

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**Amendment No. 1  
to  
Form S-1**  
**REGISTRATION STATEMENT**  
*Under  
The Securities Act of 1933*

**Silvaco Group, Inc.**

(Exact name of Registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

7372  
(Primary Standard Industrial  
Classification Code Number)

27-1503712  
(I.R.S. Employer  
Identification Number)

Silvaco Group, Inc.  
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(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this registration statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with the provisions of Section 8(a) of the Securities Act of 1933 as amended or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information contained in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED \_\_\_\_\_, 2023

PRELIMINARY PROSPECTUS

Shares  
**SILVACO**  
**Silvaco Group, Inc.**  
Common Stock

This is the initial public offering of shares of common stock of Silvaco Group, Inc. We are offering \_\_\_\_\_ shares of our common stock.

Prior to this offering, there has been no public market for our common stock. We currently anticipate that the initial public offering price will be between \$ \_\_\_\_\_ and \$ \_\_\_\_\_ per share.

Katherine S. Ngai-Pesic, our controlling stockholder and the chair of our board of directors, currently owns or is the beneficial owner of \_\_\_\_\_ % of our common stock and upon completion of this offering, will own, or be the beneficial owner of, approximately \_\_\_\_\_ % of our outstanding common stock (or approximately \_\_\_\_\_ % if the underwriters exercise their option in full). Upon completion of this offering, we will be a “controlled company” within the meaning of the listing rules of the Nasdaq Stock Market LLC. See “Management—Director Independence and Controlled Company Exemption.”

We intend to apply to have our common stock listed on the \_\_\_\_\_, or Nasdaq, under the symbol “SIVC.”

We are an “emerging growth company” and a “smaller reporting company” as defined in Section 2(a) of the Securities Act of 1933, as amended, and are subject to reduced public company disclosure requirements. See “Prospectus Summary—Implications of Being an Emerging Growth Company and a Smaller Reporting Company.”

Investing in our common stock involves a high degree of risks. See “Risk Factors” beginning on page 15 to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Initial public offering price	\$ _____	\$ _____
Underwriting discounts and commissions <sup>(1)</sup>	\$ _____	\$ _____
Proceeds to Silvaco Group, Inc., before expenses	\$ _____	\$ _____

(1) See the section titled “Underwriting” for additional information regarding underwriting compensation.

We have granted the underwriters an option to purchase up to an additional \_\_\_\_\_ shares of common stock from us, at the public offering price, less the underwriting discounts and commissions, for 30 days after the date of this prospectus. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be \$ \_\_\_\_\_, and the total proceeds to us, before expenses, will be \$ \_\_\_\_\_.

Jefferies

Cowen

, 2023

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In this prospectus, "Silvaco," "the company," "we," "us" and "our" refer to Silvaco Group, Inc. and its consolidated subsidiaries.

Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information in this prospectus, or any applicable free writing prospectus, is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock. Our business, financial condition, results of operations, and prospects may have and are likely to have changed since that date.

**Through and including [redacted], 2023 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.**

For investors outside the United States: Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this prospectus outside of the United States.

This prospectus contains references to trademarks and service marks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that the applicable licensor will not assert, to the fullest extent under applicable law, its rights to these trademarks and trade names. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

## PROSPECTUS SUMMARY

*This summary highlights selected information in greater detail contained elsewhere in this prospectus and does not contain all of the information you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our consolidated financial statements and related notes and the information set forth in “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”*

### Overview

We are a provider of technology computer aided design software, electronic design automation software and semiconductor intellectual property, or TCAD, EDA and SIP, respectively. TCAD, EDA and SIP solutions enable semiconductor and photonics companies to increase productivity, accelerate their products’ time-to-market and reduce their development and manufacturing costs. We have decades of expertise developing the “technology behind the chip” and providing solutions that span from atoms to systems, starting with providing software for the atomic level simulation of semiconductor and photonics material for devices, to providing software and SIP for the design and analysis of circuits and system level solutions. We provide SIP for systems-on-chip, or SoC, integrated circuits, or ICs, and SIP management tools to enable team collaborations on complex SoC designs. Our customers include semiconductor manufacturers, original equipment manufacturers, or OEMs, and original design manufacturers, or ODMs, who deploy our solutions in production flows across our target markets, including display, power devices, automotive, memory, high performance compute, or HPC, internet of things, or IoT, and 5G/6G mobile markets.

EDA offerings, including our solutions, enable companies to streamline their IC design workflows, develop complex IC designs in a cost-efficient manner, and maintain acceptable IC manufacturing yield, by providing interoperable tools that capture and simulate designs from concept to analysis. Our TCAD device and process simulation tools provide compatible data structures that can be used with our EDA modeling, analysis, simulation, verification and yield enhancement tools. Further, our EDA tools are used for designing SIP and IC designs that can be managed and validated by our SIP management tools.

According to Grand View Research, the global EDA software market was estimated to reach \$10.2 billion in global revenue in 2021 and is expected to reach \$22.2 billion in global revenue in 2030; representing a 9.1% compound annual growth rate, or CAGR, driven in part by the growing complexity of semiconductor and photonics designs and increasing challenges associated with advanced materials and shrinking process technology nodes across the EDA market. We believe these trends will increase the need for TCAD, EDA and SIP solutions that accelerate time-to-market at reduced development and manufacturing costs and deliver processes and devices with better operating performance, lower cost, reduced power and improved product yield.

We are a global leader in TCAD solutions for the power devices and display markets. Our TCAD solutions are designed to provide complete, fast, and accurate simulations and modeling of semiconductor and photonics device behavior, allowing our customers to design original, value-added processes and devices, explore trade-offs in performance, power, size and reliability and optimize their final design for manufacturing. By reducing the need to run expensive and time-consuming experiments in manufacturing, TCAD solutions enable companies to rapidly bring their products to market. Our TCAD solutions have been adopted by 3 of the 10 largest semiconductor companies by revenue in 2021, by 8 of the 10 largest flat panel display companies by revenue in 2021, and by 4 of the 10 leading power semiconductor devices companies in 2021.

Our EDA solutions provide analog custom design flows that bring electrical and physical layout views together with circuit simulation and physical verification including sign-off at select foundries to help ensure correct-by-design and high-yielding products before committing to final silicon. We provide device characterization and modeling solutions that enable our customers to generate accurate, high-quality models for use in simulation and analysis of analog, mixed-signal and radiofrequency, or RF, circuits across our target markets. Our EDA solutions have been adopted by 6 of the 10 largest semiconductor companies by revenue in 2021 and by 7 of the 10 largest flat panel display companies by revenue in 2021.

SIP solutions, including our offerings, provide pre-verified, high-yielding and silicon-proven SIP blocks designed to accelerate time-to-market for SoC designs. Our patented SIP fingerprint technology authenticates SIP before and after use in complex SoC designs to avoid costly design iterations and silicon re-spins. Our EDA solutions for SIP design integrate patented machine learning technologies with the goal of minimizing simulation time, chip area and power consumption. We provide SIP management software at the enterprise-level for managing, tracking and controlling SIPs that are used in SoC designs.

We leverage decades of extensive technological expertise to provide our customers with agilely developed products. In doing so, we have built long-term relationships with select strategic customers that enable us to work with them from project inception in order to tailor solutions for their specific needs. These customer relationships help us improve our new product offerings for the larger market.

Since 2015, we have acquired nine businesses, assets and/or technologies to complement our existing product offerings, expand into new markets or grow our existing market share, increase our engineering talent and enhance our technical capabilities. Our acquisition strategy also allows us to accelerate new product offerings.

Our growth has further been driven by semiconductor and photonics companies' increasing research and development spend due to increasing complexities of new material, new devices, and new systems in the markets we address. We address such market needs by:

- Providing EDA, TCAD and SIP solutions that are interoperable and cost-effective and that our customers can use to introduce their products to market in a timely fashion;
- Using advanced research and development and agile product development techniques to provide our customers with tailored solutions in vertical markets such as display, photonics, power devices, and other markets where new materials or structures are being developed;
- Providing leading-edge products that complement IC design flows and are compatible with customers' existing design flows; and
- Providing production ready and proven SIP, EDA SIP, and SIP/IC design management solutions that can be utilized individually, or as a full interoperable solution.

During 2021, we generated \$47.2 million in bookings and recognized \$42.0 million of revenue, which includes substantial recognition of up-front time-based license, or TBL, revenue (due to the structure of certain of our customer contracts), a \$1.8 million net loss and \$2.6 million of negative cash flow from operating activities. During the nine months ended September 30, 2022, we generated \$37.3 million in bookings and recognized \$36.7 million of revenue, a \$0.9 million net loss and \$3.4 million of negative cash flow from operating activities. We invest significantly in business growth by continuing to expand our products, sales and marketing footprint. As of September 30, 2022, we had over 800 customers, of which over 200 were academic institutions, that relied on our solutions worldwide. Our academic customers not only have the potential to provide future human resources, but also can act as beta testers and provide feedback that allows us to enhance our products.

### **Industry Background**

*Increasing semiconductor design complexity.* The latest technological applications require greater semiconductor performance and functionality, which have necessitated the shift towards more advanced manufacturing process technologies, new materials, and continued reduction of transistor sizes. IC and SoC complexity have significantly increased to accommodate the increased number of functional SIP blocks per chip. The slowing of Gordon Moore's, or Moore's law (which states that the number of circuits on a microchip doubles every two years), has also led to the adoption of new semiconductor materials to address varying application requirements. All these factors have increased semiconductor design complexity, which in turn increases the probability for significant development delays and project failures. As a result, we believe there is a growing need for differentiated and cost-effective tools such as TCAD, EDA and SIP solutions that enable rapid and reliable development of products containing these newly added materials and technologies.

*Increasing semiconductor manufacturing and development costs.* With each reduction in manufacturing process geometry comes a corresponding increase in manufacturing and development costs. According to IBS, the average cost of designing a 28nm chip is \$40 million, a 7nm chip is \$217 million, and a 5nm chip is \$416 million and a 3nm chip will cost up to \$590 million. The COVID-19 pandemic and subsequent semiconductor shortage have emphasized the need for supply chain optimization, further accelerating investments in semiconductor foundries. According to SEMI, worldwide foundry spending is expected to increase from \$64.0 billion in 2020 to \$109.0 billion by 2022, representing a 19% CAGR. The latest foundries being built are focused on leading-edge manufacturing process technology nodes, primarily driven by mobile applications, and require higher manufacturing yield efficiencies to offset the substantial development costs. As a result of IC technologies moving to sub 7nm process technology nodes and the resultant increase in design difficulty and development costs, we believe the continuing shift will increase demand for TCAD solutions in the design technology optimization loop to deliver high yields, accelerate time-to-market and further reduce costs by reducing the need to run expensive and time-consuming manufacturing experiments. In addition, as these trends continue, EDA solutions that meet manufacturing requirements and can reduce costs associated with potential production delays and project failures, and SIP solutions which can accelerate time-to-market by providing silicon-proven blocks that address complex SoCs and enable new technologies, such as IoT and HPC, are being more readily adopted to mitigate costs and shorten time to market.

*Increasing end market diversity.* There has been a significant growth in semiconductor demand driven by new applications in emerging markets such as automotive, HPC and IoT. Performance and functionality requirements significantly vary across each market, which drives new design complexities and increases manufacturing and development costs. The increased diversity of applications in which semiconductors are being used, is leading to a need for more complex semiconductors to satisfy the needs of such applications, which requires further time and cost to develop such semiconductor solutions. As a result, there is a growing need to accelerate time-to-market and reduce costs by adopting complete TCAD, EDA and SIP solutions that enable customers to design, simulate, verify and analyze their products from the concept stage all the way up to complete product yield.

## **Our Markets**

To contend with industry performance requirements and new applications, engineers, researchers, and other professionals rely extensively on TCAD, EDA software tools and SIP for designing and optimizing advanced ICs components. Reliance on software tools and SIP has increased in recent years as design challenges have become increasingly complex.

Rapid increase in complexity of SoCs has been the result of shrinking manufacturing process geometries, application specific customization to improve computing performance, and adoption of new materials for high voltage applications and photonics computing. These changes have led to increased investments in our research and development.

Our solutions address the following markets:

- *Automotive Market.* The semiconductor content in the automotive market is rapidly growing and evolving, driven by vehicle electrification, advances in electronic control, vehicle connectivity to the internet and autonomous driving. The new requirements of the automotive market are driving the increasing adoption of different kinds of semiconductor materials such as silicon, or SiC, gallium nitride, or GaN, and other wide bandgap materials to replace traditional silicon in high-voltage power devices. Companies designing or manufacturing SiC or GaN devices for the power device market can use TCAD simulations to replace design of experiments and enable flexible foundry selection by reducing physical trial and error cycles. We can also provide specialized EDA solutions and foundational SIPs that our customers integrate into their IC design flow.
- *Internet of Things Market.* IoT devices require a complex SoC to perform sensing, collecting data, processing data and connecting to other IoT devices or a central server or cloud through several wireless solutions. At the edge of IoT, new devices with ultra-low energy demands will be needed to harvest sensor data across a wide variety of environments. We provide a comprehensive portfolio of SIPs and tools for the IoT market, including Standard Cell IP, library creation and characterization tools, ultra-low power static random-access memories, or SRAM, compilers, connectivity IOs, microprocessor SIPs, and autonomous mobile robot alliance, or AMRA, SIP Cores and Subsystem.
- *5G/6G and Mobile Communications Markets.* IDC estimates that mobile phone semiconductor revenue will reach \$191.9 billion in 2026, and we believe the shift to 5G/6G will increase demand within our industry due to the complex nature and design cycle of 5G/6G chips. The adoption of more advanced process technology nodes for 5G mobile devices means longer circuit simulation times due to substantial increases in unwanted electrical components (parasitics) in nanometer geometries. We believe our parasitic reduction and analysis tools are unique in the market, complementing existing tool flows. These solutions are complemented by our circuit simulation tool for RF, Physical Verification tools and our full analog/custom flow for analog block creation.
- *Display Market.* With the growth in adoption of mobile electronics such as smartphones, smart watches, wearables and virtual reality, or VR, gaming, flat-screen TVs, and more, we believe semiconductors used in display technologies are of increasing importance. According to Allied Market Research, the global display market was valued at \$114.9 billion in 2021, and is projected to reach \$216.3 billion by 2031, representing a CAGR of 6.7% from 2022 to 2031. Display manufacturers are continuing to make large investments in organic light-emitting diode, or OLED, and active-matrix organic light-emitting diode, or AMOLED, as well as new technologies such as quantum dot-LED and MicroLED. These trends are driving large changes in materials and fabrication methods for displays.
- *Memory Market.* The memory market for semiconductors is expected to continue growing at a fast pace, driven by large increases in the demand for dynamic random-access memory and flash memory products. We believe our TCAD solution, complemented by our device modeling tools and services, enables memory design teams to explore new materials and device architectures and achieve optimum power and performance for memory elements.
- *High Performance Computing Market.* According to Allied Market Research, the global HPC chipset market is estimated to grow at a 19.1% CAGR from 2019 to 2027. Our foundational SIPs, memory compilers and library creation EDA tools have been adopted by our customers in HPC applications, which we believe allow our customers to gain a performance edge by using specialized circuits. We also provide modeling services

and circuit libraries for cryogenic temperatures used in quantum computing and our TCAD software is being used to design photonics devices.

- **Power Electronics Market.** With the advent of high-volume manufacturing of new process technologies such as SiC and GaN, many OEMs and ODMs are producing electronic devices and systems that benefit from these technologies. GaN is being used for low power/voltage, high frequency applications and SiC is being used for high power and high voltage switching power applications. We have gained new customers that utilized, and were early adopters of, our TCAD and EDA solutions to address their simulation/analysis needs for these new technologies at foundries, device and process levels all the way up to the system design for power management.

### Industry Challenges

Design and manufacturing of SoCs is a time intensive and costly process. Complex IoT class of SoC and Graphics Processing Unit, or GPU, class processor cost millions to billions of dollars to develop. The development, qualification, and manufacturing cycle for SoCs varies by market and may require lengthy development times. The main challenges for the industry include:

- Rapid increase of design complexity for ICs and SoCs.
- Rapid increase of design cost and time for ICs and SoCs.
- Evolving manufacturing complexity processes, supply chains and yields.

### Our Solutions and Competitive Strengths

We are a provider of TCAD, EDA and SIP solutions. We have decades of expertise developing the “technology behind the chip” and providing solutions that span from atoms to systems, from providing software for the atomic level simulation of semiconductor and photonics material for devices, to providing software and SIP for the design and analysis of circuits and system level solutions. Our primary strengths include:

- **Enabling companies to accelerate IC and photonics designs to efficiently optimize devices.** Companies use TCAD solutions to model the fabrication process and devices used in semiconductors and photonics, thus potentially accelerating the time to develop technology and ramping to yield, reducing the need to run wafers, and optimizing devices, all of which can contribute to lower development costs. We develop our EDA design and simulation solutions and SIP to be tailored to specific technologies and market segments, to enhance design flows that optimize Power, Performance and Area-Cost, or PPA.
- **Early mover advantage in vertical markets.** For decades we have focused on vertical markets, such as display and power, and have developed industrial and academic partnerships that enable our agile and fast development of solutions aligned with market needs, such as our TCAD and EDA software solutions tailored for use in the display and power markets.
- **Leading point tools complement existing chip design flows.** Point tools include Jivaro (parasitic reduction, often included in circuit simulation), Viso (parasitics analysis, often included in extraction), and Varman (statistical variation analysis, used in advanced technologies for cell and memory characterization).
- **Production-ready, also known as silicon-proven, SIP for SoC design.** We provide production-ready SIP to our customers in the automotive market (Flexcan, Flexray and I3C), and consumer markets (GPIO, I3C and AMBA) by productizing our partner’s, NXP Semiconductor Netherlands B.V., or NXP, production-ready SIP. In addition, we provide production-ready standard cells, memory and I/O SIP that is developed in-house. Lastly, we provide SIP and design management tools that enable SIP validation at SoC level, potentially streamlining design workflows.
- **Development and support of our customers’ specific needs.** Our size and focus on specific market segments allow us to develop highly agile solutions and to work with our customers with a goal of developing solutions that meet their specific needs. Through our collaboration with our academic partners such as Purdue University and Christian Doppler Labs at the University of Vienna, our TCAD and EDA tools are made ready for the next generation of processes, materials and systems.
- **Interoperable product Portfolio among TCAD, EDA and SIP.** Our tools have compatible databases across all of our products for seamless scaling of customer designs.
- **Cost-effective end-to-end solutions.** We offer complete solutions for device characterization, compact model development and circuit simulation; analog custom design, including schematics, layout, extraction and design rule check, or DRC, and process and device TCAD. We believe that our software solution pricing is competitive, which is derived from factors such as costs associated with research and development, inflation, licenses mix, number of licenses per product and number of years per TBL, as well as required license maintenance and services.

Based on a report conducted by Electronic System Design Alliance, in 2021 we ranked second worldwide in the TCAD market based on revenue. Our solutions, many of which can be used in tandem with our competitors’ tools,

have been adopted by some of the leading display and power devices providers. These customers use our design software to address certain design challenges. We believe that our positions in the TCAD and displays and power devices markets are strengthened by our EDA product line capabilities. We believe that we have a competitive advantage in these markets in part due to our investment in advanced semiconductor and photonics TCAD solutions, including investments in atomistic simulations, process etch, process deposition and design of experiments, or DOE, that are artificial intelligence, or AI, driven.

We have also developed software that certain of our customers have labelled as having best-in-class point tools capabilities. To our knowledge, standalone resistor and capacitor, or RC, parasitic reduction (Jivaro) is not offered by competitors and is included in products like circuit simulation. We believe that we have a strong market position in this market niche and that our solution is competitive to other solutions in the market. Also, in the highly competitive analog custom design market, particularly for more mature technologies, we believe that our willingness and capability of developing process design kits, or PDKs, for specific technologies has the potential to give us a natural advantage.

We believe that we provide competitive SIP solutions targeting certain end markets. For example, we license our SIP solution that targets the automotive industry from NXP, which is a leading provider of SoCs for the automotive market. In addition, our SIP solutions are qualified and silicon-proven at certain foundries, which we believe enables our customers using such foundries to lower their cost of development and reduce their time to market compared to SIP solutions that are not silicon-proven at such foundries.

To our knowledge, we are one of only two EDA/TCAD companies in the world that provide SIP to their customers. Unlike the non-EDA SIP companies, as an EDA company, we have open access to our own Analog Custom Design flow EDA software that we use for designing SIP for our customers. Further, we are commercializing silicon-proven SIP from our partners such as NXP that we believe improves our customers' time to market compared to the SIP providers that have to create, qualify and verify their unproven designs. Finally, we have developed SIP tools that not only automate generation and characterization of some of our SIPs, but also have SIP management tools as our product that we utilize to manage our SIP and customer SIPs.

### **Growth Strategy**

To further our long-term growth and increase our market share, we have made initial investments in the following areas:

- *Focus on large, growing markets where we have cemented ourselves as a reliable solutions provider.* We seek to continue and expand our presence in the display, automotive semiconductor, memory device and IoT markets by capitalizing on the growth of our existing customers.
- *Expand into established market segments.* We plan to expand into established market segments, which include fin field-effect transistor, or FinFET, and specialized SIP, fabrication process optimization, and photonics.
- *Continue our history of strategic acquisitions to accelerate growth and expand our market footprint.* Historically, we have focused on acquisitions that provide us with technology (e.g., Purdue Atomics simulation tools, commercialized under our Victory Atomistic tools), technical talent, and revenue in new markets. We intend to continue to target acquisitions that allow us to expand our solutions portfolio to better service our customers' needs.
- *Leverage our technology in TCAD, EDA, SIP, and SIP management software.* We plan to continue to invest in the technology that differentiates us and where we can establish or expand our leadership position, such as TCAD for display, power devices and photonics, simulation of large panels with complex device models, parasitic analysis and reduction, SIP management and fingerprinting, device characterization tools and services, and development of additional SIP.
- *Optimize our competitive advantage by addressing unique customer needs.* We pride ourselves on research and development agility, allowing us to design capabilities specific to customers' requirements and, where appropriate, integrate those capabilities into our software solutions.
- *Focus on a portfolio approach to the licensing and sale of our software platform.* We seek to differentiate ourselves through the breadth of our software and SIP offerings, addressing the full design cycle needs of our customers across applications and industries.
- *Expand our customer base through increased investment in sales and marketing.* We believe our serviceable market is under penetrated and that we can expand our customer base by increasing our marketing and sales resources.
- *Establish, maintain and expand relationships with key technology providers and academic partners.* We maintain successful relationships with SIP providers, foundries, design service companies, EDA companies,



our commercial customers and academia. We plan to continue to expand our ecosystem to maximize our reach, integrate into established flows and offer world-class solutions.

## **Products and Technology**

We are a provider of TCAD software, EDA software and SIP, and also provide general engineering and research support to serve our target markets. Within our TCAD, EDA, and SIP product lines, we offer a multitude of products and offerings to efficiently develop new semiconductor processes and devices.

### ***TCAD Solutions and Products***

TCAD software solutions, including our offerings, are used to help reduce the time and manufacturing cycles spent to develop semiconductor technologies and help reduce the costs during development cycles. TCAD is part of a design technology co-optimization, or DTCO, flow that is intended to improve designs across multiple domains (Layout, Process, Device, SPICE and RC extraction). Typical applications include:

- physical etch and deposition process simulation;
- calibration of doping profiles and metal oxide semiconductor, or MOS, bipolar transistors;
- modeled effects (including self-heating and thermal gradients for power device and thin-film transistor, or TFT);
- photonics simulation for solar cell, charge-coupled device, or CCD, complementary metal oxide semiconductor image sensor, or CIS, TFT, liquid crystal display, or LCD and OLED using ray tracing, finite-difference time domain, or FDTD, and timing memory, or TMM;
- single event effect and total dose simulation; and
- stress simulation.

We also offer TCAD modeling services that provide a solution for customers who have unique semiconductor device modeling requirements, but do not have the time or resources to operate TCAD software in-house.

### ***EDA Software and Modeling Services***

Our EDA software solutions cover multiple areas of analog/mixed-signal/RF circuit simulation, custom IC CAD and interconnect modeling, including support for CMOS, bipolar, diode, junction-gate field-effect transistor, or JFET, silicon on insulator, or SOI, TFT, high-electron mobility transistor, or HEMT, insulated-gate bipolar transistor, or IGBT, resistor and capacitor models. We also provide complete SPICE modeling services for the semiconductor industry, ideally suited to either complement in-house SPICE modeling capabilities when time is critical, or to provide complete SPICE modeling services for occasional needs.

### ***SIP and EDA Software and Design Services***

We provide software that optimizes and re-targets standard cell libraries. Automated tools improve productivity by automating standard cell library designs that would otherwise need to be done manually, sometimes by tens of designers. In addition, we provide automated standard cell library characterization tools that replace manual and labor-intensive characterization of standard cells.

Our full-featured standard cell libraries have demonstrated maximal density and routing performance. As a standard feature, all industry standard views (circuit description language, or CDL netlist, library exchange front, or LEF, graphic data system II, or GDSII, Liberty, parasitic extraction, or PEX Spice netlist, Verilog, very high speed integrated circuit hardware description language, or VITAL, electronic design interchange format, or EDIF and others) are provided from a consistent database.

### ***SIP Management Tools and SIP***

***SIP and SoC Management Software.*** Our SIP and SoC Management Software (Xena) helps teams of designers to manage (release, revision control and contracts) and collaborate amongst the internal team, the SIP providers, and customers. Xena also provides the ability for the team to authenticate SIP blocks from various providers and also authenticate and fingerprint the chip that utilize these SIP blocks to verify that the correct SIP is being used in an SoC.

***Silicon-Proven Soft IP Blocks.*** Our silicon-proven Soft IP blocks are embedded in SoCs and ICs in our targeted markets of automotive, IoT, wireless and High-performance Computing.

## Risk Factors Summary

There are a number of risks that you should consider before making an investment decision regarding this offering. These risks are discussed more fully in the section entitled "Risk Factors" following this prospectus summary. If any of these risks actually occur, our business, financial condition and results of operations could be materially and adversely affected. In such case, the trading price of our common stock would likely decline, and you may lose all or part of your investment. These risks include, but are not limited to, the following:

- We face significant competition from larger companies as well as from third-party providers who may deploy their resources to develop IP solutions internally.
- Our operating results are subject to significant fluctuations and, as a result, period-to-period comparisons of our results of operations are not necessarily meaningful and should not be relied upon as indicators of future performance.
- Our quarterly results of operations may be difficult to predict as a result of seasonality.
- Substantial, prolonged economic downturns in key industrial sectors and in major economic regions in which we operate may result in reduced software solutions sales and lower revenue growth.
- The success of our business depends on sustaining or growing our software license revenue and our maintenance and service revenue and the failure to increase such revenue would lead to a material decline in our results of operations.
- We also depend on growth in the semiconductor and photonics industries and in the end markets that use our products. Any slowdown in the growth of these industries and end markets could harm our business.
- If we are unable to deliver new and innovative software solutions or software license enhancements ahead of rapid technological changes in the market, our revenues could be materially adversely affected.
- We may have to invest more resources in research and development than anticipated, which could increase our operating expenses and negatively affect our operating results.
- Our international sales constitute a substantial portion of our revenue and could be negatively affected by disruptions in international geographies caused by government actions, trade disputes, direct or indirect acts of war or terrorism, international political or economic instability or other similar events.
- A substantial portion of our revenue comes from our international sales channels, and any adverse fluctuations in exchange rates could adversely affect our performance.
- If we are unable to protect our proprietary technology and inventions through patents and other intellectual property rights, our ability to compete successfully and our financial results could be adversely impacted.
- Our success depends on the interoperability of our software solutions with our customers' intended use cases and with products and services of other companies, including our competitors.
- If our information technology systems, information, or other resources or those of third parties upon which we rely are or were compromised, we could experience adverse consequences resulting from such compromise, including but not limited to damage to our reputation and our business, exposure to liability, and material and adverse effects to our results of operations, potentially irreparably.
- We may not realize the anticipated benefits of our acquisitions or investments, our business could be disrupted because of acquisitions or investments and we could use significant amounts of cash in connection with acquisitions and investments, depending on how we finance such acquisitions or investments.
- We may not be able to continue to obtain licenses to third-party software and intellectual property on reasonable terms or at all, which may disrupt our business and harm our financial results.
- Any dispute regarding our intellectual property may require us to indemnify customers, the cost of which could harm our business.
- As long as we are a controlled company, your ability to influence matters requiring stockholder approval will be limited, and the interests of our controlling shareholder may conflict with or differ from your interests as a stockholder.
- Pending or future investigations or litigation could have a material adverse effect on our results of operations and our stock price.
- We have identified a material weakness in our internal control over financial reporting. If our remediation measures are ineffective, or if we experience additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to report our financial condition or results of operations accurately or on a timely basis, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

## Implications of Being an Emerging Growth Company and a Smaller Reporting Company

As a company with less than \$1.235 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth

company may take advantage of specified reduced reporting and other requirements that are otherwise applicable generally to public companies. These provisions include, but are not limited to:

- being permitted to include only two years of consolidated financial statements and only two years of related “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure in this prospectus;
- an exemption from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, on the design and effectiveness of our internal controls over financial reporting;
- an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and financial statements;
- reduced disclosure obligations regarding executive compensation arrangements; and
- exemptions from the requirements of submitting certain executive compensation matters to stockholder advisory votes, such as “say-on-pay,” “say-on-frequency” and “say-on-golden parachutes,” and the correlation between executive compensation and performance and comparisons of the chief executive officer’s compensation to our median employee compensation.

We have elected to take advantage of certain of these reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of some or all of these reduced reporting and other requirements in the future. As a result, the information we provide to our stockholders may be different than the information you might receive from other public companies in which you hold equity interests.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period, provided in Section 13(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, for adopting new or revised accounting standards. As a result, we will be permitted to delay the adoption of new or revised accounting standards until such time as those standards would otherwise apply to private companies. We have elected to take advantage of this extended transition period for complying with new or revised accounting standards until the earlier of the date we (i) are no longer an emerging growth company; or (ii) affirmatively and irrevocably opt out of this extended transition period. As a result, our consolidated financial statements and the reported results of operations contained therein may not be directly comparable to those of other public companies.

We may take advantage of the foregoing provisions until the last day of our fiscal year following the fifth anniversary of the completion of this offering or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company upon the earliest of: (i) the last day of the first fiscal year in which our annual gross revenues are \$1.235 billion or more; (ii) the date on which we have, during the previous three-year period, issued more than \$1.0 billion in non-convertible debt securities; or (iii) the date on which we are deemed to be a “large accelerated filer,” which will occur as of the end of any fiscal year in which we (x) have an aggregate market value of our common stock held by non-affiliates of \$700.0 million or more as of the last business day of our most recently completed second fiscal quarter, (y) have been required to file annual and quarterly reports under the Exchange Act, for a period of at least 12 months and (z) have filed at least one annual report pursuant to the Exchange Act.

We are also a “smaller reporting company” as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as the market value of our voting and non-voting common stock held by non-affiliates is less than \$250 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100 million during the most recently completed fiscal year and the market value of our voting and non-voting common stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

As a result, the information in this prospectus and that we provide to our investors in the future may be different than what you might receive from other public reporting companies.

For risks related to our status as an emerging growth company and a smaller reporting company, see “Risk Factors—General Risk Factors and Risks Related to Being a Public Company—We are an “emerging growth company” and a “smaller reporting company” and any decision on our part to comply with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.”

**Corporate Information**

We were incorporated in Delaware in November 2009. Our principal executive offices are located at 4701 Patrick Henry Drive, Building #23, Santa Clara, CA 95054. Our telephone number is (408) 567-1000, and our website address is [www.silvaco.com](http://www.silvaco.com). The information contained on, or that can be accessed through, our website is not incorporated by reference in this prospectus and does not form a part of this prospectus. You should not consider information contained on our website to be part of this prospectus in deciding whether to purchase shares of our common stock.

## THE OFFERING

Common stock offered by us	shares of common stock.
Option to purchase additional shares of common stock	shares of common stock.
Common stock to be outstanding after this offering	shares of common stock ( shares of common stock if the underwriters exercise their option to purchase additional shares in full).
Controlled company	Upon completion of this offering, we will be a “controlled company” within the meaning of the listing rules of Nasdaq. After the closing of this offering, our controlling stockholder will control us and will have, among other things, the ability to approve or disapprove substantially all transactions and other matters requiring approval by stockholders, including the election of directors. See the section titled “Management —Director Independence and Controlled Company Exemption.”
Use of proceeds	<p>We estimate that the net proceeds to us from this offering will be approximately \$ million (or approximately \$ million if the underwriters exercise their option to purchase additional shares in full), based on an assumed initial public offering price of \$ per share (the midpoint of the price range set forth on the cover page of this prospectus), and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.</p> <p>We intend to use the net proceeds from this offering primarily for general corporate purposes, including working capital, selling and marketing activities, product development, general and administrative matters, the repayment of outstanding debt, and capital expenditures, although we do not currently have any specific or preliminary plans with respect to use of proceeds for such purposes. We also intend to use a portion of the net proceeds from this offering to repay our outstanding \$0.5 million promissory note, or the March 2022 Loan, and our outstanding \$4.0 million line of credit, or the 2022 Credit Line, from which we have drawn down \$2.0 million as of September 30, 2022, each payable to Katherine S. Ngai-Pesic, our controlling stockholder and the chair of our board of directors, or Ms. Ngai-Pesic. We also may use a portion of the net proceeds to acquire complementary businesses, products, services, or technologies. However, we do not have agreements or commitments for any specific acquisitions at this time. See “Use of Proceeds.”</p>
Risk factors	You should read the section titled “Risk Factors” and the other information included in this prospectus for a discussion of certain factors to consider carefully before deciding to purchase any shares of our common stock.
Proposed Nasdaq trading symbol	“SIVC”

Unless otherwise indicated, the number of shares of our common stock to be outstanding after this offering is based on 40,000,000 shares of common stock outstanding as of September 30, 2022, and excludes:

- shares of our common stock subject to the settlement of restricted stock units, or RSUs, outstanding as of September 30, 2022 granted under our 2014 Stock Incentive Plan, or the 2014 Plan, for which the liquidity-based vesting condition, or the Liquidity Event Requirement, will be satisfied upon the completion of this offering, but for which the time-based vesting condition, or the Time-Based Requirement, will not be satisfied on or before the date of this offering;
- shares of our common stock reserved for future issuance under our 2023 Stock Incentive Plan, or the 2023 Plan, which will become effective as of immediately prior to the completion of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2023 Plan and any reserved shares not issued or subject to outstanding awards under the 2014 Plan after the effective date of the 2023 Plan that are subsequently forfeited or terminated, all of which shares shall become available for issuance under the 2023 Plan; and
- shares of our common stock reserved for future issuance under our 2023 Employee Stock Purchase Plan, or the ESPP, which will become effective as of immediately prior to the completion of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

Unless otherwise indicated, all information contained in this prospectus assumes or gives effect to:

- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws immediately prior to the completion of this offering;
- a -for- split of our common stock expected to be completed prior to the completion of this offering;
- the issuance of shares of common stock following the closing of this offering from the settlement of certain outstanding RSUs issued under the 2014 Plan for which the Time-Based Requirement was satisfied on or before the date of this offering and for which the Liquidity Event Requirement will be satisfied upon the completion of this offering, or the RSU Settlement Issuance;
- no settlement or termination of outstanding RSUs described above for which the Time-Based Requirement will not be satisfied on or before the date of this offering; and
- no exercise by the underwriters of their option to purchase up to additional shares of our common stock.

## SUMMARY CONSOLIDATED FINANCIAL DATA

The summary consolidated statements of operations data presented below for the years ended December 31, 2020 and 2021 are derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statements of operations data for the nine months ended September 30, 2021 and 2022 and the summary balance sheet data as of September 30, 2022 presented below are derived from our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus. We have prepared the unaudited financial statements on the same basis as the audited financial statements and have included, in our opinion, all adjustments, that we consider necessary for a fair presentation of the financial information set forth in those financial statements. The following summary consolidated financial data should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus. The summary financial data included in this section are not intended to replace our financial statements and related notes thereto included elsewhere in this prospectus and are qualified in their entirety by our financial statements and related notes thereto included elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected for any period in the future.

### Consolidated Statements of Operations Data

SUMMARY OF OPERATIONS	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2021	2022
Revenue:	<i>(in thousands, except share and per share data)</i>			
Software license revenue	\$ 27,826	\$ 29,687	\$ 21,563	\$ 27,946
Maintenance and service	12,454	12,276	9,541	8,727
Total revenue	40,280	41,963	31,104	36,673
Cost of revenue	8,674	8,653	6,571	6,767
Gross profit	31,606	33,310	24,533	29,906
Operating expenses:				
Research and development	11,159	13,539	10,062	9,851
Selling and marketing	9,197	10,331	7,984	7,935
General and administrative	7,610	12,976	9,072	11,607
Impairment charges	—	—	—	560
Total operating expenses	27,966	36,846	27,118	29,953
Operating income (loss)	3,640	(3,536)	(2,585)	(47)
Gain on debt extinguishment	—	2,278	2,278	—
Interest and other expense, net	(784)	(317)	(58)	(237)
Income (loss) before income tax provision	2,856	(1,575)	(365)	(284)
Income tax provision	306	270	301	617
Net income (loss)	\$ 2,550	\$ (1,845)	\$ (666)	\$ (901)
Net income (loss) per share attributable to common stockholders <sup>(1)</sup> :				
Basic and diluted	\$ 0.06	\$ (0.05)	\$ (0.02)	\$ (0.02)
Weighted average shares used in computing per share amounts <sup>(1)</sup> :				
Basic and diluted	40,000,000	40,000,000	40,000,000	40,000,000
Pro forma net loss attributable to common stockholders, basic and diluted (unaudited) <sup>(2)</sup> :		\$ (0.17)		\$ (0.18)
Weighted-average shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited) <sup>(2)</sup> :		42,458,419		42,900,716

(1) See Note 2 to our financial statements included elsewhere in this prospectus for further information on the calculations of net income (loss) per share attributable to common stockholders.

(2) Basic and diluted unaudited pro forma net loss per share attributable to common stockholders for the year ended December 31, 2021 and the nine months ended September 30, 2022 gives effect to the settlement of the RSUs and issuance of the underlying common stock as of December 31, 2021 and September 30, 2022 as further described in Note 2 and Note 11 to our consolidated financial

statements included elsewhere in this prospectus. The following table summarizes our unaudited pro forma net loss per share for the year ended December 31, 2021 and for the nine months ended September 30, 2022:

	For the Year Ended December 31, 2021	For the Nine Months Ended September 30, 2022
	(in thousands, except share and per share data)	
<b>Numerator:</b>		
Net loss per share attributable to common stockholders	\$ (1,845)	\$ (901)
Stock-based compensation expense related to RSUs for which the liquidity event vesting condition becomes probable in connection with this offering	5,210	6,653
Pro forma net loss attributable to common stockholders	<u>\$ (7,055)</u>	<u>\$ (7,554)</u>
<b>Denominator:</b>		
Weighted average shares used to compute net loss per share attributable to common stockholders, basic and diluted	40,000,000	40,000,000
Pro forma adjustment to reflect the automatic conversion of RSUs to common stock in connection with this offering	2,458,419	2,900,716
Weighted-average shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted	<u>42,458,419</u>	<u>42,900,716</u>
Pro forma net loss per share attributable to common stockholders, basic and diluted	<u>\$ (0.17)</u>	<u>\$ (0.18)</u>

### Consolidated Balance Sheet Data

	As of September 30, 2022		
	Actual	Pro Forma <sup>(1)</sup>	Pro Forma as Adjusted <sup>(1) (2)</sup>
	(in thousands)		
Cash	\$ 3,971	\$ 3,971	\$
Accounts receivable, net of allowances	\$ 9,113	\$ 9,113	\$
Contract assets	\$ 10,072	\$ 10,072	\$
Working capital <sup>(3)</sup>	\$ 1,017	\$ 1,017	\$
Total assets	\$ 39,106	\$ 39,106	\$
Deferred revenue	\$ 10,534	\$ 10,534	\$
Total liabilities	\$ 26,955	\$ 24,455	\$
Retained earnings	\$ 14,953	\$ 8,300	\$
Total stockholders' equity	\$ 12,151	\$ 5,498	\$

- (1) The pro forma column gives effect to (i) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the completion of this offering, (ii) the repayment of the March 2022 Loan and the 2022 Credit Line, (iii) the RSU Settlement Issuance, and (iv) stock-based compensation expenses for which the Time-Based Requirement was satisfied on or before the date of this offering and for which the Liquidity Event Requirement will be satisfied in connection with this offering.
- (2) The pro forma as adjusted column gives effect to the pro forma adjustments described in footnote (1) above and gives further effect to the sale of shares of common stock by us in this offering after deducting underwriting discounts and commissions and estimated offering expenses payable by us.
- (3) Working capital is defined as current assets less current liabilities.

### Key Operating Indicators and Non-GAAP Financial Measures

	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2021	2022
	(dollars in millions)			
Bookings	\$ 44.0	\$ 47.3	\$ 30.6	\$ 37.3
Non-GAAP net income (loss)	\$ 4.4	\$ (0.6)	\$ (0.6)	\$ 3.3

We report our financial results in accordance with U.S. generally accepted accounting principles, or GAAP. However, management believes that non-GAAP net income (loss) provides investors with additional useful information in evaluating our performance. This financial measure is not required by or presented in accordance with GAAP. We believe, however, that this non-GAAP financial measure, when taken together with our financial results presented in accordance with GAAP, provides meaningful supplemental information regarding our operating performance and facilitates internal comparisons of our historical operating performance on a more consistent basis by excluding certain items that may not be indicative of our business, results of operations or outlook. In particular, we believe non-



GAAP net income (loss) provides useful supplemental information to investors and others in understanding and evaluating our results of operations, as well as provide a useful measure for period-to-period comparisons of our business performance.

Certain items are excluded from our non-GAAP net income (loss) because these items are non-cash in nature or are not indicative of our core operating performance, and render comparisons with prior periods and competitors less meaningful. We adjust net income (loss) for these items to arrive at non-GAAP net income (loss) because these amounts can vary substantially from company to company within our industry depending upon accounting methods and book values of assets, capital structure and the method by which the assets were acquired. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Non-GAAP Financial Measures.”

The following table reconciles net income (loss) to non-GAAP net income (loss).

	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2021	2022
	<i>(in thousands)</i>			
<b>Net Income (loss)</b>	\$ 2,550	\$ (1,845)	\$ (666)	\$ (901)
<b>Add:</b>				
Acquisition-related litigation costs <sup>(1)</sup>	52	1,148	782	1,054
Executive severance <sup>(2)</sup>	—	280	180	—
Amortization of acquired intangible assets <sup>(3)</sup>	641	808	593	215
Change in fair value of contingent consideration <sup>(4)</sup>	(36)	295	—	16
Other non-recurring expenses <sup>(5)</sup>	511	1,087	650	2,178
Foreign exchange (gain) loss	649	(93)	107	211
Gain on debt <sup>(6)</sup>	—	(2,278)	(2,278)	—
Impairment charges <sup>(7)</sup>	—	—	—	560
<b>Non-GAAP net income (loss)</b>	<u>\$ 4,367</u>	<u>\$ (598)</u>	<u>\$ (632)</u>	<u>\$ 3,333</u>

(1) Reflects litigation-related expenses incurred in connection with our acquisitions.

(2) Includes executive severance which occurred in connection with management changes.

(3) Reflects the amortization of intangible assets attributable to our acquisitions.

(4) Includes the change in fair value of contingent consideration recorded in connection with our acquisitions.

(5) Reflects one-time third-party professional services fees and costs incurred as part of, and in preparation for, this offering.

(6) Reflects one-time loan forgiveness for our unsecured loan under the Paycheck Protection Program in June 2021.

(7) Reflects impairment charges related to certain intangible assets assumed through our acquisition of PolyTEDA. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Components of Results of Operations—Impairment Charges.”

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all other information in this prospectus, including our audited consolidated financial statements and the related notes and the section of this prospectus titled "Management's Discussion and Analysis of Financial Condition and Results of Operations," before investing in our common stock. If any of the following risks are realized, in whole or in part, our business, financial condition, results of operations, and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business, financial condition, results of operations, and prospects. The risks described below, and statements found elsewhere in this prospectus, contain forward-looking statements. You should read the explanation of the qualifications and limitations on forward-looking statements discussed under the caption "Special Note Regarding Forward-Looking Statements" beginning on page [45](#).*

### Risks Related to Our Business and Industry

***We face significant competition from larger companies as well as from third-party providers who may deploy their resources to develop IP solutions internally.***

We are engaged in a competitive segment of the global semiconductor and photonics industries. Our competitive landscape is characterized by competition from companies that have greater resources than us. A variety of factors could adversely impact our ability to compete, including rapid technological change in our software solution design, customers that make purchase decisions based on a mix of factors of varying importance and continuous declines in average selling prices of our software solutions. We compete principally on the basis of technology, license quality and features, license terms, compatibility, reliability, interoperability among products and price and payment terms.

We compete against larger companies including Synopsys, Inc., or Synopsys, Coventor, Inc., Cadence Design Systems, Inc., Siemens EDA, Ansys, Inc., Arm Limited, and CEVA, Inc. Such companies have greater name recognition than us and possess substantial financial, technical, research and development and engineering resources that can be deployed so they can develop competing TCAD, EDA and SIP solutions. Varying combinations of these resources provide advantages to these competitors that enable them to influence industry trends and the pace at which industries adapt to these trends. A strong competitive response from one or more of our competitors to our marketplace efforts, or a shift in customer preferences to competitors' products, could result in increased pressure to lower our prices more rapidly than anticipated, increased selling and marketing expense, and/or market share loss. The consolidation of our competitors or collaboration among our competitors to deliver more comprehensive offerings than they could prior to consolidation may also impact our ability to compete effectively. To the extent our revenue is negatively impacted by competitive pressures and reduced pricing, our business could be harmed.

In addition, our ability to compete in our market is subject to a variety of factors, many of which are beyond our control. In particular, any of the below factors could significantly affect our ability to compete and could harm our business:

- Our ability to anticipate and lead critical software solution development cycles and technological shifts as driven by our target markets, to innovate rapidly and efficiently and to improve our existing solutions;
- Decisions by semiconductor companies and/or OEMs to develop IP internally, rather than license IP from outside vendors due to strategic changes, enhanced internal capability, budget constraints or excess engineering capacity;
- Our ability to maintain and improve upon our current research and development collaboration agreements;
- Whether any competitor substantially increases its engineering and marketing resources to compete with our software solutions;
- The challenges of developing, or acquiring externally developed, technology solutions that are adequate and competitive in meeting the rapidly evolving requirements of next-generation design challenges;
- Our ability to expand into established market segments;
- Our ability to compete on the basis of payment terms; and
- The potential effects of geopolitical conflicts, such as the ongoing trade disputes between the United States and China and Russia's invasion of Ukraine, including retaliatory and regulatory actions, on purchasing, development, sales and innovation responses and trends in response to such conflicts.

We may also be unable to reduce the cost of our software solutions sufficiently to enable us to compete with our competitors or other third-party providers who may deploy their resources to develop IP solutions internally. Our cost reduction efforts may not allow us to keep pace with competitive pricing pressures and could adversely affect our gross margins. To the extent we are unable to reduce the prices of our software solutions and remain competitive, our revenue will likely decline, resulting in further pressure on our gross margins, which could harm our business.

***Our operating results are subject to significant fluctuations and, as a result, period-to-period comparisons of our results of operations are not necessarily meaningful and should not be relied upon as indicators of future performance.***

The majority of our software license revenue is treated as point in time revenue at the start of the license period, so past revenue may not be indicative of the amount of revenue in any future period. Significant portions of our anticipated future revenue, therefore, will likely depend upon our success in attracting new customers or continuing or expanding our relationships with existing customers. However, revenue recognized from licensing arrangements vary significantly from period to period, depending largely on bookings recorded during a quarter, and is difficult to predict. In addition, as we expand our business into new markets, our licensing contracts may be smaller in volume but greater in value, which may result in further fluctuations in our software license revenue quarter to quarter. Our ability to succeed in our licensing efforts will depend on a variety of factors, including the market positioning, performance, quality, breadth and depth of our current and future IP and solutions as well as our sales and marketing success. Our failure to obtain future licensing customers would impede our future revenue growth and could materially harm our business.

Additionally, fluctuations may be caused by many other factors, including the timing of new software license releases or enhancements by us or our competitors, the license mix and timing of bookings and TBL renewals, software bugs or defects or other software solution quality problems, competition and pricing changes, customer booking or renewal deferrals in anticipation of new software solutions or enhancements, changes in demand for our software solutions, changes in operating expenses, changes in the mix of software license and maintenance and service revenue, timing of our collection of cash, personnel changes and general economic conditions.

Further, we and our customers are affected by general business and economic conditions in the United States and globally. These conditions include short-term and long-term interest rates, inflation, money supply, political issues, legislative and regulatory changes, including the imposition of new tariffs affecting our or our customers' products and services, fluctuations in both debt and equity capital markets and broad trends in industry and finance, all of which are beyond our control. Any adverse changes in general domestic and global economic conditions that may occur in the future, including any recession, economic slowdown or disruption of credit markets, may lead to lower demand for products that incorporate our solutions. Macroeconomic conditions that affect the economy and the economic outlook of the United States and the rest of the world could adversely affect our customers and vendors, which could have a material adverse effect on our business, financial condition and results of operations.

As a result of these and other factors, you should not rely on the results of any prior quarterly or annual periods, or any historical trends reflected in such results, as indications of our future revenue or operating performance. Fluctuations in our revenue and operating results could cause our stock price to decline and, as a result, you may lose some or all of your investment.

***Our quarterly results of operations may be difficult to predict as a result of seasonality.***

Our results of operations also have fluctuated significantly as a result of seasonality. For example, new year celebrations in certain countries in Asia, summer holidays in Europe and the United States, and winter holidays globally have, in the past, resulted in a slowdown in demand for our software solutions in affected locations. The impact of this cyclical nature on our business is evident in lower bookings, including software license renewals and revenue in the second and third quarters of certain years as compared to first and fourth quarters of that year. The seasonality of our business is also affected by our customers' research and development cycles. For example, our bookings generally increase when our customers' increase their research and development spend on their next generation products, which we traditionally see occur in the first quarter and last quarter of each year in part due to our customers' budgetary cycles. We may also be affected by additional seasonal trends in the future, particularly as our business continues to mature. Such seasonality may result from a number of factors, including a slowdown in our customers' procurement process during certain times of the year, both domestically and internationally, and customers choosing to spend remaining budgets shortly before the end of their fiscal years. Seasonality has in the past caused, and may cause in the future, fluctuations in our results of operations and financial metrics, and make forecasting our future results of operations and financial metrics more difficult.

***Substantial, prolonged economic downturns in key industrial sectors and in major economic regions in which we operate may result in reduced software solution sales and lower revenue growth.***

Our sales are based significantly on end user demand for our software solutions in the display, power devices, automotive, memory, HPC, IoT, and 5G/6G mobile markets. Many of these markets periodically experience economic declines. These economic declines may be exacerbated by other economic factors, such as the recent increase in global energy prices. These economic factors may adversely affect our business by extending sales cycles and reducing revenue.

Our customers supply semiconductor solutions to a wide spectrum of goods and services providers in all major economic regions. Our performance is materially impacted by general economic conditions and the performance of our customers. Our management team forecasts macroeconomic trends and developments and integrates them through long-range planning into budgets, research and development strategies and a wide variety of general management duties. To the extent that our forecasts are overly optimistic or overly pessimistic about the performance of an economy or sector, our performance may be hindered because of a failure to properly match corporate strategy with economic conditions.

Terrorist attacks, war and other increased global hostilities, including the ongoing conflict between Russia and Ukraine, pandemics, including the COVID-19 pandemic, and natural disasters have, at times, contributed to widespread uncertainty and speculation in the semiconductor markets. For example, 61% and 59% of our revenue was derived from customers in Asia for the years ended December 31, 2020 and 2021, respectively. During the nine months ended September 30, 2021 and 2022, 62% and 58% of our revenue was derived from customers in Asia, respectively. For the nine months ended September 30, 2021 and 2022, 16.7% and 19.7% of our revenue was derived from our China-based operations. Geopolitical disruptions among the United States and China could result in the suspension or delay of purchases of our software solutions by our customers in China, which could inhibit our ability to secure similar levels of revenue in the future from such customers or otherwise. See “—We face risks associated with doing business in China.” Similar uncertainties and speculation may result in further economic contraction, resulting in the suspension or delay of purchases of our software solutions by our customers, which could harm our business, financial condition and results of operations.

***The success of our business depends on sustaining or growing our software license revenue and our maintenance and service revenue and the failure to increase such revenue would lead to a material decline in our results of operations.***

Our revenue consists of software license fees and other fees and royalties paid for access to our technologies and other maintenance and services we provide to our customers. Our success at continuing to derive revenue from existing customers requires that we continue to service their needs adequately and provide them with solutions that drive value for them. Our ability to secure and renew the software licenses from which our revenue is derived depends on our customers adopting our solutions and may require us to incur significant expenditures and dedicate engineering resources to the development or enhancement of our software licenses without assurance that our solutions will be licensed. If we incur such expenditures and fail to secure revenue from such customers, our results of operations may be adversely affected. If we fail to grow our software license revenue, we are likely to consequently fail to grow our maintenance and service revenue, which would further adversely affect our results of operation. Further, because of the significant costs associated with qualifying new suppliers, customers are likely to use the same or an enhanced version of solution from existing suppliers across a number of similar and successor products for a lengthy period of time. As a result, if we fail to secure sell our solutions to any particular potential new customer, we may lose the opportunity to make future sales of those solutions to that potential customer for a significant period of time, or at all, and we may experience an associated decline in revenue relating to those products.

We may not be able to maintain or expand sales to our significant customers for a variety of reasons, and our customers can stop incorporating or using our solutions, decline to renew their agreements or terminate their agreements, often with limited notice to us and often with little or no penalty. The loss of any significant customers, a reduction in sales to any significant customers, a significant delay or negative development in our customers' product development plans, or our inability to attract new significant customers or secure new significant design wins, could negatively impact our business.

***The cyclical nature of the semiconductor and photonics industries may limit our ability to maintain or improve our revenue.***

The semiconductor and photonics industries are highly cyclical and is prone to significant downturns from time to time. Cyclical downturns can result from a variety of market forces including constant and rapid technological change, rapid product obsolescence, price erosion, evolving standards, short product life cycles and wide fluctuations in product supply and demand, all of which can result in significant declines in semiconductor demand and thus demand

for our software solutions. We have experienced downturns in the past and may experience such downturns in the future. For example, the industry experienced a significant downturn in connection with the most recent global recession in 2008, and further experienced a downturn in 2020, which may be prolonged as a result of the continued economic impact of the COVID-19 pandemic.

These downturns have been characterized by diminished product demand, production overcapacity, high inventory levels and accelerated erosion of average selling prices. Recently, downturns in the semiconductor and photonics industries have been attributed to a variety of factors, including the current COVID-19 pandemic, ongoing trade disputes between the United States and China, weakness in demand and pricing for semiconductors across applications and shortages. Recent downturns have directly impacted our business, as has been the case with many other companies, suppliers, distributors and customers in the semiconductor and photonics industries and other industries around the world, and any prolonged or significant future downturns in the semiconductor and photonics industries could harm our business.

***We also depend on growth in the semiconductor and photonics industries and in the end markets that use our products. Any slowdown in the growth of these industries and end markets could harm our business.***

The growth of our TCAD, EDA and SIP markets are dependent on the semiconductor and photonics industries. A substantial portion of our business and revenue depends upon the commencement of new design projects by semiconductor manufacturers, systems companies and their customers. The increasing complexity of designs of or SoC, ICs, electronic systems and customers' concerns about managing costs, have previously led to, and in the future could lead to, a decrease in design starts and design activity in general. For example, in response to this increasing complexity, some customers may choose to focus on one discrete phase of the design process or opt for less advanced, but less risky, manufacturing processes that may not require new or enhanced design solutions. Demand for our software solutions and services could decrease and our financial condition and results of operations could be adversely affected if growth in the semiconductor and photonics industries slows or stalls, including due to the impact of inflation or a sustained global supply chain disruption. Inflation has accelerated in the United States and globally as a result of global supply chain issues, a rise in energy prices, and strong consumer demand. An inflationary environment can increase our cost of labor, energy and other operating costs and could also impact and reduce the number of customers who purchase our software solutions as credit becomes more expensive or unavailable.

Furthermore, many of our customers outsource the manufacturing of their semiconductor designs to foundries. Our customers also frequently incorporate third-party IP, whether provided by us or other vendors, into their designs to improve the efficiency of their design process. However, if we fail to optimize our EDA and SIP solutions for use with major foundries' manufacturing processes or major IP providers' products, or if our access to such foundry processes or third-party IP licenses is hampered, then our solutions may become less desirable to our customers, resulting in an adverse effect on our business and financial condition.

Our continued success will also depend in large part on general economic growth and growth within our target markets including the display, power devices, automotive, memory, HPC, IoT, and 5G/6G mobile markets. Factors affecting these markets could seriously harm our customers and/or end customers and, as a result, harm us, examples of which include:

- Reduced sales of our customers' and/or end customers' products;
- The effects of catastrophic and other disruptive events at our customers' and/or end customers' offices or facilities;
- Increased costs associated with potential disruptions to our customers' and/or end customers' supply chain and other manufacturing and production operations, including to ongoing supply chain issues caused by the current COVID-19 pandemic and similar disruptions that may occur in future;
- The deterioration of our customers' and/or end customers' financial condition;
- Delays and project cancellations as a result of design flaws in the products developed by our customers and/or end customers;
- The inability of our customers and/or end customers to dedicate the resources necessary to promote and commercialize their products;
- The inability of our customers and/or end customers to adapt to changing technological demands resulting in their products becoming obsolete; and
- The failure of our customers' and/or end customers' products to achieve market success and gain broad market acceptance.

Any slowdown in the growth of these end markets could harm our business.

***If we are unable to deliver new and innovative software solutions or software license enhancements ahead of rapid technological changes in the market, our revenues could be materially adversely affected.***

We operate in an industry generally characterized by rapidly changing technology and frequent new product introductions that can render existing products obsolete or unmarketable. A major factor in our future success will be our ability to anticipate technological changes and to develop and introduce, in a timely manner, enhancements to our existing software solutions to meet those changes. If we are unable to introduce new software solutions and to respond quickly to industry changes, our business, financial condition, results of operations and cash flows could be materially adversely affected.

The introduction and marketing of new or enhanced software solutions requires us to manage the transition from existing software licenses to minimize disruptions in customer purchasing patterns. There can be no assurance that we will be successful in developing and marketing, on a timely basis, new software solutions, or software license enhancements that our new software licenses will address the changing needs of the marketplace, or that we will successfully manage the transition from existing products. From time to time, we may agree to hold back certain of our software license enhancements for exclusive use of one or a small number of customers, which may limit our ability to timely adapt our broader software solutions range to meet technological innovation by our competitors or the needs of our other customers.

***We may have to invest more resources in research and development than anticipated, which could increase our operating expenses and negatively affect our operating results.***

To contend with industry performance requirements and new applications, engineers, researchers, and other professionals rely extensively on TCAD and EDA software tools to design and optimize advanced IC components. Reliance on TCAD and EDA software tools has increased in recent years as design challenges have become increasingly complex, which influences our development cycle and consequently our performance and results of operations. Additionally, shrinking manufacturing process geometries, application specific customization to improve computing performance, and adoption of new materials for high voltage applications and photonics computing has led to a rapid increase in the complexity of SoCs. We currently devote substantial resources to the research and development of new and enhanced software solutions. However, we may be required to devote more resources than anticipated to address requirements for specific target markets, new competitors, technological advances in the semiconductor and photonics industries or by competitors, our acquisitions, our entry into new markets, or other competitive factors. If we are required to invest significantly greater resources than anticipated without a corresponding increase in revenue, our operating results could decline. Additionally, our periodic research and development expenses may be independent of our level of revenue, which could negatively impact our financial results. We expect these expenses to increase in the foreseeable future as our technology development efforts continue, and there can be no guarantee that our research and development investments will result in software solutions that result in additional revenue.

We may also decide to increase our research and development investment to seize customer or market opportunities, which could negatively impact our financial results.

***Consolidation among our customers and within the industries in which we operate may negatively impact our operating results.***

A number of business combinations, including mergers, asset acquisitions and strategic partnerships, among our customers in the semiconductor and photonics industries have occurred over the last several years, and more could occur in the future. Consolidation among our customers could lead to fewer customers or the loss of customers, increased customer bargaining power or reduced customer spending on software and services. Consolidation among our customers could also reduce the demand for our software solutions and services if customers streamline research and development or operations, reduce purchases or delay purchasing decisions.

Reduced customer spending or the loss of a number of customers, particularly our large customers, could adversely affect our business, financial position and results of operations. In addition, we and our competitors from time to time acquire businesses and technologies to complement and expand our respective software solutions offerings. Consolidated competitors could have considerable financial resources, channel influence, and broad geographic reach, allowing them to engage in competition on the basis of software solution differentiation, pricing, marketing, services, support and more. If any of our competitors consolidate or acquire businesses and technologies that we do not offer, they may be able to offer a larger technology portfolio, additional support and service capability or lower prices, which could negatively impact our business and results of operations.

***Our international sales constitute a substantial portion of our revenue and could be negatively affected by disruptions in international geographies caused by government actions, trade disputes, direct or indirect acts of war or terrorism, international political or economic instability or other similar events.***

A significant portion of our revenue comes from outside the United States. For example, for the years ended December 31, 2020 and 2021, 70% and 69%, respectively, of our revenue was from international customers. Risks inherent in our international business activities include imposition of government controls, export license requirements, restrictions on the export of critical technology, products and services, political and economic instability, trade restrictions, changes in tariffs and taxes, difficulties in staffing and managing international operations, longer accounts receivable payment cycles and the burdens of complying with a wide variety of foreign laws and regulations. Effective patent, copyright and trade secret protection may not be available in every foreign country in which we sell our software solutions and services. Our business, financial condition, results of operations and cash flows could be materially adversely affected by any of these risks.

In addition, we have offices globally with our sales and research and development being conducted in offices located in numerous geographical locations. Moreover, conducting business outside the United States subjects us to a number of additional risks and challenges, including:

- Changes in a specific country's or region's political, regulatory or economic conditions.
- Our ability to maintain our offices and/or operations in countries or regions experiencing military, political or social instability;
- A pandemic, epidemic or other outbreak of an infectious disease, including the current COVID-19 pandemic, which may cause us or our distributors, vendors and/or customers to temporarily suspend our or their respective operations in the affected city or country or completely;
- Compliance with a wide variety of domestic and foreign laws and regulations (including those of municipalities or provinces where we have operations) and unexpected changes in those laws and regulatory requirements, including uncertainties regarding taxes, social insurance contributions and other payroll taxes and fees to governmental entities, tariffs, quotas, export controls, export licenses and other trade barriers;
- Unanticipated restrictions on our ability to sell to foreign customers where sales of software solutions and the provision of services may require export licenses or are prohibited by government action, unfavorable foreign exchange controls and currency exchange rates;
- Imposition of tariffs and other barriers and restrictions, including trade tensions such as U.S.-China trade tensions;
- Potential for substantial penalties and litigation related to violations of a wide variety of laws, treaties and regulations, including labor regulations, export control and anti-corruption regulations (including the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the U.K. Bribery Act);
- Difficulties and costs of staffing and managing international operations across different geographic areas, time zones and cultures;
- Changes in diplomatic and trade relationships.
- Potential political, legal and economic instability, armed conflict, and civil unrest in the countries in which we and our customers are located;
- Difficulty and costs of maintaining effective data security;
- Inadequate protection of our IP;
- Nationalization and expropriation;
- Restrictions on the transfer of funds to and from foreign countries, including withholding taxes and other potentially negative tax consequences;
- Unfavorable and/or changing foreign tax treaties and policies;
- Increased exposure to general market and economic conditions outside of the United States; and
- Currency exchange rate fluctuations and the resulting effect on our revenue and expenses, and the cost and risk of entering into hedging transactions if we chose to do so in the future.

Additionally, countries in certain international regions in which we operate have continued to experience weaknesses in their currency, banking, and equity markets. These weaknesses could adversely affect customer demand for our software solutions and could have an adverse effect on our business, financial condition and results of operations.

***We face risks associated with doing business in China.***

We face increased regulatory uncertainties with respect to our China-based operations, including our wholly foreign-owned enterprise operating in China, any joint ventures we may form or contribute IP or other resources to in the future and sales to China-based customers.

For the years ended December 31, 2020 and 2021, 17.2% and 18.3%, respectively, of our revenue was derived from our China-based operations. For the nine months ended September 30, 2021 and 2022, 16.7% and 19.7% of our

revenue was derived from our China-based operations. Our operating expenses in China consist primarily of compensation, benefits, and overhead. Our operating expenses in China were \$1.4 million and \$2.3 million, respectively, for the years ended December 31, 2020 and 2021, and \$1.4 million and \$1.9 million, respectively, for the nine months ended September 30, 2021 and 2022.

On June 3, 2021, President Biden issued Executive Order 14032 (Addressing the Threat from Securities Investments that Finance Certain Companies of the People's Republic of China) targeting entities that are deemed part of the Chinese military-industrial complex. Additionally, on October 7, 2022, the Bureau of Industry and Security of the U.S. Department of Commerce, or BIS, issued new export controls related to the Chinese semiconductor manufacturing, advanced computing and supercomputer industries. The new export controls impose broad end-use and other restrictions on facilities in China that develop or produce semiconductor chips or manufacturing equipment, which may impact our ability to license or support our software solutions to entities in or doing business with certain advanced AI or "supercomputer" design companies, foundries and manufacturers of assemblies and components in China. We are still evaluating these complex new rules and are unable to quantitatively estimate any impacts at this time. Further U.S. government escalation of restrictions related to China and increased restrictions on Chinese exports may lead to regulatory retaliation by the Chinese government and possibly further escalate geopolitical tensions, and any such scenarios may adversely impact our business. Furthermore, we may, in the future, develop or sell software solutions that are subject to such rules and restrictions. In addition, such export control rules may change or be expanded or interpreted to include the sale of our current software solutions. In addition, geopolitical disruptions among the United States and China could cause general market disruptions and subject our sales efforts in China to licensing restrictions in the future. The prospect of future export controls that are implemented in a similar manner may continue to have an ongoing impact on our business, results of operations or financial conditions. To the extent we are unable to license our software solutions or support to customers in China, our business, including our revenues and our prospects, would be adversely affected.

***Downturns or volatility in general economic conditions, including as a result of the current COVID-19 pandemic or any other outbreak of an infectious disease, could harm our business.***

Our revenue, gross margin, and ability to achieve and maintain profitability depend significantly on general economic conditions and the demand for software solutions in the markets in which our customers compete. Weaknesses in the global economy and financial markets, including the current weaknesses resulting from the ongoing COVID-19 pandemic, and any adverse changes in general domestic and global economic conditions that may occur in the future, including any recession, economic slowdown or disruption of credit markets, may lead to, lower demand for products that incorporate our solutions.

As we have grown, we have become increasingly subject to the risks arising from adverse changes in domestic and global economic conditions. As a result of the current economic slowdown, many companies are delaying or reducing technology purchases, which has had an impact on our visibility into the closing of new business, as opposed to our recurring business. This slowdown has also contributed to, and may continue to contribute to, reductions in sales, longer sales cycles, and increased price pressures, which could adversely affect our business, financial condition, and results of operations.

Additionally, countries in certain international regions in which we operate have continued to experience weaknesses in their currency, banking, and equity markets. These weaknesses could adversely affect customer demand for our software solutions and could have an adverse effect on our financial condition, results of operations and cash flow.

***Our operations could be disrupted by geopolitical conditions, trade disputes, international boycotts and sanctions, political and social instability, acts of war, terrorist activity or other similar events, which could adversely affect our business, financial condition, and results of operations.***

Since we operate on a global basis, our operations could also be disrupted by geopolitical conditions, trade disputes, international boycotts and sanctions, political and social instability, acts of war, terrorist activity or other similar events.

For example, recently Russia initiated significant military action against Ukraine. In response, the United States and certain other countries imposed significant sanctions and export controls against Russia, Belarus and certain individuals and entities connected to Russian or Belarusian political, business and financial organizations, and the United States and certain other countries could impose further sanctions, trade restrictions, and other retaliatory actions should the conflict continue or worsen.

Our board of directors is responsible for overseeing the risks to our business, including risks related to the ongoing conflict between Russia and Ukraine. Such risks include an increased risk of cybersecurity attacks, sanctions, risks related to our employees, service-providers and operations in the affected regions and supply chain disruptions that may affect our customers globally. While none of our revenue is derived from Russia or Ukraine, we have employees



based in both countries and had, prior to the beginning of the conflict, offices in both countries. In response to the ongoing conflict, we recently closed our office in Moscow, Russia, and our office in Kyiv, Ukraine, has been temporarily closed. Our board of directors has received periodic reports from management regarding the impact of the conflict on us and considered whether such events have had, or are reasonably likely to have, a material impact on us. As a result of economic uncertainties and disruption created by the Russian invasion, we recorded an impairment charge of \$0.6 million associated with intangible assets assumed in connection with our acquisition of PolytEDA, which is based in Ukraine and held by our Ukrainian subsidiary. Unless and until the conflict in Ukraine is stabilized, we do not intend to reopen office locations in either country.

As of September 30, 2022, we had 7 employees in Russia and 10 employees and 2 contractors in Ukraine, all of which were working remotely. If our employees in Russia or Ukraine become subject to a military draft or are unable to work due to the ongoing conflict, the development of our next generation software could be delayed, which could negatively impact our business.

We have taken security measures designed to help protect against cyber-attacks, security breaches and impermissible downloads in Russia and Ukraine. To the extent that our security measures do not timely detect or prevent such cyber-attacks, security breaches or impermissible downloads, we may be subject to a number of risks, including those risks discussed below in “—Risks Related to Intellectual Property, Information Technology and Data Security and Privacy—If our information technology systems, information, or other resources or those of third parties upon which we rely are or were compromised, we could experience adverse consequences resulting from such compromise, including but not limited to damage to our reputation and our business, exposure to liability, and material and adverse effects to our results of operations, potentially irreparably.”

It is not possible to predict the broader consequences of Russia’s invasion of Ukraine, including related geopolitical tensions, and the measures and retaliatory actions taken by the United States, and other countries in respect thereof as well as any counter measures or retaliatory actions by Russia or Belarus in response, including, for example, potential cyberattacks or the disruption of energy exports, which are likely to cause regional instability, geopolitical shifts, and could materially adversely affect global trade, currency exchange rates, regional economies and the global economy. The situation remains uncertain, and while it is difficult to predict the impact of any of the foregoing, the conflict and actions taken in response to the conflict could, but are not presently expected to, materially increase our costs, disrupt our supply chain, reduce our sales and earnings, impair our ability to raise additional capital when needed on acceptable terms, if at all, or otherwise further adversely affect our business, financial condition, and results of operations.

***We rely on our international sales channels force to sell a substantial portion of our software solutions, and any adverse fluctuations in exchange rates could adversely affect our performance.***

For the years ended December 31, 2020 and 2021, respectively, approximately 70% and 69% of our revenue came through our international sales channels and we expect to continue to generate a significant amount of revenue through international sales in the future. Our international sales team sells our software solutions to new and existing customers, expands installations within the existing customer base, offers consulting services and provides the first line of technical support. The revenues and expenses associated with our international direct sales channels are subject to foreign currency exchange fluctuations, including the potential of a stronger American dollar which has the potential of impacting our ability to compete internationally, and, as a result, our future financial results may be impacted by fluctuations in exchange rates, including Korean Won and Japanese Yen.

Our ability to increase our customer base and achieve broader market acceptance of our software solutions will depend to a significant extent on our ability to expand our international sales force. We plan to continue expanding our sales force, both domestically and internationally. We also plan to dedicate significant resources to our sales and marketing programs. All of these efforts will require us to invest significant financial and other resources. Our business will be harmed if our sales and marketing efforts do not generate significant increases in revenue or if the increases in revenue are smaller than anticipated. We may not achieve anticipated revenue growth from expanding our sales force if we are unable to hire, develop, integrate and retain talented and effective sales personnel, if our new and existing sales personnel, on the whole, are unable to achieve desired productivity levels in a reasonable period of time, or if our sales and marketing programs are not effective, the occurrence of which could adversely affect our business, financial condition, and results of operations.

***Our ability to raise additional capital in the future may be limited and could prevent us from executing our growth strategy.***

Our ability to operate and expand our business depends on the availability of adequate capital, which in turn depends on cash flow generated by our business and the availability of borrowings under our outstanding loans, line of credit and future debt, equity or other applicable financing arrangements. We believe that our cash flow from operations,

existing cash, availability under our existing credit line and the anticipated net proceeds of this offering will satisfy our anticipated cash requirements for at least the next 12 months. However, we have based this estimate on our current operating plans and expectations, which are subject to change, and cannot assure you that our existing resources will be sufficient to meet our future liquidity needs. We may require additional capital to respond to business opportunities, challenges, acquisitions or other strategic transactions and/or unforeseen circumstances. The timing and amount of our working capital and capital expenditure requirements may vary significantly depending on numerous factors, including:

- market acceptance of our SIP and other solutions, and our IP deployment solutions;
- the need to adapt to changing technologies and technical requirements;
- the existence of opportunities for expansion; and
- access to and availability of sufficient management, technical, marketing and financial personnel.

If our capital resources are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity securities or debt securities or obtain additional debt financing. The sale of additional equity securities or convertible debt securities would result in additional dilution to our stockholders. Additional debt would result in increased expenses and could result in covenants that would restrict our operations and our ability to incur additional debt or engage in other capital-raising or other activities. There can be no assurance that additional financing, if required, will be available in amounts or on terms acceptable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us, when we require it, our ability to continue to grow and support our business and respond to business opportunities and challenges could be significantly limited.

***Software bugs or defects could expose us to liability and harm our reputation and we could lose market share.***

Software products frequently contain bugs or defects, especially when first introduced, when new versions are released, or when integrated with technologies developed by acquired companies, and the likelihood of bugs or defects may increase for our business if we accelerate the frequency of its product releases. There can be no assurance that bugs or defects will not be found in new or enhanced products after commencement of commercial shipments. Product bugs or defects, including those resulting from third-party licensors, could affect the performance or interoperability of our products, could delay the development or release of new products or new versions of products and could adversely affect market acceptance or perception of our products. In addition, any allegations of manufacturability issues resulting from use of our IP products could, even if untrue, adversely affect our reputation and our customers' willingness to license IP products from us. Any such bugs or defects or delays in releasing new products or new versions of products or allegations of unsatisfactory performance could cause us to lose customers, increase our service costs, result in diversion of resources, damage to our reputation and subject us to liability for damages, any one of which could materially and adversely affect our business and operating results.

***Our employees, consultants and third-party providers have in the past and may in the future engage in misconduct that materially adversely affects us.***

Our employees, consultants and third-party providers have in the past and may in the future engage in misconduct that materially and adversely affects us. For example, a former employee in China impermissibly used our computers and software to write and configure software for other companies. Misconduct by these parties could include intentional failures to comply with the applicable laws and regulations in the United States and abroad, report financial information or data accurately, violate our internal security policies or duties of confidentiality or disclose unauthorized activities to us. Such misconduct could result in loss of proprietary information or trade secrets, legal or regulatory sanctions, loss of important business information and cause serious harm to our reputation. It is not always possible to identify and deter misconduct, and any precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses, or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of significant civil, criminal and administrative penalties, which could have a significant impact on our business. Whether or not we are successful in defending against such actions or investigations, if any of our employees, consultants or third-party providers were to engage in or be accused of misconduct, we could be exposed to legal liability, incur substantial costs, loss of proprietary information, our business and reputation could be materially adversely affected, and we could fail to retain key employees.

***We use certain third-party services to manage and operate our business, and any failure or interruption in the services provided by these third parties could adversely affect our business, financial condition and results of operations.***

We use a number of third-party services to manage and operate our business, including software to assist our sales and marketing teams and our finance and accounting teams. These services are critical to our ability to increase our sales to customers, operate, and maintain our platform, and accurately maintain books and records. Any disruption in these services could impair our ability to execute on our operating plan and disrupt our business. Further, if these services cease to be available to us on commercially reasonable terms, or at all, we may be required to use additional or alternative services, or to develop additional capabilities within our business, any of which could require significant resources and adversely affect our business, financial condition and results of operations.

***Periodic reorganizations and adjustments to our sales force could temporarily impact productivity and adversely disrupt our sales.***

We rely heavily on our direct sales force. From time to time, we reorganize and make adjustments to our sales force in response to such factors as management changes, performance issues, market opportunities and other considerations. These changes may result in a temporary lack of sales production and may adversely impact revenue in future quarters. There can be no assurance that we will not restructure our sales force in future periods or that the transition issues associated with such a restructuring will not recur.

***Variations in actual sales activity from sales forecasts could adversely affect our business, financial condition and results of operations.***

We make many operational and strategic decisions based upon short-term and long-term sales forecasts. Our sales personnel continually monitor the status of all proposals, including the estimated closing date and the value of the sale, in order to forecast quarterly and annual sales. These forecasts are subject to significant estimation and are impacted by many external factors. For example, a slowdown in research and development spending or economic factors could cause purchasing decisions to be delayed. A variation in actual sales activity from that forecasted could cause us to plan or to budget incorrectly and, therefore, could adversely affect our business, financial condition and results of operations.

***We may not realize the anticipated benefits of our acquisitions or investments, our business could be disrupted because of acquisitions or investments and, depending on how we finance such acquisitions or investments, we could use significant amounts of cash.***

Our success depends in part on our ability to continually enhance and broaden our software solutions offerings in order to support our long-term strategic direction, strengthen our competitive position, expand our customer base, provide greater scale to increase our investments in research and development to accelerate innovation, provide increased capabilities to our existing software solutions, supply new software solutions and services, and enhance our distribution channels. Accordingly, our success depends in part on our ability to identify, complete and integrate acquisitions. Over the past several years, we have completed nine such acquisitions of companies or strategic assets, and in the future, from time to time we will likely seek to acquire or invest in businesses, products, or technologies. Any acquisition, investment or business relationship may result in unforeseen operating difficulties and expenditures, as we have experienced historically. In particular, we may encounter difficulties assimilating or integrating the businesses, technologies, products, personnel or operations of the acquired companies, particularly if the key personnel of the acquired company choose not to work for us, their software is not easily adapted to work with our software solutions or we have difficulty retaining the customers of any acquired business due to changes in ownership, management or otherwise. For example, we have in the past and may in the future face challenges associated with the integration and migration of processes, including issue tracking, release procedures and standardization of license models, which can delay introduction of software solutions. We may be unable to successfully integrate previously acquired businesses and technologies or those acquired in the future, which could adversely impact our business, financial condition and results of operations.

Acquisitions and investments involve numerous risks, including:

- the inability to complete the acquisition or investment on commercially acceptable terms;
- the inability to obtain timely approvals from governmental authorities under competition and antitrust laws and the resulting delay in consummating the acquisition;
- the risk that we may have difficulty incorporating the acquired technologies or products with our existing software solutions and maintaining uniform standards, controls, procedures, and policies;

- the risk that we may not realize the anticipated increase in our revenue if a larger than predicted number of customers decline to renew annual leases or software license updates and license support or, if we are unable to sell or license the acquired solutions to our customer base;
- unforeseen difficulties in legal entity merger integration activities that may result in legal and tax exposures or the loss of anticipated tax benefits;
- disruption of our ongoing businesses and diversion of management attention;
- the risk that our relationships with current and new employees, customers, partners and distributors could be impaired;
- difficulties in integrating the acquired entities, products or technologies and overcoming any unforeseen technical problems with the acquired products or technologies;
- difficulties in operating the acquired business profitably;
- difficulties in preserving and transitioning important licensing, research and development, and customer, distributor and supplier relationships;
- difficulties in implementing the appropriate controls and procedures to ensure the acquired entity is in compliance with the Sarbanes-Oxley Act;
- the risk that the acquisition may result in increased litigation or contingencies, including as described in –“Pending or future investigations or litigation could have a material adverse effect on our results of operations and our stock price” below;
- risks associated with entering lines of business or geographies in which we have no or limited prior experience; and
- unanticipated costs, expenses or liabilities.

In addition, any future acquisitions or investments may result in:

- issuances of dilutive equity securities, which may be at a discount to market price;
- use of significant amounts of cash;
- the incurrence of debt;
- the assumption of significant liabilities;
- unfavorable financing terms;
- large one-time expenses; and
- the creation of certain intangible assets, including goodwill, the write-down of which may result in significant charges to earnings.

Any of these factors could have a material adverse effect on our business, financial condition and results of operations.

***If we lose the services of our senior executives or key technical personnel who possess specialized industry knowledge and technical skills, or are unable to hire additional key personnel, it could reduce our ability to compete, to manage our operations effectively, or to develop new software solutions and services.***

We are highly dependent upon the ability and experience of our senior executives and our key technical and other management employees, and we do not maintain key person insurance for any of our employees. Although we have employment agreements with certain employees, the loss of these employees, or any of our other key employees, could adversely affect our ability to conduct our operations.

Further, to be successful, we must also attract and retain key employees who join us organically and through acquisitions. There are a limited number of qualified engineers with specialized applicable skills, and competition for these individuals and other qualified employees is intense and has increased globally, including in major markets such as Asia. Our employees are often recruited aggressively by our competitors and our customers worldwide. Any failure to recruit and retain key employees could harm our business, results of operations and financial condition, and our recruiting and retention efforts may be negatively impacted by restrictions on travel and business activity due to the COVID-19 pandemic. Additionally, efforts to recruit and retain qualified employees could be costly and negatively impact our operating expenses.

Historically we have issued equity awards as a key component of our overall compensation. If we are unable to grant attractive equity-based packages in the future, it could limit our ability to attract and retain key employees.

***We may not be able to effectively manage our growth, and we may need to incur significant expenditures to address the additional operational and control requirements of our growth, either of which could harm our business and operating results.***

In order to succeed in executing our business plan, we will need to manage our growth effectively as we make significant investments in research and development and sales and marketing and expand our operations and

infrastructure both domestically and internationally. In addition, in connection with operating as a public company, we will incur additional significant legal, accounting and other expenses that we did not incur as a private company. If our revenue does not increase to offset these increases in our expenses, we may not achieve or maintain profitability in future periods.

To continue to grow and to meet our ongoing obligations as a public company, we must continue to expand our operational, engineering, accounting and financial systems, procedures, controls, personnel and other internal management systems. This may require substantial managerial and financial resources, and our efforts in this regard may not be successful. Our current systems, procedures and controls may not be adequate to support our future operations and we may be unable to meet reporting obligation deadlines under the Exchange Act. Unless our growth results in an increase in our revenue that is proportionate to the increase in our costs associated with this growth, our operating margins will be adversely affected. If we fail to adequately manage our growth, improve our operational, financial and management information systems, or effectively motivate and manage our new and future employees, it could harm our business.

***The global COVID-19 pandemic has affected our business and operations.***

The COVID-19 pandemic and efforts to control its spread have significantly curtailed the movement of people, goods, and services worldwide. In light of the uncertain situation relating to the spread of COVID-19, we took precautionary measures intended to minimize the risk of the virus to our employees, our customers, and the communities in which we operate. These measures included modifications to employee travel policies, office closures when and as employees are advised to work from home, and other similar measures, some of which are still in place.

Because the future effects of the COVID-19 pandemic are unpredictable, the impact and repercussions could be more prolonged and significant in the future. These possible disruptions could result in further reductions to capital expenditure budgets, delayed purchasing decisions, longer sales cycles, extended payment terms or missed payments, and postponed or canceled projects, any of which would negatively impact our business and operating results, including revenue and cash flows. We cannot predict the long-term impact that the COVID-19 pandemic may have on our business and cannot guarantee that it will not be materially negative. The ongoing effects of the COVID-19 pandemic and/or the precautionary measures that we have adopted may create operational and other challenges, any of which could harm our business and results of operations.

The COVID-19 pandemic has had, and may continue to have, adverse effects on economies and financial markets globally, leading to an economic downturn, which may decrease technology spending generally and could adversely affect demand for our services. It is not possible at this time to estimate the full impact that COVID-19 will have on our business, as the impact will depend on future developments, the emergence of additional strains and subsequent effects of the repercussions, which are highly uncertain and cannot be predicted.

To the extent the COVID-19 pandemic adversely affects our business, financial condition and results of operations, it may also have the effect of heightening many of the other risks described in this "Risk Factors" section, including but not limited to, those related to our ability to increase sales to existing and new customers due to shifting demand, our performance in international markets, our ability to continue to perform on existing contracts, develop and deploy new technologies and expand our marketing capabilities and sales organization.

***We received a Paycheck Protection Program loan, and our application for the PPP Loan and loan forgiveness could in the future be determined to have been impermissible or could result in damage to our reputation.***

In May 2020, we received an unsecured loan in the amount of \$2.3 million under the Paycheck Protection Program, or the PPP Loan. On June 29, 2021, the PPP Loan was forgiven. The Paycheck Protection Program was established under the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, and is administered by the U.S. Small Business Administration, or the SBA. If we are later determined to have been ineligible to receive the PPP Loan or loan forgiveness, we may be subject to significant penalties, including significant civil, criminal and administrative penalties, we could be required to repay the PPP Loan in its entirety and our reputation could suffer. A review or audit by the SBA or other government entity or claims under the U.S. False Claims Act could consume significant financial and management resources and may have an adverse effect on our business, results of operations and financial condition.

***Our estimates of market opportunity and forecasts of market growth may prove to be inaccurate.***

Market opportunity estimates and growth forecasts whether obtained from third-party sources or developed internally, are subject to significant uncertainty and are based on assumptions and estimates that may prove to be inaccurate. The estimates and forecasts included in this prospectus relating to the size and expected growth of the target market and market demand may also prove to be inaccurate. For example, Grand View Research's estimations for the size of

the 2021 and 2030 global EDA market and the growth thereof are based on assumptions, including as to the future growth of the integrated circuits and electronic manufacturing markets, and the continued advancement of technology in those industries that may prove to be inaccurate or incorrect. In addition, the estimated global EDA market may not materialize in the timeframe we expect, if ever, and even if the markets meet the estimates presented in this prospectus, this should not be taken as indicative of our future growth or prospects. In order to be successful, we will need to continue to develop and advance our software solutions, secure new and renewed bookings, obtain sufficient capital to finance our business and otherwise successfully scale our business and operations. We face a number of challenges in achieving these objectives, including those described elsewhere in these risk factors. There can be no assurance that we will be able to achieve our objectives or successfully grow our business, capture meaningful market share or take advantage of market opportunities.

### **Risks Related to Intellectual Property, Information Technology and Data Security and Privacy**

***If we are unable to protect our proprietary technology and inventions through patents and other intellectual property rights, our ability to compete successfully and our financial results could be adversely impacted.***

We seek to protect our proprietary technology and innovations, particularly those relating to our software solutions, through patents, trade secrets and other intellectual property rights. Maintenance of our patent portfolios, particularly outside of the United States, is expensive, and the process of seeking patent protection is lengthy and costly. While we intend to maintain our current portfolio of patents and to continue to prosecute our currently pending patent applications and file future patent applications when appropriate, the value of these actions may not exceed their expense. Existing patents and those that may be issued from any pending or future applications may be subject to challenges, invalidation or circumvention, and the rights granted under our patents may not provide us with meaningful protection or any commercial advantage. In addition, the protection afforded under the patent laws of one country may not be the same as that in other countries. This means, for example, that our right to exclusively commercialize a product in those countries where we have patent rights for that product can vary on a country-by-country basis. We also may not have the same scope of patent protection in every country where we do business.

Additionally, it is difficult and costly to monitor the use of our intellectual property. It may be the case that our intellectual property is already being infringed and infringement may occur in the future without our knowledge. Litigation may be necessary to enforce our intellectual property rights.

While it is our policy to protect and defend our rights to our intellectual property, we cannot predict whether steps taken by us to enforce and protect our intellectual property rights will be adequate to prevent infringement, misappropriation, or other violations of our intellectual property rights. Any inability to meaningfully enforce our intellectual property rights could harm our ability to compete. Moreover, in any lawsuit we bring to enforce our intellectual property rights, a court may refuse to stop the other party from using the technology at issue on grounds that our intellectual property rights do not cover the technology in question. Further, in such proceedings, the defendant could counterclaim that our intellectual property is invalid or unenforceable and the court may agree, in which case we could lose valuable intellectual property rights. Any litigation of this nature, regardless of outcome or merit, could materially harm our business and hurt our competitive advantage.

We generally control access to and use of our confidential information and trade secrets using internal and external controls, including contractual protections with employees, contractors, and customers. We rely in part on the laws of the United States and international laws to protect our trade secrets. All employees and consultants are required to execute confidentiality agreements in connection with their employment and consulting relationships with us. We also require them to agree to disclose and assign to us all inventions conceived or made in connection with the employment or consulting relationship. However, we cannot guarantee that we have entered into such agreements with every such party and we may not have adequate remedies in case of a breach of any such agreements. Our trade secrets could be disclosed to our competitors or others may independently develop substantially equivalent technologies or otherwise gain access to our trade secrets. Trade secrets can be difficult to protect and some courts inside and outside of the United States are less willing or unwilling to protect trade secrets.

Despite our efforts to protect our intellectual property, unauthorized parties may still copy, misappropriate, or otherwise obtain and use our software, technology, or other information that we regard as our proprietary intellectual property. In addition, we intend to expand our international operations, and effective patent, copyright, trademark, and trade secret, and other intellectual property protection may not be available or may be limited in some foreign countries. We currently have no trademark registrations or pending applications to register trademarks in foreign countries. Further, intellectual property law, including statutory and case law, particularly in the United States, is constantly developing, and any changes in the law could make it harder for us to enforce our rights.

We have predominantly developed our proprietary technology and other intellectual property internally, through development by our employees and independent contractors and externally, including through our research institution

partners and their students. Our development has taken place globally, including the United States, Brazil, Europe, the Middle East and India. We attempt to protect our intellectual property, technology, and confidential information by requiring our employees, consultants, contractors and developer partners who develop intellectual property on our behalf to enter into confidentiality and invention assignment agreements. However, these agreements may not have been properly entered into on every occasion with the applicable counterparty, and such agreements may not always have been effective when entered into in granting ownership of, controlling access to and distribution of our proprietary information or technology. Certain state laws may require that we provide certain notices with respect to the assignment of particular inventions in such agreements, and we may not have been able to include such specific notice requirements in every occasion that it required. Further, if we failed to enter into one of these agreements, or if the assignment language is found to be insufficient under applicable laws, it may not have effectively granted ownership of certain technology or other intellectual property to us. In such an event, there would be a risk that the applicable counterparty would not be available to (or would not be willing to) assist us in perfecting our ownership of the technology or intellectual property, or the counterparty may even assert ownership rights against us and make claims for fees, damages, or equitable relief with respect to such technology or intellectual property, which may have an adverse effect on our ability to utilize, perfect, or protect our proprietary rights over such technology and intellectual property. Each jurisdiction has different rules regarding the correct language and procedures required to effectively assign intellectual property rights, and we may not have effectively implemented such language and procedures in each jurisdiction on every occasion, which may also limit our ability to perfect and protect our technology and intellectual property rights. Further, these agreements do not prevent our competitors or partners from independently developing technologies that are substantially equivalent or superior to our products. In addition, these agreements may not effectively prevent unauthorized use or disclosure of our confidential information, intellectual property, or technology and may not provide an adequate remedy in the event of unauthorized use or disclosure of our confidential information or technology, or infringement of our intellectual property.

From time to time, particularly over the last several years, we have acquired a portion of our intellectual property from one or more third parties. While we have conducted diligence with respect to such acquisitions, because we did not participate in the development or prosecution of such acquired intellectual property, we cannot guarantee that our diligence efforts identified and/or remedied all issues related to such intellectual property, including potential ownership errors, potential errors during prosecution of such intellectual property, and potential encumbrances that could limit our ability to enforce such intellectual property rights.

***If we are unable to protect our proprietary technology and inventions through trade secrets, our competitive position and financial results could be adversely affected.***

As noted above, we seek to protect our proprietary technology and innovations, particularly those relating to our software solutions, as patents, trade secrets and other forms of intellectual property. Additionally, while software and other forms of our proprietary works may be protected under patent or copyright law, in some cases we have chosen not to seek any patents or register any copyrights in these works, and instead, primarily rely on protecting our software as a trade secret. In the United States, trade secrets are protected under the federal Economic Espionage Act of 1996 and the Defend Trade Secrets Act of 2016, or the Defend Trade Secrets Act, and under state law, with many states having adopted the Uniform Trade Secrets Act, or the UTSA. In addition to these federal and state laws inside the United States, under the World Trade Organization's Trade Related-Aspects of Intellectual Property Rights Agreement, or the TRIPS Agreement, trade secrets are to be protected by World Trade Organization member states as "confidential information." Under the UTSA and other trade secret laws, protection of our proprietary information as trade secrets requires us to take steps to prevent unauthorized disclosure to third parties or misappropriation by third parties. In addition, the full benefit of the remedies available under the Defend Trade Secrets Act requires specific language and notice requirements in the relevant agreements, which may not be present in all of our agreements. While we require our officers, employees, consultants, distributors, and existing and prospective customers and collaborators to sign confidentiality agreements and take various security measures to protect unauthorized disclosure and misappropriation of our trade secrets, we cannot assure or predict that these measures will be sufficient. The semiconductor and photonics industries are generally subject to high turnover of employees, so the risk of trade secret misappropriation may be amplified. If any of our trade secrets are subject to unauthorized disclosure or are otherwise misappropriated by third parties, our competitive position may be materially and adversely affected.

***We may be subject to claims that we have wrongfully hired an employee from a competitor, or that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.***

Many of our employees, consultants and advisors, or individuals that may in the future serve as our employees, consultants and advisors, are currently or were previously employed at companies including our competitors or potential competitors. Although we try to ensure that our employees, consultants, independent contractors and

advisors do not use the confidential or proprietary information, trade secrets or know-how of others in their work for us, we may be subject to claims that we have inadvertently or otherwise used or disclosed confidential or proprietary information, trade secrets, or know-how of these third parties, or that our employees, consultants, independent contractors or advisors have inadvertently or otherwise used or disclosed confidential information, trade secrets, or know-how of such individual's current or former employer. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees. Claims that we, our employees, consultants, or advisors have misappropriated the confidential or proprietary information, trade secrets, or know-how of third parties could have a material adverse effect on our business, financial condition, results of operations and prospects.

***Our success depends on the interoperability of our software solutions with our customers' intended use cases and with products and services of other companies, including our competitors.***

The success of our software solutions depends on the interoperability of our software with our customers' intended use cases and often depends on the existing products and services of other companies, including our direct competitors. As a result, our customers' bookings may rapidly evolve, utilize multiple standards, include multiple versions and generations of our software. In addition, to the extent that hardware and software vendors, including our competitors, perceive that their applications or technologies compete with our software solutions or services, they may have an incentive to withhold any cooperation necessary to ensure interoperability, decline to share access or sell to us their proprietary protocols or formats, or engage in practices to actively limit the functionality, compatibility and certification of our software solutions. In addition, competitors may fail to certify or support or continue to certify or support our software solutions for their systems.

If any of the foregoing occurs, our software solutions development efforts may be delayed or foreclosed and it may be difficult and more costly for us to achieve functionality that would make our offerings attractive to our customers or potential customers, and we may, among other consequences, lose or fail to increase our market share and experience reduced demand for our services, any of which could negatively impact our business, financial condition and results of operations.

***If our information technology systems, information, or other resources or those of third parties upon which we rely are or were compromised, we could experience adverse consequences resulting from such compromise, including but not limited to damage to our reputation and our business, exposure to liability, and material and adverse effects to our results of operations, potentially irreparably.***

In conducting our business, we and the third parties upon which we rely routinely collect and store sensitive data, including proprietary technology, trade secrets, personal information, and other confidential information about our business and our customers, suppliers, and business partners. The secure processing, maintenance and transmission of this information is critical to our operations and business strategy.

Increasingly, companies are subject to a wide variety of threats to their networks, data and information technology systems. Such threats are prevalent, continue to rise, are increasingly difficult to detect, and come from a variety of sources, including traditional computer "hackers," threat actors, "hacktivists," organized criminal threat actors, personnel (such as employee theft of misuse), and sophisticated nation-state and nation-state supported actors. These threats create risks for our, and our third-party service providers', products and services, information technology systems, internal networks, infrastructure, and cloud deployed products and the information each stores and processes (such products, services, systems, networks, infrastructure, cloud resources, and information collectively, Resources). We, and our third-party service providers, may be subject to disruptions or security breaches of our Resources caused by ransomware, supply chain attacks, malicious code, malware, denial of service attacks, software bugs, software or hardware failures, illegal hacking, criminal fraud or impersonation, acts of vandalism or terrorism, actions or failure to act by our employees or other with access to our network, or other similar threats. We and our third-party service providers are also subject to system malfunctions, natural disasters, public health epidemics, war or military conflicts, telecommunication and electrical failures. Threat actors, nation-states, and nation-state-supported actors now engage, and are expected to continue to engage, in cyber-attacks, including for geopolitical reasons and in connection with military conflicts and operations. During times of war and other major conflicts, we and the third parties upon which we rely may be vulnerable to heightened risk of these attacks, including retaliatory cyber-attacks that could materially disrupt our systems and operations, supply chain, and ability to provide our services. Additionally, future or past business transactions could expose us to additional security risks and vulnerabilities, as our Resources could be negatively affected by vulnerabilities present in acquired or integrated entities' systems and technologies.

Although we have implemented security measures to prevent such disruptions, security breaches, cyber-attacks, and vulnerabilities our Resources have been and may in the future be compromised by the aforementioned or similar



threats, and result in unauthorized, unlawful, or accidental acquisition, modification, destruction, loss, alteration, encryption, disclosure of, or access to our Resources, or the third parties upon which we rely. Additionally, our ability to monitor these third parties' information security practices is limited. If these third parties do not have adequate information security measures in place and experience a disruption, security breach or cyber-attack, we could experience adverse consequences. Our security measures, or those of our third-party service providers, may not timely detect or prevent such disruptions, security breaches, cyber-attacks, or vulnerabilities in all instances. The costs to us to reduce the risk of or alleviate such disruptions, security breaches, cyber-attacks and vulnerabilities could be significant.

Additionally, applicable data privacy and security obligations may require us to notify relevant stakeholders of certain disruptions, security breaches and cyber-attacks. Such disclosures are costly, and the disclosure or the failure to comply with such requirements could lead to adverse consequences.

Furthermore, any type of disruption, security breach, cyber-attack, or vulnerability, whether experienced by us or a third-party upon which we rely, could harm our reputation or deter existing or prospective customers from using our software solutions and services, increase our reporting requirements once we become a public company and/or oversight, increase our operating expenses in order to contain and remediate the incident, expose us to unbudgeted or uninsured liability, disrupt our operations, divert management focus away from other priorities, result in litigation (including class claims), regulatory scrutiny (such as investigations, audits, or inspections) or restrictions on processing sensitive information (including personal information), result in the imposition of penalties and fines under state, federal and foreign laws or by or other adverse consequences.

Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from liabilities, damages, or claims related to our data privacy and security obligations. Furthermore, our cyber insurance policies may not be adequate to compensate us for the potential losses arising from any such disruption in or failure or security breach of our systems or third-party systems where information important to our business operations or commercial development is stored. In addition, such insurance may not be available to us in the future on economically reasonable terms, or at all. Further, our insurance may not cover all claims made against us and could have high deductibles in any event, and defending a suit, regardless of its merit, could be costly and divert management attention.

***Our software licenses contain third-party open source software components, and failure to comply with the terms of the underlying open source software licenses could restrict our ability to deliver our software licenses or subject us to litigation or other actions.***

Some of our software licenses contain software modules licensed to us under "open source" licenses, and we expect to continue to incorporate such open source software in our software licenses in the future. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide support, warranties, indemnification, or other contractual protections regarding infringement claims or the quality of the code. In addition, the public availability of such software may make it easier for others to compromise our products.

Some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use, or grant other licenses to our intellectual property. We seek to ensure that our proprietary software is not combined with, and does not incorporate, open source software in ways that would require the release of the source code of our proprietary software to the public. However, if we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors or new entrants to create similar offerings with lower development effort and time and ultimately could result in a loss of our competitive advantages. Alternatively, to avoid the public release of the affected portions of our source code, we could be required to expend substantial time and resources to re-engineer some or all of our software. We incorporate software that is licensed under open source licenses which could require release of proprietary code if such license was released or distributed in any manner that would trigger such a requirement to third parties. We take steps to ensure that such software is not released or distributed. Additionally, some open source projects have vulnerabilities and architectural instabilities and are provided without warranties or services to actively provide us patched versions when available, and which, if not properly addressed, could negatively affect the performance of our products.

Although we have certain processes in place to monitor and manage our use of open source software to avoid subjecting our software licenses to conditions we do not intend, the terms of many open source licenses have not been interpreted by U.S. or foreign courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to provide or distribute our products. From time to time, there have been claims challenging the ownership of open source software against companies that incorporate

open source software into their products, and the licensors of such open source software provide no warranties or indemnities with respect to such claims. As a result, we and our customers could be subject to lawsuits by parties claiming ownership of what we believe to be open source software. Moreover, we cannot assure you that our processes for monitoring and managing our use of open source software in our software licenses has been, or will be, effective.

If we are held to have breached or failed to fully comply with all the terms and conditions of an open source software license, or if an author or other third party that distributes such open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations, could be subject to significant damages, enjoined from the licensing of our software licenses or other liability, or be required to seek costly licenses from third parties to continue providing our software on terms that, if available at all, are not economically feasible, to re-engineer our software, to discontinue or delay the provision of our software if re-engineering could not be accomplished on a timely basis, or to make generally available, in source code form, our proprietary code, any of which would adversely affect our business, financial condition and results of operations.

***We may not be able to continue to obtain licenses to third-party software and intellectual property on reasonable terms or at all, which may disrupt our business and harm our financial results.***

We license third-party software and other intellectual property for use in research and development and, in several instances, inclusion in our products. We also license third-party software, including the software of our competitors, to test the interoperability of our software solutions with other industry software tools and in connection with our professional services. Our third-party licenses may need to be renegotiated or renewed from time to time, or we may need to obtain new licenses in the future. Some of these licenses may also be terminated by the counterparty for convenience with limited notice to us. Third parties may stop adequately supporting or maintaining their technology, they may become insolvent or cease conducting business in the ordinary course, or they or their technology may be acquired by our competitors. From time to time, our licensors may license their technology to us on condition that we do not provide such technology or licenses incorporating such technology to certain customers. If we are unable to obtain licenses to these third-party software and intellectual property on reasonable terms or at all, we may not be able to sell the affected products, our customers' use of the licenses may be interrupted, or our software solutions development processes and professional services offerings may be disrupted, which could in turn harm our financial results, our customers, and our reputation.

The inclusion of third-party intellectual property in our software solutions can also subject us and our customers to intellectual property infringement claims. Although we seek to mitigate this risk contractually, we have not always been able to, and may not in future be able to sufficiently limit our potential liability. Regardless of outcome, infringement claims may require us to use significant resources and may divert management's attention. See the risk factor "—If we are unable to protect our proprietary technology and inventions through patents and other intellectual property rights, our ability to compete successfully and our financial results could be adversely impacted."

***We are subject to stringent and changing privacy and security laws, regulations, standards, policies, and contractual obligations related to privacy, data protection, and information security. Our actual or perceived failure to comply with such obligations could lead to government enforcement actions, a disruption of our services, private litigation, changes to our business practices, increased costs of operations, adverse publicity, limitations on the use or adoption of our services, and other negative effects on our operating results and overall harm to our business.***

As a regular part of our business, we collect, store, use, share and otherwise process information about individuals, including personal information and/or other confidential information from our customers. Our handling of such information is subject to a variety of evolving privacy and security laws and regulations, including regulation by various government agencies, such as the U.S. Federal Trade Commission and various state, local, and foreign governments. These new or proposed laws and regulations are subject to differing interpretations and may be inconsistent among jurisdictions, and guidance on implementation and compliance practices are often updated or otherwise revised, which adds to the complexity of processing personal information. Moreover, we are subject to the terms of our internal and external privacy and security policies, representations, certifications, standards, publications, contracts and other obligations related to privacy and security. These and other obligations could require us to incur additional costs to achieve compliance, limit our competitiveness, necessitate the acceptance of more onerous obligations in our contracts, restrict our ability to use, store, transfer, and process information, impact our ability to process or use information in order to support the provision of our services, affect our ability to offer our services in certain locations, result in increased expenses, reduce overall demand for our services, and make it more difficult to meet expectations of relevant stakeholders.

In the United States, both the federal and various state governments, as well as local governments, have adopted or are considering, laws, or regulations governing the collection, distribution, use, storage and other processing of information collected from or about individuals, households, or devices. A range of enforcement agencies exist at both the state and federal levels that can enforce these laws and regulations. These laws and regulations may apply to our activities, including, for example, state data breach notification laws, state personal information privacy laws, and federal and state consumer protection laws.

For example, California enacted the California Consumer Privacy Act, or CCPA, which became operative on January 1, 2020. Additionally, although not effective until January 1, 2023, the California Privacy Rights Act, or CPRA, which expands and amends the CCPA, was passed on November 3, 2020. The CCPA, as amended by the CPRA, requires covered businesses to, among other things, provide new disclosures to California consumers, and affords such consumers new privacy rights such as the ability to opt-out of certain sales of personal information and expanded rights to access and require deletion of their personal information, opt out of certain personal information sharing, and receive detailed information about how their personal information is collected, used and shared. The CCPA and CPRA provide for civil penalties for violations, as well as a private right of action for security breaches that may increase security breach litigation. Further, Virginia enacted the Virginia Consumer Data Protection Act, or VCDPA, effective January 1, 2023, Colorado recently passed the Colorado Privacy Rights Act, or CPA, effective July 1, 2023, Connecticut passed the Connecticut Data Privacy Act, or CDTA, effective July 1, 2023, and Utah recently passed the Utah Consumer Privacy Act, or UCPA, effective December 31, 2023. These laws demonstrate our vulnerability to the evolving regulatory environment related to personal information and may increase our compliance costs and potential liability and could harm our business, including how we use personal information. A number of other proposals exist for new federal and state privacy legislation that, if passed, could increase our potential liability, increase our compliance costs and harm our business.

Several foreign jurisdictions, including the European Union, or EU, United Kingdom, or UK, China, and others, also have laws and regulations which apply more broadly to the collection, use, storage, disclosure, security, transfer, and other processing of various types of data, including data that identifies or may be used to identify an individual. For example, we are subject to the EU General Data Protection Regulation, or EU GDPR, the EU GDPR as it forms part of UK law by virtue of section 3 of the European Union (Withdrawal) Act 2018, or UK GDPR, and other EU member state implementing legislation includes stringent operational requirements for the use of personal data. For example, under the EU GDPR we may be subject to fines of up to €20 million or up to 4% of the total worldwide annual group turnover of the preceding financial year (whichever is higher) for major violations and up to the greater of £17.5m or up to 4% of annual global revenues in respect of the UK GDPR. In addition to the foregoing, a breach of the EU GDPR or UK GDPR could result in regulatory investigations, reputational damage, orders to cease/ change our processing of our data, enforcement notices, assessment notices (for a compulsory audit), and/or other corrective action, such as class action brought by classes of data subjects or by consumer protection organizations authorized at law to represent their interests. Additionally, we also target customers in Asia and have operations in China, Korea, Japan, Taiwan and Singapore and may be subject to new and emerging data privacy regimes in Asia, including China's Personal Information Protection Law, Japan's Act on the Protection of Personal Information, and Singapore's Personal Data Protection Act.

In the ordinary course of business, we may transfer personal data from the EU, the UK and other jurisdictions to the United States or other countries. The EU, UK, and other jurisdictions have enacted laws regulating the transfer of personal data to other countries, and, in particular, the EU and UK have significantly restricted the transfer of personal data to the United States. Other jurisdictions may adopt similarly stringent interpretations of their cross-border data transfer laws. Although there are currently various mechanisms that may be used to transfer personal data from the EU and UK to the United States, such as standard contractual clauses and related addenda, these mechanisms are subject to legal challenges, and there is no assurance that we can satisfy or rely on these measures to lawfully transfer personal data to the United States. If there is no lawful manner for us to transfer personal data from the EU, UK, or other jurisdictions to the United States, we could face significant consequences, including restricting our operations or relocating part of or all of our business to other jurisdictions and increased exposure to regulatory actions, substantial fines, and injunctions against processing or transferring personal data. Some European regulators have prevented companies from transferring personal data out of Europe.

In addition to privacy and security laws and regulations, we may be contractually subject to industry standards adopted by industry groups and may become subject to such obligations in the future. We may also be bound by contractual obligations related to privacy and security, and our efforts to comply with such obligations may not be successful. For example, certain privacy laws, such as the GDPR and the CCPA, require our customers to impose specific contractual restrictions on their service providers. We may publish privacy policies, marketing materials and other statements, such as compliance with certain certifications or self-regulatory principles, regarding privacy and security. If these policies, materials or statements are found to be deficient, lacking in transparency, deceptive, unfair,

or misrepresentative of our practices, we may be subject to investigation, enforcement actions by regulators or other adverse consequences.

Restrictions on the collection, use, sharing or disclosure of personal information or additional requirements and liability for security and data integrity could require us to modify our solutions and features, possibly in a material manner, could limit our ability to develop new software solutions and features and could subject us to increased compliance obligations and regulatory scrutiny.

Although we make reasonable efforts to comply with all applicable data protection laws and regulations, our interpretations and such efforts may have been or may prove to be insufficient or incorrect. The effects of any applicable U.S. state, U.S. federal and foreign laws and regulations that are currently in effect or that may go into effect in the future, are significant and may require us to modify our data processing practices and policies and to incur substantial costs and potential liability in an effort to comply with such laws and regulations. Allegations of non-compliance could be costly, time consuming, distracting to management, and cause reputational harm. Any actual or perceived failure to comply with these and other data protection and privacy laws and regulations could result in regulatory scrutiny and litigation or the imposition of consent orders, resolution agreements, requirements to take particular actions with respect to training, policies or other activities, inability to process personal data, or to operate in certain jurisdictions, and civil and criminal penalties, including fines, which could harm our business, as well as other adverse consequences. In addition, we or our third-party service providers could be required to fundamentally change our business activities and practices or modify our software solutions and services, which could harm our or our third-party service providers' business. Any of the foregoing could result in additional cost and liability to us, damage our reputation, inhibit sales, and harm our business.

### **Risks Related to Intellectual Property Litigation**

***We may be subject to litigation, regardless of success or merit, that could cause us to incur substantial expenses, reduce our sales, and divert the efforts of our management and other personnel.***

The semiconductor and photonics industries are characterized by vigorous protection and pursuit of intellectual property rights and positions, which has resulted in protracted and expensive litigation for many companies. We may receive, communications alleging liability for damages or challenging the validity of our intellectual property or proprietary rights. Any litigation, regardless of success or merit, could cause us to incur substantial expenses, reduce our sales, and divert the efforts of our management and other personnel. In the event we receive an adverse result in any litigation, we could be required to pay substantial damages, seek licenses from third parties, which may not be available on reasonable terms or at all, cease sale of products, expend significant resources to develop alternative technology, or discontinue the use of processes requiring the relevant technology. Furthermore, an adverse determination of any litigation or defense proceedings could put our intellectual property at risk of being invalidated or interpreted narrowly and could put our related pending patent applications at risk of not issuing. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential or sensitive information could be compromised by disclosure in the event of litigation. In addition, during the course of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

***Our ability to compete successfully depends in part on our ability to commercialize our intellectual property solutions without infringing the patent, trade secret, trademark, copyright, or other intellectual property rights of others.***

Just as we seek to protect our technology and inventions with patents, trademarks, copyrights, trade secrets and other intellectual property rights, our competitors and other third parties do the same for their technology and inventions. We have no means of knowing the content of patent applications filed by third parties until they are published and we may not be aware of any patent applications even following their publication or issue.

The semiconductor and photonics industries are rife with patent assertion entities and is characterized by frequent litigation regarding patent and other intellectual property rights. From time to time, we receive communications from third parties that allege that our software solutions or technologies infringe their patent or other intellectual property rights. We are currently subject to litigation alleging we have misappropriated trade secrets, as described in further described in the risk factor “—Risks Related to Legal, Regulatory, Accounting and Tax Matters—Pending or future investigations or litigation could have a material adverse effect on our results of operations and our stock price.” As a public company with an increased profile and visibility, we may receive similar communications or lawsuits in the future. In a patent infringement claim against us, we may assert, as a defense, that we do not infringe the relevant patent claims, that the patent is invalid or both. The strength of our defenses will depend on the patents asserted, the interpretation of these patents, and our ability to invalidate the asserted patents. However, we may not be successful

in advancing non-infringement and/or invalidity arguments in our defense. In the United States, issued patents enjoy a presumption of validity, and the party challenging the validity of a patent claim must present clear and convincing evidence of invalidity, which is a high burden of proof. Conversely, the patent owner need only prove infringement by a preponderance of the evidence, which is a lower burden of proof. Lawsuits or other proceedings resulting from allegations of infringement could subject us to significant liability for damages, invalidate our proprietary rights and harm our business.

In the event that any third party succeeds in asserting a valid claim against us or any of our customers, we could be forced to do one or more of the following:

- discontinue selling access to certain technologies that contain the allegedly infringing intellectual property which may result in a decline in our revenue and could result in breach of contract claim by our affected customers and damage to our reputation;
- discontinue using trademarks that allegedly infringe the trademarks of others;
- stop receiving payment from a customer that can no longer sell the end-product if it contains allegedly infringing intellectual property;
- seek to develop non-infringing technologies, which may be expensive and not be feasible;
- incur significant legal expenses;
- pay substantial monetary damages to the party whose intellectual property rights we may be found to be infringing; and/or
- we or our customers could be required to seek licenses to the infringed technology that may not be available on commercially reasonable terms, if at all.

If a third party causes us to discontinue the use of any of our technologies, we could be required to design around those technologies. If a third party causes us to discontinue using any of our trademarks, we could be required to adopt alternative brand names. If a third party establishes that they are co-authors of a copyrighted work that we use, we could be required to account for profits arising from exploiting such intellectual property. Each of these scenarios could be costly and time consuming and could have an adverse effect on our results of operations. Any significant impairments of our intellectual property rights from any litigation we face could harm our business and our ability to compete in our industry.

***Any dispute regarding our intellectual property may require us to indemnify customers, the cost of which could harm our business.***

In any potential dispute involving our patents or other intellectual property, our customers could also become the target of litigation. While we generally try to avoid indemnifying our customers, some of our agreements provide for indemnification, and some require us to provide technical support and information to a customer that is involved in litigation involving use of our technology. In addition, we may be exposed to indemnification obligations, risks and liabilities that were unknown at the time that we acquired assets or businesses. Any of these indemnification and support obligations could result in substantial and material expenses. In addition to the time and expense required for us to indemnify or supply such support to our customers, a customer's development, marketing and sales of licensed semiconductors, mobile communications and data security technologies could be severely disrupted or shut down as a result of litigation, which in turn could severely harm our business as a result of lower licensing or royalty payments.

#### **Risks Related to Our Status as a Controlled Company**

***Upon completion of this offering, we will be a "controlled company" within the meaning of the Nasdaq listing rules and as such are exempt from certain corporate governance requirements.***

As a result of Ms. Ngai-Pesic and the SMIK Grantor Retained Annuity Trust, or SMIK Trust, collectively holding more than 50% of the voting power of our company, following the completion of this offering, we will be a "controlled company" within the meaning of the Nasdaq listing rules. Therefore, we are not required to comply with certain corporate governance rules that would otherwise apply to us as a listed company on Nasdaq, including the requirement that (i) we have a majority of independent directors on our board of directors; (ii) the compensation of our executive officers be determined by a majority of the independent directors or a compensation committee comprised solely of independent directors; and (iii) director nominees selected or recommended for our board be approved either by a majority of the independent directors or a nominating committee comprised solely of independent directors. Following this offering, we intend to utilize some or all of these exemptions. As a result, we may not have a majority of independent directors on our board of directors. In addition, our compensation and nominating and corporate governance committees may not consist entirely of independent directors and may not be subject to annual performance evaluations. Should the interests of Ms. Ngai-Pesic and the SMIK Trust differ from those of our other stockholders, it is possible that the other stockholders might not be afforded such protections as might exist if our

board of directors, or our committees, were required to have a majority, or be composed exclusively, of directors who were independent of Ms. Ngai-Pesic and the SMIK Trust or our management.

***As long as we are a controlled company, your ability to influence matters requiring stockholder approval will be limited, and the interests of our controlling shareholder may conflict with or differ from your interests as a stockholder***

Following the completion of this offering, Ms. Ngai-Pesic will own \_\_\_\_\_ shares of our common stock and the SMIK Trust, of which Ms. Ngai-Pesic and members of her immediate family are beneficiaries, will own \_\_\_\_\_ shares of our common stock, collectively representing approximately \_\_\_\_\_ % of our total outstanding common stock, assuming the underwriters do not exercise their over-allotment option, and approximately \_\_\_\_\_ % if the underwriters exercise their over-allotment option in full. For so long as Ms. Ngai-Pesic and the SMIK Trust continue to collectively hold at least 50% of our outstanding common stock, they will be able to elect the members of our board of directors and could at any time replace our entire board of directors.

In addition, until such time as Ms. Ngai-Pesic and the SMIK Trust and their successors in interest collectively own less than a majority of the shares of our common stock then outstanding, Ms. Ngai-Pesic and the SMIK Trust will have the ability to take stockholder action without the vote of any other stockholder, and investors in this offering will not be able to affect the outcome of any stockholder vote during this period. As a result, Ms. Ngai-Pesic and the SMIK Trust will have the ability to control all matters affecting us, including:

- through our board of directors, any determination with respect to our business plans and policies, including the appointment and removal of our officers;
- any determinations with respect to mergers and other business combinations;
- our acquisition or disposition of assets;
- our financing activities;
- the allocation of business opportunities that may be suitable for us;
- the payment of dividends on our common stock; and
- the number of shares available for future issuance and also issuance under our stock plans.

Ms. Ngai-Pesic and the SMIK Trust's collective voting control may discourage transactions involving a change of control of us, including transactions in which you as a holder of our common stock might otherwise receive a premium for your shares over the then current market price.

Ms. Ngai-Pesic and the SMIK Trust are not prohibited from selling a controlling interest in us to a third party and may do so without your approval and without providing for a purchase of your shares of common stock. Accordingly, your shares of common stock may be worth less than they would be if Ms. Ngai-Pesic and the SMIK Trust did not maintain voting control over us.

The interests of Ms. Ngai-Pesic and the SMIK Trust could conflict with or differ from your interests as a holder of our common stock. For example, the concentration of ownership held by Ms. Ngai-Pesic and the SMIK Trust could delay, defer or prevent a change of control of us or impede a merger, takeover or other business combination that you as a stockholder may otherwise view favorably. So long as Ms. Ngai-Pesic and the SMIK Trust continue to beneficially own a significant amount of our equity, even if such amount is less than 50%, they may continue to be able to strongly influence or effectively control our decisions.

***Our inability to resolve any disputes that arise between us and Ms. Ngai-Pesic with respect to our past, future and ongoing relationships may adversely affect our operating results.***

We entered into the March 2022 Loan and the 2022 Credit Line with Ms. Ngai-Pesic. As of September 30, 2022, \$0.5 million in principal was outstanding under the March 2022 Loan, which was issued on March 30, 2022 pursuant to a promissory note and bears interest at a rate equal to 3.25% per annum, and we had drawn down \$2.0 million from the 2022 Credit Line. We also lease several office facilities from entities controlled by Ms. Ngai-Pesic pursuant to which we recorded a rent expense of \$0.4 million during the years ended December 31, 2020 and 2021, and \$0.3 million during the nine months ended September 30, 2022. Because we are controlled by Ms. Ngai-Pesic and the SMIK Trust, we may not have the leverage to negotiate extensions or amendments to our agreements on terms as favorable to us compared to those we would negotiate with an unaffiliated third party. See "Certain Relationships and Related Party Transactions" and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources."

More generally, disputes may arise between Ms. Ngai-Pesic and us in a number of areas relating to our past and ongoing relationships. We may not be able to resolve any potential conflicts, and even if we do, the resolution may be less favorable than if we were dealing with an unaffiliated party.

## **Risks Related to Legal, Regulatory, Accounting and Tax Matters**

***We are subject to anti-corruption and anti-money laundering laws with respect to our operations and non-compliance with such laws can subject us to criminal and/or civil liability and harm our business.***

We are subject to anti-corruption, anti-bribery, anti-money laundering, and similar laws in the United States and other countries in which we conduct activities, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and the United Kingdom Bribery Act 2010. Anti-corruption and anti-bribery laws, which have been enforced aggressively and are interpreted broadly, generally prohibit companies and their employees, agents, intermediaries and other third parties from directly or indirectly promising, authorizing, making or offering improper payments or other benefits to government officials and others in the private sector. We use third parties, including intermediaries and partners, to support sales of our products. We and these third parties may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and we may be held liable for the corrupt or other illegal activities of these third-party intermediaries and partners, our employees, representatives, contractors, and other third parties, even if we do not explicitly authorize such activities. While we have policies and procedures intended to address compliance with anti-corruption, anti-bribery, anti-money laundering and similar laws, we cannot assure you that all of our employees, representatives, contractors, partners, agents, intermediaries or other third parties have not taken, or will not take, actions in violation of our policies and applicable law, for which we may be ultimately held responsible.

Noncompliance with anti-corruption, anti-bribery, and anti-money laundering laws could subject us to investigations, severe criminal or civil sanctions, settlements, prosecution, loss of export privileges, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, whistleblower complaints, adverse media coverage and other consequences. Any investigations, actions or sanctions could harm our reputation, business, operating results and financial condition.

***We are subject to governmental export and import controls that could impair our ability to compete in international markets due to licensing requirements and subject us to liability if we are not in compliance with applicable laws.***

Our software solutions and technology are subject to export control and import laws and regulations of applicable jurisdictions. Certain of our software solutions are subject to U.S. export controls and sanctions, including the Export Administration Regulations, U.S. Customs regulations, and the economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control, or OFAC. These laws and regulations may limit our ability to export our software solutions and technology or may require export authorizations and conditions prior to export. Export control and sanctions laws may also prohibit us from selling or providing our software solutions and technology to embargoed countries, regions, governments, persons, and entities. In addition, various countries regulate the importation of certain products, including through import licensing and permitting requirements, which could limit or restrict our ability to sell our products. The exportation, re-exportation, and importation of our software solutions and technology must comply with these laws and regulations. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including the possible loss of export or import privileges, as well as reputational harm.

Complying with export control and sanctions laws and regulations can be time-consuming and result in the delay or loss of sales opportunities. We have taken precautions to prevent our software solutions and technology from being provided in violation of such laws and regulations. However, our software solutions and technology have previously been, and could in the future be, provided in violation of such laws despite the precautions in place. Between August 2019 and June 2022, we filed various voluntary disclosures with BIS regarding potential violations of U.S. export control laws and regulations, specifically, the export of our licenses to certain parties designated on BIS's Entity List and Unverified List, and the export of certain software modules without a license which was required at the time of the transaction but that were declassified by BIS in October 2020 to a lesser controlled export classification, meaning that such software generally no longer requires an export license. In July and October 2022, we also filed voluntary disclosures with OFAC regarding potential violations of OFAC sanctions programs, specifically the download of certain Company software modules by users in U.S. embargoed countries. These voluntary disclosures remain pending before BIS and OFAC and if either organization chose to bring an enforcement action against us in relation to such potential violations, such actions could result in the imposition of significant penalties against the Company.

Changes in our software solutions or technology or changes in applicable export or import laws and regulations may create delays in the introduction and sale of our software solutions and technology in international markets, prevent our customers from deploying our software solutions and technology or, in some cases, prevent the export or import of our software solutions and technology to certain countries, governments or persons altogether.

Any change in export or import laws and regulations, shift in the enforcement or scope of existing laws and regulations, or change in the countries, governments, persons or technologies targeted by such laws and regulations, could also result in decreased use of our software solutions and technology, or in our decreased ability to export or sell our software solutions and technology to existing or potential customers. Any decreased use of our software solutions and technology or limitation on our ability to export or sell our software solutions and technology would likely adversely affect our business, financial condition and results of operations.

***Pending or future investigations or litigation could have a material adverse effect on our results of operations and our stock price.***

We are involved in various investigations, claims and legal proceedings from time to time that arise in the ordinary course of our business activities, including intellectual property, collaboration, licensing agreement, product liability, employment, class action, whistleblower and other litigation claims, and governmental and other regulatory investigations and proceedings. For example, we have previously commenced legal proceedings against certain of our customers to protect our intellectual property rights and we may do so again in the future, which could result in resentment within our customer base and adversely affect our business, financial condition and results of operations. Our proceedings currently include customary audit activities by various taxing authorities and legal proceedings. For example, in December 2020, Silvaco, Inc., one of our subsidiaries, filed suit against Ole Christian Andersen et al., or Andersen, in California Superior Court for the County of Santa Clara seeking declaratory relief related to a dispute concerning the interpretation of an earnout agreement with Andersen in connection with the acquisition of the shares of Nangate Denmark ApS, or Nangate. In January 2022, Andersen filed a third amended cross-complaint against Silvaco, Inc. and certain of its board members alleging breach of contract, fraud, and unfair business practices and is seeking \$20 million in damages, along with punitive damages. Discovery in the matter is ongoing and Silvaco, Inc. intends to contest this matter vigorously. In August 2021, Aldini AG filed suit against Silvaco, Inc. in the United States District Court for the Northern District of California alleging various tort claims against Silvaco, Inc., Silvaco France, and certain of its board members. On August 23, 2022, Aldini AG filed a Second Amended Complaint against Silvaco, Inc., Silvaco France, and certain of its board members that included claims of trade secret theft, conspiracy, and intentional interference with a prospective economic advantage in relation to Silvaco's acquisition of certain assets of Dolphin Design SAS, or Dolphin. Aldini AG seeks \$703 million and punitive damages. Silvaco, Inc. filed a motion to dismiss the suit and intends to contest the matter vigorously.

***Changes in our tax rates, unavailability of certain tax credits or reliefs, or exposure to additional tax liabilities or assessments could affect our profitability, and audits by tax authorities could result in additional tax payments for prior periods.***

We are subject to various U.S. and non-U.S. taxes, including direct and indirect taxes, such as corporate income, withholding, customs, excise, value-added, sales and other taxes imposed on our global activities. Significant judgment is required in determining our provisions for taxes, and there are many transactions and calculations where the ultimate tax determination is uncertain.

Our tax returns are subject to audit by U.S. federal, state and local tax authorities and by non-U.S. tax authorities. If audits result in tax liabilities or assessments different from our reserves, our future results may include unfavorable adjustments to our tax liabilities, and our financial statements could be adversely affected. Any significant changes to the tax system in the United States or in other jurisdictions could adversely affect our business, financial condition and results of operations.

***Changes in tax laws could adversely affect our business, financial position and results of operations.***

The U.S. Congress, government agencies in non-U.S. jurisdictions where we and our affiliates do business, and the Organization for Economic Cooperation and Development, or OECD, have recently focused on issues related to the taxation of multinational corporations. One example is in the area of "base erosion and profit shifting," where profits are claimed to be earned for tax purposes in low-tax jurisdictions, or payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. The OECD has released several components of its comprehensive plan to create an agreed set of international rules for addressing base erosion and profit shifting.

Because we operate in numerous taxing jurisdictions, the application of the relevant tax laws can be subject to diverging and sometimes conflicting interpretations by the taxing authorities of these jurisdictions. It is not uncommon for taxing authorities in different countries to have conflicting views with respect to, among other things, whether a permanent establishment exists in a particular jurisdiction, the manner in which the arm's length standard is applied for transfer pricing purposes, or the valuation of intellectual property. For example, if the taxing authority in one country where we operate were to reallocate income from another country where we operate, and the taxing authority in the second country did not agree with the reallocation asserted by the first country, we could become subject to tax on the same income in both countries, resulting in double taxation.



If taxing authorities were to allocate income to a higher tax jurisdiction, subject our income to double taxation or assess interest and penalties, it could increase our tax liability, which could adversely affect our business, financial position and results of operations.

Due to the potential for changes in tax laws and regulations or changes in the interpretation thereof (including regulations and interpretations pertaining to recent tax reform in the United States), the ambiguity of tax laws and regulations, the subjectivity of factual interpretations, uncertainties regarding the geographic mix of earnings in any particular period and other factors, our estimates of our effective tax rate and our income tax assets and liabilities may be incorrect and our financial statements could be adversely affected. The impact of these factors may be substantially different from period-to-period.

***Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations.***

We may experience ownership changes in the future, including in connection with this offering or as a result of subsequent changes in our stock ownership, some of which are outside our control. Accordingly, we may not be able to utilize a material portion of our NOLs, even if we achieve profitability. In addition, future changes in U.S. federal or state tax laws could impact our ability to utilize our NOLs and may result in greater tax liabilities than we would otherwise incur and adversely affect our business, financial position and results of operations.

### **Risks Related to This Offering and Ownership of Our Common Stock**

***The price of our common stock could be volatile and you may not be able to resell your shares at or above our initial public offering price. Declines in the price of our common stock could subject us to litigation.***

Our stock price may be volatile and may decline, resulting in a loss of some or all of your investment. The trading price and volume of our common stock could fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- variations in our operating results and other financial and operational metrics, including the key financial and operating metrics disclosed in this prospectus, as well as how those results and metrics compare to analyst and investor expectations;
- speculation in the market about our operating results;
- the financial guidance we may provide to the public, any changes in guidance or our failure to meet guidance;
- failure of securities analysts to initiate or maintain coverage of us, changes in financial estimates or ratings by any securities analysts who follow us, or our failure to meet these estimates or the expectations of investors;
- results of operations that otherwise fail to meet the expectations of securities analysts and investors;
- changes in earnings estimates or recommendations by securities analysts, or other changes in investor perceptions of the investment opportunity associated with our common stock relative to other investment alternatives;
- events or factors resulting from global health crises such as the COVID-19 pandemic, war, incidents of terrorism or responses to these events;
- announcements of software solutions or enhancements, strategic alliances or significant agreements or other developments by us or our competitors;
- announcements by us or our competitors of mergers or acquisitions or rumors of such transactions involving us or our competitors;
- changes in management, other key personnel or our board of directors;
- disruptions in our operations due to security breaches or other issues;
- the strength of the global economy or the economy in the jurisdictions in which we operate, and market conditions in our industry and those affecting our customers;
- trading activity by our controlling stockholders, Ms. Ngai-Pesic and the SMIK Trust, including upon the expiration of contractual lock-up agreements, and other market participants, in whom ownership of our common stock may be concentrated following this offering;
- the potential effects arising if U.S. or global inflationary and/or currency devaluation trends appear or increase;
- market conditions in the semiconductor and photonics industries
- the performance of the equity markets in general and in our industry;
- the operating performance of other similar companies;
- actual or anticipated developments in our business or our competitors' businesses or the competitive landscape generally;
- new laws or regulations or new interpretations of existing laws, or regulations applicable to our business;
- changes in regulations, including import, export and economic sanctions, laws and regulations, that may expose us to liability and increase our costs;

- litigation or other claims against us;
- the number of shares of our common stock that are available for public trading; and
- any other factors discussed in this prospectus.

Furthermore, the stock market in general has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of particular companies. Broad market and industry factors may significantly affect the market price of our common stock, regardless of our actual operating performance. These fluctuations may be even more pronounced in the trading market for our common stock shortly following the closing of this offering. In addition, if the market for EDA, TCAD, SIP or other technology stocks or the stock market in general experiences a loss of investor confidence, the price of our common stock could decline for reasons unrelated to our business, results of operations or financial condition. The price of our common stock might also decline in reaction to events that affect other companies, even if those events do not directly affect us. Some companies that have experienced volatility in the trading price of their stock have been the subject of securities class action litigation. If we are the subject of such litigation, it could result in substantial costs and could divert our management's attention and resources, which could adversely affect our business, financial position and results of operations.

***We have not operated as a public company, which will require us to incur substantial costs and will require substantial management attention, and we may not be able to manage our transition to a public company effectively or efficiently.***

We have never operated as a public company and will incur significant legal, accounting and other expenses that we did not incur as a private company. We also expect to incur stock-based compensation expenses, which we have not incurred in any material amount as a private company. Our management team and other personnel will need to devote a substantial amount of time to, and we may not effectively or efficiently manage, our transition to a public company. For example, we will be subject to the reporting requirements of the Exchange Act, the applicable requirements of the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act and the rules and regulations of the SEC. The rules and regulations of Nasdaq will also apply to us following this offering. To comply with the various requirements applicable to public companies, we will need to establish and maintain effective disclosure and financial controls and make changes to our corporate governance practices. If, notwithstanding our efforts to comply with these laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal or administrative proceedings against us and our business may be harmed. Further, failure to comply with these rules might make it more difficult for us to obtain some types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management. As such, we intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities.

We also expect that our management and other personnel will need to divert attention from other business matters to devote substantial time to the reporting and other requirements applicable to a public company. We may be unable to locate and hire qualified professionals with requisite technical and public company experience when and as needed. In addition, new employees will require time and training to learn our business and operating processes and procedures. If we are unable to recruit and retain additional finance personnel or if our finance and accounting team is unable for any reason to respond adequately to the increased demands that will result from being a public company, the quality and timeliness of our financial reporting may suffer, which could result in late filings or the identification of additional material weaknesses in our internal controls. Any consequences resulting from inaccuracies or delays in our public reporting could cause our stock price to decline, result in litigation and could harm our business, financial condition and results of operations.

Additionally, as a public company, we may, from time to time, be subject to proposals and other requests from stockholders urging us to take certain corporate actions, including proposals seeking to influence our corporate policies or effect a change in our management. In the event of such stockholder proposals, particularly with respect to matters which our management and board of directors, in exercising their fiduciary duties, disagree with or have determined not to pursue, our business could be harmed because responding to actions and requests of stockholders can be costly and time-consuming, disrupting our operations and diverting the attention of management and our employees. Additionally, perceived uncertainties as to our future direction may result in the loss of potential business opportunities and may make it more difficult to attract and retain qualified personnel, business partners and customers.

***We are, and following the completion of this offering will be, subject to significant regulatory compliance and internal governance requirements, and the failure to comply with such regulatory and governance***

**requirements could result in a loss of sales or the loss of investor confidence in our financial reports, which could have an adverse effect on our stock price.**

Following the completion of this offering, we will be subject to the rules and regulations of the SEC, including those that require us to report on our internal controls. Compliance with these requirements has and will cause us to incur additional expenses and cause management to divert time from our day-to-day operations. While we anticipate being able to fully comply with these internal control requirements, if we are not able to comply with the Sarbanes-Oxley reporting or certification requirements relating to internal controls, we may be subject to investigations or sanctions by the SEC, Nasdaq or other regulatory authorities.

Our stock will be listed on Nasdaq and we are subject to ongoing financial and corporate governance requirements of Nasdaq. While we anticipate being able to fully comply with applicable Nasdaq requirements, if we are not able to comply, our name may be published on Nasdaq's daily Non-Compliant Companies list until Nasdaq determines that we have regained compliance or we no longer trade on Nasdaq.

**There has been no prior public market for our common stock, and an active trading market for our common stock may not develop or be sustained and you may not be able to sell your shares at or above the initial public offering price, or at all.**

There has been no public market for our common stock prior to this offering. The initial public offering price for our common stock will be determined through negotiations between the underwriters and us and may vary from the market price of our common stock following this offering. If you purchase our common stock in this offering, you may not be able to resell those shares at or above the initial public offering price, or at all.

An active market in our common stock may not develop upon completion of this offering or, if it does develop, it may not be sustainable or liquid enough for you to sell your shares, especially given the concentration of outstanding shares. If an active market for our common stock does not develop, it may be difficult for you to sell shares you purchase in this offering at the price you paid. An inactive trading market may also impair our ability to raise capital by selling shares of our common stock and enter into strategic partnerships or acquire other complementary products, technologies or businesses by using shares of our common stock as consideration. Furthermore, although we intend to apply to have our common stock listed on Nasdaq, even if listed, there can be no guarantee that we will continue to satisfy the continued listing standards of Nasdaq. If we fail to satisfy the continued listing standards, we could be delisted, which would negatively impact the value and liquidity of your investment.

**If you purchase our common stock in this offering, you will incur immediate and substantial dilution.**

The initial public offering price of our common stock will be substantially higher than the pro forma net tangible book value per share of our common stock immediately after this offering. If you purchase shares of our common stock in this offering, you will suffer immediate dilution of \$        per share, or \$        per share if the underwriters exercise their over-allotment option in full, representing the difference between our pro forma as adjusted net tangible book value per share after giving effect to the sale of common stock in this offering and the assumed public offering price of \$        per share, the midpoint of the price range set forth on the cover page of this prospectus. You will experience additional dilution upon the vesting of RSUs issued under our equity incentive plans, if we issue restricted stock to our employees under our equity incentive plans or if we otherwise issue additional shares of our common stock. See "Dilution."

**Future issuances of our common stock or sales of a substantial number of shares of our common stock in the public market following this offering, or the perception that such sales could occur, could cause the price of our common stock to decline.**

The market price of our common stock could decline as a result of substantial sales of our common stock, particularly sales by our directors, executive officers and significant stockholders, a large number of shares of our common stock becoming available for sale, or the perception in the market that such sales could occur. We may issue additional common stock, preferred stock, convertible securities or other equity or equity linked securities following the completion of this offering. We also expect to issue common stock to our employees, directors and other service providers pursuant to our equity incentive plans. Such issuances will be dilutive to investors and could cause the price of our common stock to decline. New investors in such issuances could also receive rights senior to those of holders of our common stock.

Upon the closing of this offering, we will have approximately        shares of common stock outstanding, assuming no exercise of the underwriters' option to purchase additional shares. All of the shares of common stock sold in this offering will be freely transferable without restriction or additional registration under the Securities Act of 1933, as amended, or the Securities Act.

Substantially all of the remaining shares of our common stock, including all shares held by our executive officers, directors and the holders of substantially all of our equity securities, will be subject to the lock-up agreements with the underwriters of this offering described in “Underwriting.” We also intend to register all shares of common stock that we may issue under equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described in the “Underwriting” section of this prospectus. As these restrictions on resale end, the market price of our common stock could drop significantly if the holders of those shares sell them or are perceived by the market as intending to sell them. These declines in our stock price could occur even if our business is otherwise doing well and, as a result, you may lose all or a part of your investment.

***If securities analysts or industry analysts downgrade our common stock, publish negative research or reports, or fail to publish reports about our business, our stock price and trading volume could decline.***

The market price and trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us, our business and our market. As a newly public company, we may be slow to attract research coverage and the analysts who publish information about our common stock will have had relatively little experience with us, which could affect their ability to accurately forecast our results and could make it more likely that we fail to meet their estimates. If no or few securities or industry analysts commence coverage of us, the trading price for our common stock will be negatively impacted. In the event we do obtain industry or equity research analyst coverage, we will not have any control over the analysts’ content and opinions included in their reports. If one or more analysts adversely change their recommendation regarding our stock or change their recommendation about our competitors’ stock, our stock price could decline. If one or more analysts cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline or become volatile.

***We will have broad discretion in the use of the net proceeds to us from this offering and may not apply the proceeds in ways that increase our market value or improve our operating results.***

Our management will have considerable discretion in the application of the net proceeds to us of this offering, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds to us may be used for corporate purposes that do not increase the value of our business, which could cause our stock price to decline. The failure by our management to apply the net proceeds from this offering effectively could impair our growth prospects and result in financial losses that could harm our business and cause the price of our common stock to decline. We intend use a portion of the proceeds of this offering to repay the March 2022 Loan and the 2022 Credit Line, from which we have drawn \$2.0 million as of September 30, 2022, each payable to Ms. Ngai-Pesic. Until the net proceeds we receive are used, they may be placed in investments that do not produce income or that lose value.

***We do not intend to pay dividends on our common stock, so any returns on your investment will be limited to changes in the value of our common stock.***

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any dividends for the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and subject to, among other things, our compliance with applicable law, and depending on, among other things, our business prospects, financial condition, results of operations, cash requirements and availability, debt repayment obligations, capital expenditure needs, the terms of any preferred equity securities we may issue in the future, covenants in the agreements governing any future indebtedness, other contractual restrictions and industry trends and any other factors or considerations our board of directors may regard as relevant. Any return to stockholders will therefore be limited to the increase, if any, in our stock price, which may never occur.

***Our amended and restated charter and bylaws that will be in effect upon the closing of this offering will designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, and provides that federal district courts will be the sole and exclusive forum for Securities Act claims, which could limit our stockholders’ ability to obtain what they believe to be a favorable judicial forum for disputes with us or our directors, officers or other employees.***

Our charter and bylaws that will be in effect upon the closing of this offering provide that, unless we consent in writing to the selection of an alternative forum, to the fullest extent permitted by law, the Court of Chancery of the State of Delaware (or, if that court lacks subject matter jurisdiction, another federal or state court situated in the State of Delaware) shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to

us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or the DGCL, our certificate of incorporation, or our bylaws, or any issue, in one or more series, of all or any of the remaining shares of preferred stock, and, in the resolution or resolutions providing for such issue; (iv) any action to interpret, apply, enforce, or determine the validity of our certificate of incorporation or our bylaws; or (v) any action asserting a claim against us governed by the internal affairs doctrine. If any such action is filed in a court other than a court located within the State of Delaware, or a Foreign Action, in the name of any stockholder, that stockholder shall be deemed to have consented to: (x) the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce our choice of forum, or an Enforcement Action, and (y) having service of process made upon such stockholder in any such Enforcement Action by service upon such stockholder's counsel in the Foreign Action as agent for such stockholder, in each case, to the fullest extent permitted by law. Our charter and bylaws that will be in effect upon the closing of this offering further provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts are the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. The choice of forum provisions will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation will further provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall, to the fullest extent permitted by law, be the sole and exclusive forum for the resolutions of any complaint asserting a cause of action arising under the Securities Act, including all causes of action asserted against any defendant named in such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying this offering.

We believe these provisions may benefit us by providing increased consistency in the application of Delaware law and federal securities laws by chancellors and judges, as applicable, particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums, and protection against the burdens of multi-forum litigation. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims or make such lawsuits more costly for stockholders, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder. Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. If a court were to find one or more of the choice of forum provisions that will be contained in our amended and restated certificate of incorporation and amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could seriously harm our business.

## **General Risk Factors and Risks Related to Being a Public Company**

***We have identified a material weakness in our internal control over financial reporting. If our remediation measures are ineffective, or if we experience additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to report our financial condition or results of operations accurately or on a timely basis, prevent fraud or file our periodic reports in a timely manner, which may adversely affect investor confidence in us and our reported financial information and, as a result, impact the value of our common stock.***

We have been a private company and, as such, we have not been subject to the internal control and financial reporting requirements applicable to a publicly traded company. As a public company, we will be subject to Section 404 of the Sarbanes-Oxley Act, or Section 404, which requires that we maintain effective internal control over financial reporting and disclosure controls and procedures. Section 404(a) of the Sarbanes-Oxley Act requires that we include a management report on our internal controls, including an assessment of the effectiveness of our internal controls and financial reporting procedures, beginning with annual report for our fiscal year ending December 31, 2023. We will also be required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act,

or Section 404(b), following the later of the date we are deemed to be an “accelerated filer” or a “large accelerated filer,” each as defined in the Exchange Act, or the date we are no longer an “emerging growth company,” as defined in the JOBS Act. See “—We are an “emerging growth company” and a “smaller reporting company” and any decision on our part to comply with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.” In order to comply with Section 404, we must perform system and process evaluations, document our controls and perform testing of our key controls over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting. Our testing will need to include the disclosure of any material weaknesses or significant deficiencies in our internal control over financial reporting identified by our management or our independent registered public accounting firm. Our testing, or the subsequent testing by our independent public accounting firm, may reveal deficiencies in our internal control over financial reporting that are deemed to be material weaknesses. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. If we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock would likely decline and we could be subject to lawsuits, sanctions or investigations by regulatory authorities, which would require additional financial and management resources.

We have in the past and continue to identify material weaknesses in our internal control over financial reporting. The material weakness as of December 31, 2021, identified in connection with the preparation of our financial statements, related to an insufficient complement of personnel possessing the technical accounting and financial reporting knowledge and experience to support a timely and accurate close and financial statement reporting process.

Any failure to maintain internal control over financial reporting or to identify any additional material weaknesses could severely inhibit our ability to timely and accurately report our financial condition, results of operations or cash flow. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by Nasdaq, the SEC, or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also adversely affect our future access to the capital markets.

We have begun to take certain actions intended to address the material weakness in our financial reporting, including hiring additional qualified accounting and financial reporting personnel, and developing and implementing processes and controls, and we may take additional actions, including hiring additional personnel, implementing system upgrades or other organizational changes. We have also begun to review and document our accounting and financial processes and internal controls, build out our financial management and reporting systems infrastructure, and further develop and formalize our accounting policies and financial reporting procedures, which includes ongoing senior management review and enhancing our audit committee oversight. While we have begun taking measures and plan to continue to take measures to design and implement an effective control environment, we cannot assure you that the measures we have taken to date and other remediation and internal control measures we implement in the future will be sufficient to remediate our current material weakness or prevent future material weaknesses. We may discover additional material weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting, when required, investors may lose confidence in the accuracy and completeness of our financial reports, we may not be able to access to the capital markets, and our stock price may be materially adversely affected. Moreover, we could become subject to investigations by regulatory authorities, which could require additional financial and management resources and result in the imposition of fines or penalties.

***We are an “emerging growth company” and a “smaller reporting company” and any decision on our part to comply with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.***

We are an “emerging growth company” as defined in the JOBS Act. We intend to take advantage of certain exemptions under the JOBS Act from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404(b), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved. We may take advantage of these exemptions for up to five years or until we are no longer an “emerging growth company,” whichever is earlier.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period under the JOBS Act. Accordingly, our consolidated financial statements may not be comparable to the financial statements of public companies that comply with such new or revised accounting standards.

We cannot predict if investors will find our common stock less attractive if we choose to rely on any of the exemptions afforded to emerging growth companies. If some investors find our common stock less attractive because we rely on any of these exemptions, there may be a less active trading market for our common stock and the market price of our common stock may be more volatile.

We will remain an emerging growth company until the earlier of (i) the last day of the fiscal year (a) in which the fifth anniversary of the completion of this offering occurs, (b) in which we have total annual gross revenue of at least \$1.235 billion or (c) in which we become a large accelerated filer, which means that we have been public for at least 12 months, have filed at least one annual report and the market value of our common stock that is held by non-affiliates exceeds \$700.0 million as of the last day of our then-most recently completed second fiscal quarter, and (ii) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

We are also a “smaller reporting company.” We may continue to be a smaller reporting company after this offering if either (i) the market value of our common stock held by non-affiliates is less than \$250.0 million or (ii) our annual revenue is less than \$100.0 million during the most recently completed fiscal year and the market value of our common stock held by non-affiliates is less than \$700.0 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K, we are not required to comply with the auditor attestation requirements of Section 404 and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. Any statements contained in this prospectus that are not statements of historical facts may be deemed to be forward-looking statements. Statements regarding our future results of operations and financial position, business strategy and plans and objectives of management for future operations, including, among others, statements regarding the offering, liquidity, growth and profitability strategies and factors and trends affecting our business are forward-looking statements. The forward-looking statements are contained principally in the sections titled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business," but are also contained elsewhere in this prospectus. In some cases, you can identify forward-looking statements by the words "may," "might," "will," "can," "could," "would," "should," "expect," "intend," "plan," "objective," "target," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue" and "ongoing," or the negative of these terms or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied by these forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- market conditions;
- anticipated trends, challenges and growth in our business and the markets in which we operate;
- our ability to appropriately respond to changing technologies on a timely and cost-effective basis;
- our expectations regarding our revenue, gross margin and capacity to increase bookings;
- the size and growth potential of the markets for our software solutions, and our ability to serve those markets;
- our expectations regarding competition in our existing and new markets;
- the level of demand in our customers' end markets;
- regulatory developments in the United States and foreign countries;
- changes in trade policies, including the imposition of tariffs;
- proposed new software solutions, services or developments;
- our ability to attract and retain key management personnel;
- our customer relationships and our ability to retain and expand our customer relationships;
- our ability to diversify our customer base and develop relationships in new markets;
- the strategies, prospects, plans, expectations, and objectives of management for future operations;
- public health crises, pandemics, and epidemics, such as the COVID-19 pandemic, and their effects on our business and our customers' businesses;
- the impact of the current conflict between Ukraine and Russia and the ongoing trade disputes among the United States and China on our business, financial condition or prospects, including extreme volatility in the global capital markets making debt or equity financing more difficult to obtain, more costly or more dilutive, delays and disruptions of the global supply chains and the business activities of our suppliers, distributors, customers and other business partners;
- changes in general economic or business conditions or economic or demographic trends in the United States and foreign countries including changes in interest rates and inflation;
- our ability to raise additional capital;
- our ability to accurately forecast demand for our software solutions;
- our expectations regarding the outcome of any ongoing litigation;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act and as a smaller reporting company under the Exchange Act;
- our expectations regarding our ability to obtain, maintain, protect and enforce intellectual property protection for our technology;
- our status as a controlled company; and
- our use of the net proceeds from this offering.

These forward-looking statements reflect our management's beliefs and views with respect to future events and are based on estimates and assumptions as of the date of this prospectus and are subject to risks and uncertainties. You should refer to the "Risk Factors" section of this prospectus for a discussion of crucial factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate.

Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. Considering the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified timeframe, or at all. Moreover, we operate in a competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on



our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Given these uncertainties, you should not place undue reliance on these forward-looking statements.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus. While we believe that such information provides a reasonable basis for these statements, such information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and investors are cautioned not to unduly rely on them.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Such forward-looking statements relate only to events as of the date of this prospectus. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement of which this prospectus is a part completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

## INDUSTRY AND MARKET DATA

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys, studies and other similar third-party sources, as well as our estimates based on such data. The market data and estimates used in this prospectus involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such data and estimates. We believe that the information from these third-party sources is reliable; however, we have not independently verified them, and our business and the industry in which we operate is subject to a high degree of risk and uncertainty. See “Risk Factors” for additional information regarding risks that could cause results to differ materially from those expressed in the estimates made by the third-party sources and by us.

Market and industry data are subject to change and may be limited by the availability of raw data, the voluntary nature of the data gathering process and other limitations inherent in any statistical survey of such data. In addition, projections, assumptions and estimates of the future performance of the markets in which we operate are necessarily subject to uncertainty and risk due to a variety of factors, including those described in “Risk Factors” and “Special Note Regarding Forward-Looking Statements.” These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us. Accordingly, you are cautioned not to place undue reliance on such market and industry data or any other such estimates. The content of, or accessibility through, the sources and websites identified herein, except to the extent specifically set forth in this prospectus, does not constitute a part of this prospectus and are not incorporated herein and any websites are an inactive textual reference only.

Certain information in this prospectus is based on independent or third-party sources, including:

1. Allied Market Research, Automotive Semiconductor Market by Component (Processor, Analog IC, Discrete Power, Sensor, Memory and Others), Vehicle Type (Passenger Car, Light Commercial Vehicle and Heavy Commercial Vehicle), Propulsion Type (Internal Combustion Engine and Electric) and Application (Powertrain, Safety, Body Electronics, Chassis, Telematics & Infotainment): Global Opportunity Analysis and Industry Forecast, 2021-2030, November 2021.
2. Allied Market Research, IoT Market by Component (Processor, Connectivity IC, Sensors, Others), by Connectivity Technology (WiFi, Bluetooth, Zigbee, Cellular, NFC, RFID, Others), by End-Use (Consumer Electronics, Retail, Logistics, Automotive, Healthcare, Manufacturing, Others): Global Opportunity Analysis and Industry Forecast, 2021-2031, August 2022.
3. Allied Market Research, Display Market, Global Opportunity Analysis and Industry Forecast, 2022-2031, September 2022.
4. Allied Market Research, High Performance Computing (HPC) Chipset Market by Chip Type (CPU, GPU, FPGA, and ASIC): Global Opportunity Analysis and Industry Forecast, 2020-2027, January 2021.
5. Allied Market Research, Power Electronics Market by Device Type (Power Discrete, Power Module, Power IC), by Material (Silicon Carbide, Gallium Nitride, Sapphire, Others), by Application (Power Management, UPS, Renewable, Others), by End Use (Telecommunication, Industrial, Automotive, Consumer Electronics, Military and defense, Energy and Power, Others): Global Opportunity Analysis and Industry Forecast, 2021-2031, May 2022.
6. Electronic Design Market Data Q4 2021 Report, Electronic System Design Alliance, July 2021.
7. Global FAB Equipment Spending Expected to Reach Record \$109 Billion in 2022, SEMI Reports, SEMI, June 2022.
8. Grand View Research, Electronic Design Automation Software Market Size, Share & Trends Analysis Report By End-use (Microprocessors & Controllers, Memory Management Units), By Region And Segment Forecasts, 2022-2030.
9. Grand View Research, Semiconductor Memory Market Size, Share & Trends Analysis Report By Type (SRAM, MRAM, DRAM, Flash ROM), By Application (Consumer Electronics, Automotive), By Region, And Segment Forecasts, 2020-2027.
10. Handel Jones, Chief Executive Officer of IBS, as cited in “The cost of a 3nm chip is nearly \$600 million. Where is it?”, iMedia.
11. IDC, Worldwide Mobile Phone Semiconductor Forecast, May 2022, #US47829222.

## USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$            million (or approximately \$            million if the underwriters exercise their option to purchase additional shares of our common stock in full) from the sale of the shares of our common stock offered by us in this offering, based on an assumed initial public offering price of \$            per share (the midpoint of the price range set forth on the cover page of this prospectus), and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$            per share would increase (decrease) the net proceeds to us from this offering by approximately \$            million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, each 1.0 million share increase (decrease) in the number of shares offered, as set forth on the cover page of this prospectus, would increase (decrease) the net proceeds that we receive from this offering by approximately \$            million, assuming no change in the assumed initial public offering price per share, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to increase our capitalization and financial flexibility, establish a public market for our common stock, facilitate future access to the public equity markets by us, our employees and our stockholders, obtain additional capital to support our operations and increase our visibility in the marketplace.

We intend to use the net proceeds from this offering for general corporate purposes, including working capital, selling and marketing activities, product development, general and administrative matters, the repayment of outstanding debt and capital expenditures. We also may use a portion of the net proceeds to acquire complementary businesses, products, services or technologies. However, we do not have agreements or commitments for any specific acquisitions at this time.

We intend to use a portion of the offering proceeds to repay the March 2022 Loan. The March 2022 Loan bears an interest rate of 3.25% per annum and is due in full on March 30, 2023. We also intend to use a portion of the offering proceeds to repay the outstanding balance of the 2022 Credit Line, from which we have drawn \$2.0 million as of September 30, 2022. The 2022 Credit Line bears an interest rate equal to the prime rate plus 1% per annum and is due in full upon the earlier of (i) June 13, 2023 and (ii) 10 days following the date that we secure financing in an amount equal to or greater than the such line of credit. See "Certain Relationships and Related Party Transactions—Related Party Loans" for more information regarding the March 2022 Loan and the 2022 Credit Line.

Pending the uses described above, we intend to invest the net proceeds from this offering in short term, interest-bearing securities such as money market accounts, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government.

The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including our ability to gain access to additional financing, the pace of our operational expansion relative to revenue growth, and the relative success and cost of our research and development programs. As a result, our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds of this offering.

## **DIVIDEND POLICY**

We have never declared or paid cash dividends on our common stock, and we currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business and we do not anticipate declaring or paying, in the foreseeable future, any cash dividends on our common stock. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant.

## CAPITALIZATION

The following table sets forth our cash and cash equivalents, and our capitalization as of September 30, 2022:

- on an actual basis;
- on a pro forma basis, giving effect to (i) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the completion of this offering, (ii) the RSU Settlement Issuance, and (iii) a - for - split of our common stock expected to be completed prior to the completion of this offering; and
- on a pro forma as adjusted basis, giving effect to (i) the pro forma adjustment discussed above, (ii) giving further effect to the sale of shares of our common stock by us in this offering at an assumed initial public offering price of \$ per share (the midpoint of the range set forth on the cover page of this prospectus), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and (iii) the repayment of the March 2022 Loan and the 2022 Credit Line following the completion of this offering.

The pro forma and pro forma as adjusted information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table together with the sections titled "Prospectus Summary—Summary Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes appearing elsewhere in this prospectus.

	As of September 30, 2022		
	Actual	Pro Forma	Pro Forma As Adjusted <sup>(1)</sup>
	(in thousands, except for per share data)		
Cash	\$ 3,971	\$ 3,971	\$
Debt:			
March 2022 Loan <sup>(2)</sup>	\$ 500	\$ —	
2022 Credit Line <sup>(3)</sup>	2,000	—	
Stockholders' equity:			
Preferred stock, \$0.0001 par value per share; no shares authorized, issued and outstanding, actual; shares authorized, no shares issued and outstanding pro forma and pro forma as adjusted	—	—	
Common stock, \$0.0001 par value; 50,000,000 shares authorized; 40,000,000 shares issued and outstanding, actual; shares authorized, shares issued and outstanding pro forma; shares authorized, shares issued and outstanding pro forma as adjusted	4	4	
Retained earnings	14,953	8,300	
Accumulated other comprehensive loss	(2,806)	(2,806)	
Total stockholders' equity	12,151	5,498	
Total capitalization	\$ 14,651	\$ 5,498	\$

(1) Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) each of the amount of cash and cash equivalents, additional paid-in capital and total capitalization by approximately \$ million, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering costs payable by us. Each 1.0 million increase (decrease) in the number of shares offered as set forth on the cover page of this prospectus, would increase (decrease) each of our cash and cash equivalents, working capital (deficit), total assets, additional paid-in capital and total stockholders' equity by approximately \$ million, assuming no change in the assumed initial public offering price per share, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(2) Reflects the repayment of the March 2022 Loan in connection with this offering.

(3) Reflects the repayment of the 2022 Credit Line in connection with this offering.

The number of shares of our common stock to be outstanding after this offering is based on 40,000,000 shares of common stock outstanding as of September 30, 2022 and the issuance of \_\_\_\_\_ shares of common stock resulting from the RSU Settlement Issuance, and excludes:

- \_\_\_\_\_ shares of our common stock subject to the settlement of RSUs outstanding as of September 30, 2022 granted under the 2014 Plan for which the Liquidity Event Requirement will be satisfied in connection with this offering, but for which the Time-Based Requirement will not be satisfied on or before the date of this offering;
- \_\_\_\_\_ shares of our common stock reserved for future issuance under the 2023 Plan, which will become effective as of immediately prior to the completion of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2023 Plan and any reserved shares not issued or subject to outstanding awards under the 2014 Plan after the effective date of the 2023 Plan that are subsequently forfeited or terminated, all of which shares shall become available for issuance under the 2023 Plan; and
- \_\_\_\_\_ shares of our common stock reserved for future issuance under the ESPP, which will become effective as of immediately prior to the completion of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

## DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value as of September 30, 2022, was approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share of our common stock. Our historical net tangible book value is the amount of our total tangible assets less our total liabilities. Historical net tangible book value per share is our historical net tangible book value divided by the number of shares of common stock outstanding as of September 30, 2022.

Our pro forma net tangible book value as of September 30, 2022, was \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share of common stock. Our pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of our shares of common stock outstanding as of September 30, 2022, after giving effect to (i) the RSU Settlement Issuance and (ii) stock-based compensation expenses of approximately \$ \_\_\_\_\_ related to RSUs for which the Time-Based Requirement was satisfied on or before the date of this offering and for which the Liquidity Event Requirement will be satisfied upon the completion of this offering.

After giving effect to our sale of \_\_\_\_\_ shares of common stock in this offering at the assumed initial public offering price of \$ \_\_\_\_\_ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2022 would have been \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share. This represents an immediate increase in pro forma as adjusted net tangible book value per share of \$ \_\_\_\_\_ to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value per share of \$ \_\_\_\_\_ to new investors purchasing common stock in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share	\$
Historical net tangible book value per share as of September 30, 2022	\$
Pro forma increase in net tangible book value per share as of September 30, 2022 before giving effect to this offering	
Pro forma net tangible book value per share as of September 30, 2022	
Increase in pro forma net tangible book value per share attributable to investors participating in this offering	
Pro forma as adjusted net tangible book value per share after giving effect to this offering	—
Pro forma as adjusted dilution per share to investors participating in this offering	\$

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ \_\_\_\_\_ per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately \$ \_\_\_\_\_ per share and the dilution in pro forma per share to investors participating in this offering by approximately \$ \_\_\_\_\_ per share, assuming that the number of shares offered, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A 1.0 million share increase in the number of shares offered, as set forth on the cover of this prospectus, would increase the pro forma as adjusted net tangible book value per share after this offering by approximately \$ \_\_\_\_\_, and decrease the dilution in pro forma per share to investors participating in this offering by approximately \$ \_\_\_\_\_, and a 1.0 million share decrease in the number of shares offered by us would decrease the pro forma as adjusted net tangible book value per share after this offering by approximately \$ \_\_\_\_\_ and increase the dilution in pro forma per share to investors participating in this offering by approximately \$ \_\_\_\_\_, in each case assuming the assumed initial public offering price of \$ \_\_\_\_\_ per share (the midpoint of the price range set forth on the cover of this prospectus) remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares in full, the pro forma as adjusted net tangible book value will increase to \$ \_\_\_\_\_ per share, representing an immediate increase in pro forma as adjusted net

tangible book value to our existing stockholders of \$ \_\_\_\_\_ per share and an immediate decrease of dilution of \$ \_\_\_\_\_ per share to new investors participating in this offering.

The following table summarizes, on a pro forma as adjusted basis as of September 30, 2022, the number of shares purchased or to be purchased from us, the total consideration paid or to be paid to us, and the average price per share paid to us by our existing stockholders and paid us to by investors participating in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share (the midpoint of the price range set forth on the cover page of this prospectus), before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. As the table below shows, investors participating in this offering will pay an average price per share substantially higher than our existing stockholders paid.

	Shares Purchased		Total Consideration		Average Price Per Share	
	Number	Percent	Amount	Percent	%	\$
Existing stockholders		%	\$		%	\$
Investors participating in this offering						
<b>Total</b>		<b>100 %</b>	<b>\$</b>		<b>100 %</b>	

The table above assumes no exercise of the underwriters' option to purchase up to an additional \_\_\_\_\_ shares in this offering. If the underwriters' option to purchase additional shares is exercised in full, the number of shares of our common stock held by the existing stockholders would be reduced to \_\_\_\_\_ % of the total number of shares of our common stock outstanding after this offering, and the number of shares of common stock held by new investors participating in the offering would be increased to \_\_\_\_\_ % of the total number of shares outstanding after this offering.

The number of shares of our common stock to be outstanding after this offering is based on 40,000,000 shares of common stock outstanding as of September 30, 2022 and the issuance of shares of common stock resulting from the RSU Settlement Issuance, and excludes:

- \_\_\_\_\_ shares of our common stock subject to the settlement of RSUs outstanding as of September 30, 2022 granted under the 2014 Plan for which the Liquidity Event Requirement will be satisfied upon the completion of this offering, but for which the Time-Based Requirement will not be satisfied on or before the date of this offering;
- \_\_\_\_\_ shares of our common stock reserved for future issuance under the 2023 Plan, which will become effective as of immediately prior to the completion of this offering, with such number of shares reserved for issuance under the 2023 Plan being inclusive of \_\_\_\_\_ shares that were reserved for future issuance under the 2014 Plan but transferred to the 2023 Plan effective immediately prior to completion of this offering; and
- \_\_\_\_\_ shares of our common stock reserved for future issuance under the ESPP, which will become effective as of immediately prior to the completion of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

To the extent that any outstanding RSUs vest and settle or RSUs are issued under our stock-based compensation plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering.



## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*You should read the following discussion and analysis of financial condition and results of operations together with our audited consolidated financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks, uncertainties and assumptions. Our actual results could differ materially from those discussed in or implied by these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled "Risk Factors." Please also see the section titled "Special Note Regarding Forward-Looking Statements."*

### Overview

We are a provider of TCAD software, EDA software and SIP. TCAD, EDA and SIP solutions enable semiconductor and photonics companies to increase productivity, accelerate their products' time-to-market and reduce their development and manufacturing costs. We have decades of expertise developing the "technology behind the chip" and providing solutions that span from atoms to systems, starting with providing software for the atomic level simulation of semiconductor and photonics material for devices, to providing software and SIP for the design and analysis of circuits and system level solutions. We provide SIP for SoC and ICs, and SIP management tools to enable team collaborations on complex SoC designs. Our customers include semiconductor manufacturers, OEMs and design teams who deploy our solutions in production flows across our target markets, including display, power devices, automotive, memory, HPC, IoT and 5G/6G mobile markets.

EDA offerings, including our solutions, enable companies to streamline their IC design workflows, develop complex IC designs in a cost-efficient manner, and maintain acceptable IC manufacturing yield, by providing interoperable tools that capture and simulate designs from concept to analysis. Our TCAD device and process simulation tools provide compatible data structures that can be used with our EDA modeling, analysis, simulation, verification and yield enhancement tools. Further, our EDA tools are used for designing SIP and IC designs that can be managed and validated by our SIP management tools.

Our go-to-market strategy centers on selling software solutions and associated maintenance and services. Our software solutions accounted for 69% and 71% of our revenue for the years ended December 31, 2020 and 2021, respectively, and associated maintenance and services accounted for 31% and 29% of our revenue for the years ended December 31, 2020 and 2021, respectively. Our software licenses accounted for 69% and 76% of our revenue for the nine months ended September 30, 2021 and 2022, respectively, and associated maintenance and services accounted for 31% and 24% of our revenue for the nine months ended September 30, 2021 and 2022, respectively. For the year ended December 31, 2020, approximately 78% of our bookings came from existing customers and 22% came from new customers, and for the year ended December 31, 2021, approximately 85% of our bookings came from existing customers and 15% came from new customers. For the nine months ended September 30, 2021, approximately 82% of our bookings came from existing customers and 18% came from new customers, and for the nine months ended September 30, 2022, approximately 85% of our bookings came from existing customers and 15% came from new customers. See "—Key Operating Indicators and Non-GAAP Financial Measures—Bookings" for a description of how we define bookings.

We have experienced an increase in bookings and revenue over the past two years. Our revenue was \$40.3 million and \$42.0 million for the years ended December 31, 2020 and 2021, respectively, and was \$31.1 million and \$36.7 million for the nine months ended September 30, 2021 and 2022, respectively. Our bookings were \$44.0 million and \$47.3 million for the years ended December 31, 2020 and 2021, respectively, and were \$30.6 million and \$37.3 million for the nine months ended September 30, 2021 and 2022, respectively. We had net income of \$2.6 million for the year ended December 31, 2020 and, as a result of increased operating expenses in connection with our preparation for this offering, we had a net loss of \$1.8 million for the year ended December 31, 2021. We recorded net losses of \$0.7 million and \$0.9 million for the nine months ended September 30, 2021 and 2021, respectively.

### Recent Acquisitions

Since 2015, we have acquired nine businesses, assets and/or technologies to complement our existing software solution offerings, expand into new markets or grow our existing market share, increase our engineering talent and enhance our technical capabilities. For example, in November 2020, we acquired the memory compiler assets and resources of Dolphin for \$1.2 million to provide embedded memory and register files for SoC designers and foundries. In January 2021, we acquired PolytEDA Cloud LLC, or PolytEDA, for \$1.9 million to expand our capabilities for rapid physical verification of IC designs prior to mask creation and manufacturing and for cloud enablement of EDA software tools.

## **Impact of COVID-19**

We are continuing to monitor the impact of COVID-19 on all aspects of our business. The COVID-19 pandemic has caused and may continue to cause travel bans or disruptions, and in some cases, prohibition of non-essential activities, disruption and shutdown of businesses and greater uncertainty in global financial markets. The impact of COVID-19 is fluid and uncertain, but it has caused and may continue to cause various negative effects, including an inability to meet with actual or potential customers, customers deciding to delay or abandon their planned purchases or failing to make payments to us, closures in our customers' offices, and delays or disruptions in our customers' supply chains.

As a result of the COVID-19 pandemic, our average sales cycles were extended due to closures of certain of our customers' offices. We also experienced delayed payments from many of our customers in China and Europe. Additionally, we expended resources to enable our employees to work from home. For example, we used resources to strengthen our cybersecurity measures and provide employees with work from home stipends, computers and related equipment, and enhanced internet bandwidth connections. In some locations we incurred costs associated with the transition from work from home back to our offices, including sanitization costs and cost related to creating workstations and work schedule that permit social distancing. In other locations, we closed, and have not reopened, our offices. Extended sales cycles, delayed payments, and costs associated with the work from home and back to office transitions impacted our business. To help alleviate this impact, we received a PPP loan pursuant to the CARES Act on May 7, 2020, in an aggregate principal amount of \$2.3 million. We used proceeds of the PPP Loan to fund qualifying payroll and other expenses. On June 29, 2021, the PPP Loan was forgiven in full in the amount of \$2.3 million in principal and \$26 thousand in interest.

Our ability to close transactions with new and existing customers, our demand generation activities, and the efficiency and effect of those activities may be negatively affected, and it has been and, until the COVID-19 pandemic is contained, will continue to, be more difficult for us to forecast our operating results. These uncertainties have, and may continue to, put pressure on global economic conditions. Overall research and development spending has caused, and may continue to cause, our customers to modify spending priorities or delay or abandon purchasing decisions, thereby lengthening bookings cycles for our software solutions and making it difficult for us to forecast bookings and operating results and make decisions about future investments, any of which could materially harm our business, operating results and financial condition.

Further, our management team is focused on addressing the impacts of COVID-19 on our business, which has required and will continue to require, a large investment of their time and resources and may distract our management team or disrupt our operating plans. The extent to which COVID-19 ultimately impacts our results of operations, cash flow and financial position will depend on future developments, which are uncertain and cannot be predicted, including but not limited to, the duration and spread of the pandemic, its severity, the actions taken by governments and authorities to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume.

## **Russia and Ukraine Conflict**

In February 2022, Russia invaded Ukraine, and the ensuing conflict has created disruption in the region and around the world. However, we do not currently consider Russia's invasion of Ukraine to have had a material impact on our business. None of our revenue was derived from our Russian or Ukrainian subsidiaries in the year ended December 31, 2021 or in the nine months ended September 30, 2022. In addition, neither of our Russian nor Ukrainian subsidiaries comprise, or is expected to comprise, a material portion of our net assets which consist primarily of computers, laptops and audio/visual equipment. In addition, we have an aggregate of 17 employees and 2 contractors in the affected region. As a result of economic uncertainties and disruption created by the initiation of war, we recorded, during the nine months ended September 30, 2022, an impairment charge of \$0.6 million to write down the carrying value of intangible assets associated with our Ukrainian subsidiary, which management determined would not be recoverable. See also Note 5, Acquisitions, Note 6, Goodwill and Intangible Assets and [Note 13](#), Fair Value of Financial Instruments, of our unaudited condensed consolidated financial statements for the nine months ended September 30, 2022.

We continue to closely monitor the ongoing conflict and related sanctions in the affected region, such as potential sanctions related to employing individuals located in the affected area, which could impact our results of operations in the future. Other impacts due to the evolving conflict are currently unknown and could potentially subject our business to adverse consequences should the situation escalate beyond its current scope or affect our customers outside of the region.

## **Key Factors Affecting our Results of Operations and Future Performance**

We believe that the growth of our business and our future success are dependent upon many factors including those described above under “Risk Factors” and elsewhere in this prospectus and those described below. While each of these factors presents significant opportunities for us, these factors also pose challenges that we must successfully address to sustain the growth of our business and enhance our results of operations.

### ***Relationships with Our Existing Customers***

Building long-term relationships with our existing customer base is critical in driving renewals for our licenses and overall revenue growth. We have a global sales force selling to semiconductor companies and engineering universities which instruct the next generation of chip designers and fabrication facility managers on the use and benefits of our design tools. Most of our customers enter into multi-year software license agreements for a fixed price including a multi-year software license and maintenance and services.

When we renew expiring contracts with our customers, we may increase our bookings by selling them additional or new software or SIP. Our total bookings increased by 7.5% from \$44.0 million in fiscal year 2020 to \$47.3 million in fiscal year 2021. Our total bookings increased by 22% from \$30.6 million in the nine months ended September 30, 2021 to \$37.3 million in the nine months ended September 30, 2022. Our ability to continue to generate sales from our existing customers and to expand those relationships is dependent on our ability to continue to offer software solutions that our existing and potential customers demand. Any failure to continue to generate sales with our existing customers or expand our product and service offerings with our existing customers may have an adverse effect on our revenue and results of operations.

We enter into standard software licensing agreements with each of our customers. Pursuant to these agreements, we grant our customers a non-exclusive, non-transferable limited license, without the right to sublicense, to execute, use and operate certain software. Each party has the right to terminate the software license agreement under certain circumstances, in which event the customer will remove, delete and return all software, related documentation and confidential information furnished under the license agreement.

### ***Ability to Expand into New Markets and Applications and Expansion of our Existing Markets***

According to Grand View Research, the global EDA software market was estimated to reach \$10.2 billion in potential revenue in 2021 and is expected to reach \$22.2 billion in potential revenue in 2030, representing a 9.1% CAGR, driven in part by the growth in the integrated circuits and electronics manufacturing markets, growing complexity of semiconductor and photonics designs and increasing challenges associated with advanced materials and shrinking process technology nodes across the EDA market. We believe these trends will increase the demand for our software solutions over time, which will have a direct impact on our future revenues and results of operations. In response to this increase in complexity and new challenges facing designers, we have increased investments in our research and development for new software product offerings. For example, our research and development expense was 28% and 32% of revenue for the years ended December 31, 2020 and 2021, respectively, and was 32% and 27% of revenue for the nine months ended September 30, 2021 and 2022, respectively. We plan to continue to invest in our software solutions to establish and expand a leadership position in our target markets. We also plan to use our research and development efforts to continue to cater to strategic customer needs.

The drive to increase performance and diversification of applications is further accelerated by a broad-scale transition to cloud-based software applications and computing on mobile platforms. The development of semiconductors that are optimized for specific applications, including AI, 5G/6G communications and IoT, has continued to fuel demand for TCAD and EDA software tools, which in turn fuels demand to develop solutions to meet our markets' evolving needs. Our ability to successfully generate customer demand amongst new customers and in new markets is dependent on our ability to educate these customers and markets about our software solutions and our ability to generate sufficient new solutions that solve problems for these potential customers. Our ability to continue to expand our product offerings into new markets also requires that we direct our research and development efforts toward value-generating new and existing initiatives. Our future revenues and results of operations will be directly impacted by our ability to produce and provide new software solutions in new and expanding markets.

### ***Our Ability to Successfully Identify, Complete and Integrate Acquisitions***

Our success depends in part on our ability to identify, complete and integrate acquisitions. Our goal for future potential acquisition is to pursue acquisitions that will increase our competitiveness in our markets, and increase our bookings and revenue. Our ability to successfully identify, complete and integrate acquisitions will depend on a number of factors, including access to adequate capital, potential competition for the assets, and technology fit.

## **Components of Results of Operations**

### **Revenue**

Our revenue is derived from software licensing and maintenance and services. Our customer agreements include combinations of licensed software and maintenance and services, which are accounted for as separate performance obligations with differing revenue recognition patterns.

#### *Software License Revenue*

Revenue from our software licenses is classified as software license revenue. Software license revenue is recognized upfront upon delivery of the licensed product. We also offer licenses of our standard SIP developed both in house and in partnership with third parties. Our SIP licenses provide customers with access to SoC design SIP which meet established industry standards, thus saving customers the time and resources required to develop similar design methodologies. Our SIP are generally ready to use upon delivery, meaning no customization is required for our customers to obtain value from the use of our SIP in their IC designs. We recognize revenue associated with licenses of our SIP at the commencement of the contract upon delivery of the licensed SIP. With respect to our SIP developed in partnership with third parties, we generally act as a principal to the transaction because we control the promised SIP that we deliver to the customer. Consistent with our role as the principal, we recognize SIP revenue of our SIP developed in partnership with third parties on a gross basis. Any royalty fees based upon unit sales, revenue or flat fees which are paid to a third party are reported in cost of revenue upon delivery pursuant to the terms and conditions of our contractual obligations with the licensors.

Under certain SIP license agreements, we can also derive revenue through royalties from customers who agree to pay usage-based fees to embed our SIP into their own software offerings. Revenue under SIP royalty agreements is generally recognized during the period in which the customer sells its solutions which incorporate our SIP.

#### *Maintenance and Service Revenue*

Typically, our software solutions are sold with post-contract support, or PCS, which includes unspecified technical enhancements and customer support. PCS is classified as maintenance revenue and is recognized ratably over the term of the contract, as we satisfy the PCS performance obligation over time.

We also recognize revenue from a range of device characterization, modeling and SIP integration services. Revenue for modeling and SIP integration services may be recognized as the related services are performed or deferred until the services are completed subject to the terms of the particular customer arrangement. Such revenue is classified as maintenance and service revenue.

### **Cost of Revenue and Gross Profit**

Cost of revenue consists of personnel costs comprised of salaries and benefits for employees directly involved in our customer support function, such as customer support engineering salary and benefits, costs of our other customer services, allocation of overhead and facility costs and royalties related to recognized revenue. Gross profit represents revenue less cost of revenue.

### **Operating Expenses**

Our operating expenses consist of research and development, selling and marketing, and general and administrative expenses. Personnel costs are the most significant component of our operating expenses and consist of salaries, benefits, bonuses and commissions. Our operating expenses also include consulting costs, allocated costs of facilities, information technology, and depreciation. We expect our operating expenses to fluctuate as a percentage of revenue over time. Historically, we have not recognized share-based compensation, but we expect we will do so after the closing of our initial public offering. We expect that this expense will be a component of research and development, selling and marketing and general and administrative expense, and any such amounts could be significant. As of September 30, 2022, we had \$15.3 million in deferred share-based compensation expense, of which \$6.5 million deferred share-based compensation expense relates to awards that have met the Time-Based Requirement but not the Liquidity-Based Requirement, and the remaining \$8.8 million deferred share-based compensation expense relates to awards that have not met either requirement.

#### *Research and Development*

Our research and development expense consists primarily of personnel costs comprised of salaries, benefits for employees directly involved in our research and development efforts, as well as engineering, quality assessment, other related costs associated with the development of new products, enhancements to existing products, quality assurance and testing and allocated overhead costs. We expense research and development costs as incurred. We believe that continued investment in our software solutions and services is important for our future growth and acquisition of new customers and, as a result, we expect our research and development expenses to continue to

increase, although it may fluctuate as a percentage of revenue from period to period depending on the timing of these expenses.

***Selling and Marketing***

Selling and marketing expense consists of personnel costs comprised of salaries, benefits, sales commissions, travel costs, and field application engineering directly involved in our selling and marketing efforts, as well as professional and consulting fees, advertising expenses, and allocated overhead costs. We expect selling and marketing expense to continue to increase as we increase our sales and marketing personnel and grow our international operations, although it may fluctuate as a percentage of revenue from period to period depending on the timing of these expenses.

***General and Administrative***

General and administrative expense consists of personnel costs associated with our executive, legal, finance, human resources, information technology and other administrative functions, including salaries, benefits and bonuses. General and administrative expense also includes professional and consulting fees, accounting fees, legal costs, and allocated overhead costs. We expect general and administrative expense to increase as we expand our finance and administrative personnel, grow our operations, and incur additional expense associated with operating as a public company, including director and officer liability insurance and legal and compliance costs, although it may decrease as a percentage of revenue from period to period depending on the timing of these expenses.

***Impairment Charges***

On February 24, 2022, Russia launched an invasion of Ukraine. As a result of local economic uncertainties and disruption created by this ongoing conflict, we recorded an impairment charge of \$0.6 million during the nine months ended September 30, 2022 in order to reduce the carrying value of intangible assets associated with our Ukrainian subsidiary, which management determined would not be recoverable.

***Gain on Debt Extinguishment***

Gain on extinguishment of debt consists of forgiveness of a loan from the United States Treasury Department's Small Business Administration under their Payroll Protection Plan.

***Interest and Other Expense, Net***

Interest and other expense includes interest income earned on cash balances or other sources, interest expense associated with cost of borrowings, leases or interest-bearing agreements, foreign exchange gains and losses and changes in the fair value of contingent consideration associated with legacy acquisitions.

***Income Tax Provision***

Income tax provision is our estimate of current tax expense incurred from the consolidated results of operations globally.

## Results of Operations

The following table sets forth our results of operations for the years ended December 31, 2020 and 2021 and for the nine months ended September 30, 2021 and 2022:

	Year Ended December 31,			Nine Months Ended September 30,		
	2020	2021	% Change	2021	2022	% Change
	<i>(in thousands)</i>					
<b>Revenue:</b>						
Software license revenue	\$ 27,826	\$ 29,687	7 %	\$ 21,563	\$ 27,946	30 %
Maintenance and service	12,454	12,276	(1)%	9,541	8,727	(9)%
Total revenue	40,280	41,963	4 %	31,104	36,673	18 %
Cost of revenue	8,674	8,653	— %	6,571	6,767	3 %
Gross profit	31,606	33,310	5 %	24,533	29,906	22 %
<b>Operating expenses:</b>						
Research and development	11,159	13,539	21 %	10,062	9,851	(2)%
Selling and marketing	9,197	10,331	12 %	7,984	7,935	(1)%
General and administrative	7,610	12,976	71 %	9,072	11,607	28 %
Impairment charges	—	—	— %	—	560	100 %
Total operating expenses	27,966	36,846	32 %	27,118	29,953	10 %
Operating income (loss)	3,640	(3,536)	(197)%	(2,585)	(47)	98 %
Gain on debt extinguishment	—	2,278	100 %	2,278	—	(100)%
Interest and other expense, net	(784)	(317)	(60)%	(58)	(237)	(309)%
Income (loss) before income tax provision	2,856	(1,575)	(155)%	(365)	(284)	22 %
Income tax provision	306	270	(12)%	301	617	105 %
Net income (loss)	\$ 2,550	\$ (1,845)	(172)%	\$ (666)	\$ (901)	(35)%

The following table summarizes our results of operations as a percentage of total revenue for years ended December 31, 2020 and 2021 and for the nine months ended September 30, 2021 and 2022:

	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2021	2022
	<i>(as a percentage of total revenue)</i>			
<b>Revenue:</b>				
Software license revenue	69 %	71 %	69 %	76 %
Maintenance and service	31 %	29 %	31 %	24 %
Total revenue	100 %	100 %	100 %	100 %
Cost of revenue	22 %	21 %	21 %	18 %
Gross profit	78 %	79 %	79 %	82 %
<b>Operating expenses:</b>				
Research and development	28 %	32 %	32 %	27 %
Selling and marketing	23 %	25 %	26 %	21 %
General and administrative	19 %	31 %	29 %	32 %
Impairment charges	— %	— %	— %	2 %
Total operating expenses	69 %	88 %	87 %	82 %
Operating income (loss)	9 %	(8)%	(8)%	— %
Gain on debt extinguishment	— %	5 %	7 %	— %
Interest and other expense, net	(2)%	(1)%	— %	(1)%
Income (loss) before income tax provision	7 %	(4)%	(1)%	(1)%
Income tax provision	1 %	1 %	1 %	2 %
Net income (loss)	6 %	(4)%	(2)%	(2)%

### Comparison of the Nine Months Ended September 30, 2021 and 2022

#### Revenue

	Nine Months Ended September 30,	
	2021	2022
	<i>(in thousands)</i>	
<b>Revenue:</b>		
Software license revenue	\$ 21,563	\$ 27,946
Maintenance and service	9,541	8,727
Total revenue	<b>\$ 31,104</b>	<b>\$ 36,673</b>

Total revenue increased \$5.6 million, or 18%, from \$31.1 million for the nine months ended September 30, 2021 to \$36.7 million for the nine months ended September 30, 2022. The growth in total revenue was driven by an increase in revenue from customer renewals of \$3.3 million and \$2.3 million of revenue from new customers. Software license revenue increased \$6.4 million, or 30%, from \$21.6 million for the nine months ended September 30, 2021 to \$27.9 million for the nine months ended September 30, 2022. Maintenance and service revenue declined \$0.8 million, or 9%, from \$9.5 million for the nine months ended September 30, 2021 to \$8.7 million for the nine months ended September 30, 2022. The decline in maintenance and service revenue was primarily driven by foreign currency effects as a result of a stronger U.S. dollar during the nine months ended September 30, 2022 as compared to the same period during the previous year.

#### Gross Profit and Cost of Revenue

Gross profit increased \$5.4 million, or 22%, from \$24.5 million for the nine months ended September 30, 2021 to \$29.9 million for the nine months ended September 30, 2022. Gross profit margin increased from 79% for the nine months ended September 30, 2021 to 82% for the nine months ended September 30, 2022, driven by an increase in the contribution of software license revenue to total revenue.

## Operating Expenses

	Nine Months Ended September 30,	
	2021	2022
	(in thousands)	
<b>Operating expenses</b>		
Research and development	\$ 10,062	\$ 9,851
Selling and marketing	7,984	7,935
General and administrative	9,072	11,607
Impairment charges	—	560
<b>Total operating expenses</b>	<b>\$ 27,118</b>	<b>\$ 29,953</b>

### Research and Development Expenses

Research and development expenses was \$10.1 million and \$9.9 million for the nine months ended September 30, 2021 and 2022, respectively. The decrease of \$0.2 million, or 2%, reflects a decline in amortization expense driven by the impairment of intangible assets associated with our Ukrainian subsidiary during the nine months ended September 30, 2022. See *Impairment Charges* below for further discussion.

### Selling and Marketing Expenses

Selling and marketing expenses was \$8.0 million and \$7.9 million for the nine months ended September 30, 2021 and 2022, respectively. The decrease of \$0.1 million, or 1%, was primarily due to a decline in the U.S. dollar value of expenses associated with our international subsidiaries as a result of prevailing exchange rates during the nine months ended September 30, 2022.

### General and Administrative Expenses

General and administrative expenses was \$9.1 million and \$11.6 million for the nine months ended September 30, 2021 and 2022, respectively. The increase of \$2.5 million, or 28%, reflects an increase in legal expenses of \$1.1 million primarily related to ongoing litigation, higher compensation of \$0.4 million and benefits of \$0.1 million primarily related to increased headcount and professional services of \$0.9 million primarily related to audit, tax and consulting services associated with our activities to prepare for this offering.

### Impairment Charges

On February 24, 2022, Russia launched an invasion of Ukraine. As a result of local economic uncertainties and disruption created by the initiation of war, we recorded an impairment charge of \$0.6 million to write down the carrying value of intangible assets associated with our Ukrainian subsidiary which management determined would not be recoverable. See also [Note 5](#), Acquisitions, and [Note 6](#), Goodwill and Intangible Assets, in our unaudited condensed consolidated financial statements for the nine months ended September 30, 2022 for further discussion.

## Interest and Other Expense

### Interest and Other Expense, Net

Interest and other expense was \$0.1 million and \$0.2 million for the nine months ended September 30, 2021 and 2022, respectively. Interest and other expense, net includes interest income earned on cash balances or other sources, interest expense associated with cost of borrowings, leases or interest-bearing agreements, foreign exchange gains and losses and changes in the fair value of contingent consideration associated with legacy acquisitions. The decrease in interest and other expense, net, was primary the result of foreign exchange.

## Income Tax Provision

	Nine Months Ended September 30,	
	2021	2022
	(in thousands)	
<b>Income tax provision</b>	<b>\$ 301</b>	<b>\$ 617</b>

Income tax provision was \$0.3 million and \$0.6 million for the nine months ended September 30, 2021 and 2022, respectively. See Note 10 of our unaudited condensed consolidated financial statements for the nine months ended September 30, 2021 and 2020.



## Comparison of the Years Ended December 31, 2020 and 2021

### Revenue

	Year Ended December 31,	
	2020	2021
	<i>(in thousands)</i>	
<b>Revenue:</b>		
Software license revenue	\$ 27,826	\$ 29,687
Maintenance and service	12,454	12,276
<b>Total revenue</b>	<b>40,280</b>	<b>41,963</b>

Total revenue was \$40.3 million for the year ended December 31, 2020 and \$42.0 million for the year ended December 31, 2021, an increase of \$1.7 million, or 4%. The growth in total revenue was primarily driven by an increase in revenue from customer renewals of \$1.9 million, partially offset by a \$0.2 million decline in revenue from new customers. Software license revenue was \$27.8 million for the year ended December 31, 2020 and \$29.7 million for the year ended December 31, 2021, an increase of \$1.9 million, or 7%. Maintenance and service revenue was \$12.5 million for the year ended December 31, 2020 and \$12.3 million for the year ended December 31, 2021, a decrease of \$0.2 million, or 1%.

### Gross Profit and Cost of Revenue

Gross profit was \$31.6 million for the year ended December 31, 2020 and \$33.3 million for the year ended December 31, 2021, an increase of \$1.7 million, or 5%. Gross profit margin was 78% for the year ended December 31, 2020 and 79% for the year ended December 31, 2021.

### Operating Expenses

	Year Ended December 31,	
	2020	2021
	<i>(in thousands)</i>	
<b>Operating expenses</b>		
Research and development	\$ 11,159	\$ 13,539
Selling and marketing	9,197	10,331
General and administrative	7,610	12,976
<b>Total operating expenses</b>	<b>\$ 27,966</b>	<b>\$ 36,846</b>

### Research and Development Expenses

Research and development expenses was \$11.2 million for the year ended December 31, 2020 and \$13.5 million for the year ended December 31, 2021. The increase of \$2.3 million, or 21%, was primarily the result of increased headcount, which resulted in increases in compensation of \$2.3 million and benefits of \$0.1 million, as well as a \$0.1 million increase in depreciation and amortization, partially offset by \$0.2 million of research grant credits.

### Selling and Marketing Expenses

Selling and marketing expenses was \$9.2 million for the year ended December 31, 2020 and \$10.3 million for the year ended December 31, 2021. The increase of \$1.1 million, or 12%, was due to wages of \$0.5 million and benefits of \$0.1 million, and an increase in sales commissions of \$0.5 million, primarily due to higher sales during the year.

### General and Administrative Expenses

General and administrative expenses was \$7.6 million for the year ended December 31, 2020 and \$13.0 million for the year ended December 31, 2021. The increase of \$5.4 million, or 71%, was primarily driven by an increase in legal expenses of \$1.5 million, primarily related to ongoing litigation, higher compensation of \$1.3 million and benefits of \$0.1 million, primarily related to increased headcount, professional services of \$1.8 million, primarily related to audit, tax and consulting services associated with this offering, increase of rent and building services of \$0.2 million and an increase of \$0.2 million of equipment rental repair and maintenance expense.

### Interest and Other Expense

#### Gain on Debt Extinguishment

For the year ended December 31, 2021, our PPP loan was forgiven, and we recognized the gain in the amount of \$2.3 million.

**Interest and Other Expense, Net**

Interest and other expense was \$0.7 million for the year ended December 31, 2020 and \$0.3 million for the year ended December 31, 2021. Interest and other expense, net includes interest income earned on cash balances or other sources, interest expense associated with cost of borrowings, leases or interest-bearing agreements, foreign exchange gains and losses and changes in the fair value of contingent consideration associated with legacy acquisitions. The decrease in interest and other expense, net, was primary the result of foreign exchange and interest fluctuations.

**Income Tax Provision**

	Year Ended December 31,	
	2020	2021
	<i>(in thousands)</i>	
<b>Income tax provision</b>	<b>\$ 306</b>	<b>\$ 270</b>

Income tax provision was \$0.3 million for the year ended December 31, 2020 and \$0.3 million for the year ended December 31, 2021. See Note 12 of our audited consolidated financial statements for the years ended December 31, 2020 and 2021 included elsewhere in this prospectus.

**Key Operating Indicators and Non-GAAP Financial Measures**

We use the following key performance indicators and non-GAAP financial measures to analyze our business performance and financial forecasts and to develop strategic plans which we believe provide useful information to investors and others in understanding and evaluating our results of operations in the same manner as our management team. These key performance indicators and non-GAAP financial measures are presented for supplemental informational purposes only, should not be considered a substitute for financial information presented in accordance with GAAP and may differ from similarly titled metrics or measures presented by other companies.

**Bookings**

We define a booking as a signed contract and related purchase commitment from a customer, based on the value set forth in a purchase order. We believe bookings are a useful metric to measure the success of customer sales and provide an indication of trends in our operating results that are not necessarily reflected in our revenue, because our revenue recognition is based on the later satisfaction of our customer obligations, and not of the sales to customers at the time of sale. For the year ended December 31, 2020 and 2021, we recorded \$44.0 million and \$47.3 million in bookings, respectively. For the nine months ended September 30, 2021 and 2022, we recorded \$30.6 million and \$37.3 million in bookings, respectively.

**Non-GAAP Net Income (Loss)**

We define non-GAAP net income (loss) as our net income (loss) adjusted to exclude IPO readiness, non-recurring legal charges associated with legacy acquisitions, impairment charges, executive severance, amortization of acquired intangible assets, change in fair value of contingent consideration, foreign exchange (gain) loss and gain on extinguishment of debt. We monitor non-GAAP net income (loss) as a non-GAAP financial measure to supplement the financial information we present in accordance with GAAP to provide investors with additional information regarding our financial results. For further explanation of the uses and limitations of this measure and a reconciliation of our non-GAAP net income (loss) to the most directly comparable GAAP measure, income (loss), please see “—Non-GAAP Financial Measures.”

**Non-GAAP Financial Measures**

We report our financial results in accordance with GAAP. However, management believes that non-GAAP net income (loss) provides investors with additional useful information in evaluating our performance. This financial measure is not required by or presented in accordance with GAAP. We believe, however, that this non-GAAP financial measure, when taken together with our financial results presented in accordance with GAAP, provides meaningful supplemental information regarding our operating performance and facilitates internal comparisons of our historical operating performance on a more consistent basis by excluding certain items that may not be indicative of our business, results of operations or outlook. In particular, we believe non-GAAP net income (loss) provides useful supplemental information to investors and others in understanding and evaluating our results of operations, as well as provide a useful measure for period-to-period comparisons of our business performance.

Certain items are excluded from our non-GAAP net income (loss) because these items are non-cash in nature, or are not indicative of our core operating performance, and render comparisons with prior periods and competitors less meaningful. We adjust net income (loss) for these items to arrive at non-GAAP net income (loss) because these

amounts can vary substantially from company to company within our industry depending upon accounting methods and book values of assets, capital structure and the method by which the assets were acquired.

The following table reconciles net income (loss) to non-GAAP net income (loss).

	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2021	2022
	<i>(in thousands)</i>			
<b>Net Income (loss)</b>	<b>\$ 2,550</b>	<b>\$ (1,845)</b>	<b>\$ (666)</b>	<b>\$ (901)</b>
<b>Add:</b>				
Acquisition-related litigation costs <sup>(1)</sup>	52	1,148	782	1054
Executive severance <sup>(2)</sup>	—	280	180	—
Amortization of acquired intangible assets <sup>(3)</sup>	641	808	593	215
Change in fair value of contingent consideration <sup>(4)</sup>	(36)	295	—	16
Other non-recurring expenses <sup>(5)</sup>	511	1,087	650	2178
Foreign exchange (gain) loss	649	(93)	107	211
Gain on debt extinguishment <sup>(6)</sup>	—	(2,278)	(2,278)	—
Impairment charges <sup>(7)</sup>	—	—	—	560
<b>Non-GAAP net income (loss)</b>	<b>\$ 4,367</b>	<b>\$ (598)</b>	<b>\$ (632)</b>	<b>\$ 3,333</b>

(1) Reflects litigation and related expenses incurred in connection with our acquisitions.

(2) Includes executive severance which occurred in connection with management changes.

(3) Reflects the amortization of intangible assets attributable to our acquisitions.

(4) Includes the change in fair value of contingent consideration recorded in connection with our acquisitions.

(5) Reflects one-time third-party professional services fees and costs incurred as part of, and in preparation for, this offering.

(6) Reflects one-time loan forgiveness of the PPP Loan in June 2021.

(7) Reflects impairment charges related to certain intangible assets assumed through our acquisition of PolyEDA.

### Liquidity and Capital Resources

Since inception, we have financed operations primarily through proceeds received from payments from our customers and borrowings from Ms. Ngai-Pesic. Our primary sources of liquidity are cash including cash generated from operations. As of September 30, 2022, we had \$4.0 million in cash, of which \$2.4 million was held by our foreign subsidiaries.

On June 13, 2022, we entered into a business financing agreement with Ms. Ngai-Pesic for a line of credit of up to \$4.0 million with a maturity of June 13, 2023, or the 2022 Credit Line. We can draw funds from the 2022 Credit Line at any time and can repay such amounts at any time without penalty. The interest rate on the 2022 Credit Line is the prime rate of prime plus 1% per annum. The 2022 Credit Line has no restrictions or covenants. We have drawn \$2.0 million on the 2022 Credit Line as of September 23, 2022. The total outstanding balance of the 2022 Credit Line is due in full upon the earlier of (i) June 13, 2023 and (ii) 10 days following the date that we secure financing in an amount equal to or greater than the 2022 Credit Line.

On March 30, 2022, we received the March 2022 Loan from Ms. Ngai-Pesic at an interest rate of 3.25% per annum, pursuant to a promissory note. The total \$0.5 million outstanding balance of the March 2022 Loan is due in full on March 30, 2023.

In December 2021, we entered into a business financing agreement with Ms. Ngai-Pesic for a short-term promissory note in the principal amount of \$0.5 million, or the December 2021 Loan, which was paid in full in July 2022.

On December 31, 2020, we had a note payable to Kipee International, Inc., or Kipee, an entity owned by Ms. Ngai-Pesic, with a balance due of \$0.5 million and notes receivable from New Horizons (Cambridge) LTD, or NHC, and New Horizon France, or NHF, real estate affiliates also owned by Ms. Ngai-Pesic, of \$0.9 million and \$1.5 million, respectively. Our Director of Global Sales Operations also serves as director of NHC. These notes were settled by Ms. Ngai-Pesic in September 2021, for a payment to us of \$0.2 million, representing the net balance remaining after the settlement of these notes.

In May 2020, we received an unsecured loan in the amount of \$2.3 million under the PPP Loan. The PPP Loan was payable two years from the date of initial disbursement and bore an interest rate of 1.00% per annum. On June 29,

2021, the PPP Loan was forgiven. The Paycheck Protection Program was established under the CARES Act, and is administered by the SBA. We used proceeds of the PPP Loan to fund qualifying payroll and other expenses.

We believe our cash and remaining available borrowing capacity of \$2.0 million under our 2022 Credit Line will be sufficient to meet our expected working capital needs, capital expenditures, financial commitments and other liquidity requirements associated with our existing operations for at least the next 12 months. We currently have no other committed sources of capital. If these resources are not sufficient to satisfy our liquidity requirements, we may be required to seek additional financing. If we raise additional funds by issuing equity securities or convertible debt securities, our stockholders will experience dilution. Debt financing, if available, may contain covenants that significantly restrict our operations or our ability to obtain additional debt financing in the future. Any additional financing that we raise may contain terms that are not favorable to us or our stockholders. We cannot assure you that we would be able to obtain additional financing on terms favorable to us or our existing stockholders, or at all. See “Risk Factors—Risks Related to Our Business and Industry—Our ability to raise additional capital in the future may be limited and could prevent us from executing our growth strategy.”

### Cash Flows

The following table summarizes changes in our cash flows for the periods indicated.

	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2021	2022
	<i>(in thousands)</i>			
<i>Cash provided by (used in):</i>				
Net cash provided by (used in) operating activities	\$ 5,777	\$ (2,636)	\$ (2,218)	\$ (3,397)
Net cash provided by (used in) investing activities	(1,597)	234	9	(64)
Net cash provided by (used in) financing activities	2,328	60	(314)	1,178
Effect of exchange rate changes	370	(674)	(389)	(450)
<i>Net increase (decrease) in cash</i>	<u>\$ 6,878</u>	<u>\$ (3,016)</u>	<u>\$ (2,912)</u>	<u>\$ (2,733)</u>

### Operating Activities

Cash flows from operating activities may vary significantly from period to period depending on a variety of factors including the timing of our collections and payments. Our ongoing cash outflows from operating activities primarily relate to personnel related costs, payments for professional services, property leases and related facilities costs, and software supporting our company infrastructure, among others. Our primary source of cash inflows is collections of our accounts receivable. The timing of invoices to our customers and subsequent collection is based on agreements executed and payment terms that can vary by customer.

Net cash used by operating activities for the nine months ended September 30, 2021 was \$2.2 million compared to \$3.4 million of net cash used for the nine months ended September 30, 2022. The \$1.2 million increase in net cash use reflects changes in net working capital of \$3.3 million, driven by higher receivable balances as of September 30, 2022, partially offset by the change in net loss after adjusting for a noncash \$2.3 million gain on debt extinguishment associated with forgiveness of our PPP Loan during the nine months ended September 30, 2021.

Net cash provided by operating activities for the year ended December 31, 2020 was \$5.8 million compared to \$2.6 million of net cash used for the year ended December 31, 2021. The change was primarily due to the net loss incurred in 2021 of \$1.8 million, a non-cash adjustment for a gain on extinguishment of the PPP Loan of \$2.3 million and changes in net working capital of \$1.9 million.

### Investing Activities

Net cash provided by investing activities for the nine months ended September 30, 2021 was nine thousand dollars and reflects \$1.2 million of net proceeds received in connection with a loan receivable from New Horizon UK, a related party, partially offset by \$1.0 million of cash tendered for our PolytEDA acquisition and \$0.2 million of capital expenditures for property and equipment. Net cash used for the nine months ended September 30, 2022, reflects purchases of property and equipment of \$0.1 million.

Net cash generated from investing activities for the year ended December 31, 2021, was \$0.2 million and reflects \$1.3 million of net proceeds in connection with a loan receivable from New Horizon UK, partially offset by \$1.0 million of cash paid in connection with the PolytEDA acquisition and \$0.1 million of capital expenditures for property and equipment. The net cash used for the year ended December 31, 2020 reflects cash used in connection with

acquisitions of \$1.1 million and purchases of property and equipment of \$0.5 million, partially offset by a related party loan receivable of \$0.1 million.

### Financing Activities

Net cash used by financing activities for the nine months ended September 30, 2021, was \$0.3 million and reflects \$0.3 million paid in connection with our Nangate acquisition. Net cash provided by financing activities for the nine months ended September 30, 2022, was \$1.2 million and reflects the \$0.5 million received from the March 2022 Loan and the draw down of \$2.0 million from the 2022 Credit Line, partially offset by \$0.8 million paid in connection with our Nangate and PolyEDA acquisitions, and the repayment of the December 2021 Loan.

Net cash provided by financing activities for the year ended December 31, 2020, was \$2.3 million reflecting proceeds from the PPP Loan, compared to net cash provided by financing activities of \$0.1 million for the year ended December 31, 2021, representing the December 2021 Loan, partially offset by \$0.4 million paid in connection with our Nangate acquisition.

### Effects of Exchange Rate Fluctuations on Cash

The effects of exchange rate fluctuations on cash was \$0.4 million and \$(0.7) million at December 31, 2020 and 2021, respectively, and \$(0.4) million and \$(0.5) million at September 30, 2021 and 2022, respectively.

### Contractual Obligations

The following table summarizes our financial commitments for contractual obligations as of September 30, 2022:

Year Ending December 31,	Operating Lease Liabilities	Contingent Consideration	March 2022 Loan	2022 Credit Line	Total
	<i>(in thousands)</i>				
Remainder of 2022	\$ 238	\$ 220	\$ —	\$ —	\$ 458
2023	940	667	500	2,000	4,107
2024	501	152	—	—	653
2025	264	34	—	—	298
2026	182	—	—	—	182
Thereafter	505	—	—	—	505
<b>Total contractual obligations</b>	<b>\$ 2,630</b>	<b>\$ 1,073</b>	<b>\$ 500</b>	<b>\$ 2,000</b>	<b>\$ 6,203</b>

### Critical Accounting Policies and Significant Judgments and Estimates

Our consolidated financial statements have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Actual results may differ from these estimates. To the extent that there are material differences between these estimates and our actual results, our future financial statements will be affected.

The critical accounting policies requiring estimates, assumptions, and judgments that we believe have the most significant impact on our consolidated financial statements are described below. See Note 2 to our consolidated financial statements appearing elsewhere in this prospectus for a description of our other significant accounting policies.

### Emerging Growth Company Status and Extended Transition Period Election

We qualify as an “emerging growth company” pursuant to the provisions of the JOBS Act. For as long as we are an “emerging growth company,” we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies,” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404(b), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, exemptions from the requirements of holding advisory “say-on-pay” votes on executive compensation, and stockholder advisory votes on golden parachute compensation.

The JOBS Act also permits an emerging growth company like us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We have elected to “opt-in” to this extended transition period for complying with new or revised accounting standards and, therefore, we will not be

subject to the same new or revised accounting standards as other public companies that comply with such new or revised accounting standards on a non-delayed basis.

Upon completion of this offering, we will also be a “smaller reporting company.” We may continue to be a smaller reporting company after this offering if either (i) the market value of our common stock held by non-affiliates is less than \$250.0 million or (ii) our annual revenue is less than \$100.0 million during the most recently completed fiscal year and the market value of our common stock held by non-affiliates is less than \$700.0 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K, we are not required to comply with the auditor attestation requirements of Section 404 and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

### **Revenue Recognition**

Our revenue is derived principally from software licensing and related maintenance and service. We enter into agreements that include combinations of software and maintenance and services, which are accounted for as separate performance obligations with differing revenue recognition patterns. We recognize revenue pursuant to ASC Topic 606, *Revenue from Contracts with Customers*. The core principle of this guidance is that an entity should recognize revenue to depict the delivery of software or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for such software or services. To achieve this objective we apply a five-step approach: (1) identify the contract(s) with a customer, (2) identify the performance obligations within the contract, (3) determine the transaction price, (4) allocate the transaction price to the separate performance obligations and (5) recognize revenue when, or as, each performance obligation is satisfied.

Software license revenue is recognized upfront upon delivery of the licensed software. Typically, our software solutions are licensed with PCS which includes unspecified technical enhancements and customer support. The PCS is classified as maintenance and service revenue and is recognized ratably over the term of the maintenance period, as we satisfy the PCS performance obligation over time.

We also offer standard SIP licenses, developed both in house and in partnership with industry-recognized firms. Our SIP licenses provide customers with access to SoC design SIP which meet established industry standards, thus saving customers the time and resources required to re-invent similar design methodology. SIP licenses offered by us are generally ready to use upon delivery. No modification is required in order for the customer to obtain value for use in their integrated circuit designs. We do not license SIP without support.

Revenue associated with the license of our SIP is classified as software license revenue and recognized as revenue upon delivery of the licensed SIP. Under certain SIP license agreements, we also derive revenue through royalties from customers who agree to pay usage-based fees to embed our SIP into their own SoCs. Royalties are generally recognized as revenue during the period in which the customer sells its solutions which incorporate our SIP. The PCS is classified as maintenance and service revenue and is recognized ratably over the term of the contract, as we satisfy the PCS performance obligation over time.

In connection with our SIP, which is developed in partnership with third parties, we have entered into various renewable license agreements under which we have the right to sell the technology we license from third parties. When we license these particular SIP to a customer, we generally act as a principal to the transaction because we control the promised SIP that we deliver to the customer. Consistent with our role as a principal, we recognize SIP revenue on a gross basis. Royalty costs are reported in cost of revenue upon delivery pursuant to the terms and conditions of our contractual obligations with the licensors.

In connection with our standard SIP licenses, we also offer our licensee customers SIP integration services for such licenses. All our SIP integration services are provided under a statement of work and include some acceptance criteria. The customer pays us for the licenses and services based upon milestones, and revenue recognition occurs upon delivery and acceptance.

Non-income related taxes collected from customers and remitted to governmental authorities are recorded on the consolidated balance sheets as accounts receivable and accrued expenses. The collection and payment of these amounts are reported on a net basis in the consolidated statements of income (loss).

We do not offer a right of return. We warrant to our customers that our software will perform substantially as specified in our current user manuals. We have not experienced significant claims related to software warranties beyond the scope of maintenance support, which we are already obligated to provide. The warranty is not sold, and cannot be

purchased, separately. The warranty does not provide any type of additional service to the customer or performance obligation for us.

Our agreements with customers generally require us to indemnify the customer against claims that our software infringes third-party patent, copyright, trademark or other proprietary rights. Such indemnification obligations are generally limited in a variety of industry-standard respects, including by affirming our right to replace an infringing product.

#### ***Significant Judgments***

Our license agreements enable customers to use our software solutions and to receive certain services. Judgment is required to determine if the promises are separate performance obligations, and if so, to allocate the transaction price to each performance obligation. We use the estimated standalone selling price method to allocate the transaction price for each performance obligation. The estimated standalone selling price is determined using all information reasonably available to us, including market conditions and other observable inputs, historical pricing and the value relationship between our various product and service offerings. The corresponding revenues are recognized as the related performance obligations are satisfied.

#### ***Contract Assets and Liabilities***

Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 days. The timing of revenue recognition may differ from the timing of invoicing to customers, and these timing differences result in receivables (billed), contract assets (unbilled), or contract liabilities (deferred revenue) on our consolidated balance sheets. We record a contract asset when revenue is recognized prior to the right to invoice, or deferred revenue when revenue is recognized subsequent to invoicing. For time-based software agreements, customers are generally invoiced in equal, quarterly amounts, although some customers are invoiced in single or annual amounts. We record an unbilled receivable when revenue is recognized and it has an unconditional right to invoice and receive payment.

#### ***Financing***

We are required to adjust promised amounts of consideration for the effects of the time value of money if the timing of the payments provides the customer or us with a significant financing benefit. We consider various factors in assessing whether a financing component exists, including the duration of the contract, market interest rates and the timing of payments. Our contracts do not include a significant financing component requiring adjustment to the transaction price.

#### ***Sales Commissions***

Sales commissions associated with multi-year contracts for new term-based licenses are deferred, capitalized and amortized over an estimated customer life of five years. Capitalized sales commissions are included in prepaid and other current assets and other assets on our consolidated balance sheets. Amortization of sales commissions is included in selling and marketing expenses on our consolidated statements of income (loss). We expense sales commissions as incurred when the amortization period would have been one year or less. During the years ended December 31, 2020 and 2021, we capitalized sales commissions of \$1.9 million and \$0.7 million, respectively. Amortization of sales commissions during the years ended December 31, 2020 and 2021, was \$0.6 million and \$0.9 million, respectively. During the nine months ended September 30, 2021 and 2022, we capitalized sales commissions of \$0.5 million and \$0.7 million, respectively. Amortization of sales commissions during the nine months ended September 30, 2021 and 2022, was \$0.6 million and \$0.7 million, respectively.

#### ***Business Combinations***

When a business combination is consummated, the assets acquired and the liabilities assumed are recognized separately from goodwill at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of the fair value of consideration transferred over the acquisition date fair value of the net identifiable assets acquired. While best estimates and assumptions are used to accurately value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill as new information is obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date. Upon the earlier of the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, any subsequent adjustments are recorded in the consolidated statements of income.

#### ***Goodwill and Other Intangible Assets***

Goodwill represents the excess of the fair value of consideration transferred over the fair value of net identifiable assets acquired. Other intangible assets consist of customer relationships, developed technology and noncompete

agreements which are amortized over their useful lives, which range from two to six years. Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable.

Goodwill and intangible assets with indefinite useful lives are not amortized but are tested annually for impairment and more often if there is an indicator of impairment.

We perform testing for impairment of goodwill on an annual basis, or as events occur or circumstances change that would more likely than not reduce the fair value of our single reporting unit below its carrying amount. Goodwill is considered impaired if the carrying value of the reporting unit exceeds its fair value.

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable.

No indicators of impairment or impairments charges were identified or recorded to goodwill or intangible assets during the fiscal years ended December 31, 2020 and 2021.

In connection with Russia's invasion of Ukraine in February of 2022, we recorded an impairment charge of \$0.6 million associated with \$0.6 million of intangibles held by our Ukrainian subsidiary which management determined would not be recoverable. See also [Note 5](#), Acquisitions, [Note 6](#), Goodwill and Intangible Assets and [Note 13](#), Fair Value of Financial Instruments of our unaudited condensed consolidated financial statements for the nine months ended September 30, 2022 appearing elsewhere in this prospectus for additional information.

### **Share-Based Compensation**

We account for share-based payments in accordance with the authoritative guidance issued by the FASB on share-based compensation, which establishes the accounting for transactions in which an entity exchanges its equity instruments for goods or services. Under the provisions of the authoritative guidance, share-based compensation expense is measured at the grant date, based on the fair value of the award, and is recognized as an expense over the requisite employee service period (generally the vesting period), net of actual forfeitures. For share-based payment awards that contain performance criteria, share-based compensation expense is recorded when the achievement of the performance condition is considered probable of achievement and is recorded on a straight-line basis over the requisite service period. If such performance criteria are not met, no compensation expense is recognized and any recognized compensation expense is reversed.

Historically, we have not recorded share-based compensation expense, as the RSUs granted under the 2014 Plan carry both a "time-based vesting requirement" and a "liquidity event vesting requirement," with the satisfaction of the "liquidity event requirement" an improbable contingency as of December 31, 2020 and 2021 and September 30, 2022. See [Note 11](#) to our consolidated financial statements appearing elsewhere in this prospectus for additional information.

As there has been no public market for our common stock to date, the estimated fair value of our common stock has been determined by our board of directors as of the date of each RSU grant, with input from management, and considering our most recently available third-party valuation of our common stock. These third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants Accounting and Valuation Guide, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*.

Our board of directors considered the fair value of our common stock by first determining the equity value of our company, and then allocating that value among our equity securities to derive a per share value of our common stock. The equity value of our company was determined using the market approach by reference to the closest round of equity financing, if any, preceding the date of valuation and analysis of the trading values of publicly traded companies deemed comparable to us.

In addition to considering the results of these third-party valuations, our board of directors considered various objective and subjective factors to determine the fair value of our common stock as of each grant date, including:

- our results of operations, financial position, and capital resources;
- industry outlook;
- the lack of marketability of our common stock;
- the fact that the RSU grants involve illiquid securities in a private company;
- the likelihood of achieving a liquidity event, such as an initial public offering or a sale of our company, given prevailing market conditions;
- the history and nature of our business, industry trends and competitive environment; and



- general economic outlook including economic growth, inflation and unemployment, interest rate environment and global economic trends.

The assumptions underlying these valuations represented management's best estimates, which involved inherent uncertainties and the application of management's judgment. As a result, if we had used significantly different assumptions or estimates, the fair value of our common stock and our share-based compensation expense could be materially different.

Following the completion of this offering, the fair value of our common stock will be based on the closing price as reported on the date of grant on the primary stock exchange on which our common stock is traded.

### **Internal Control Over Financial Reporting**

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. Under standards established by the Public Company Accounting Oversight Board, or PCAOB, a deficiency in internal control over financial reporting exists when the design or operation of a control does not allow management or personnel, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. The PCAOB defines a material weakness as a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented, or detected and corrected, on a timely basis.

We have in the past and continue to identify material weaknesses in our internal control over financial reporting. The material weakness identified as of December 31, 2021, in connection with the preparation of our financial statements, related to an insufficient complement of personnel possessing the technical accounting and financial reporting knowledge and experience to support a timely and accurate close and financial statement reporting process.

We are working to remediate the material weakness and are taking steps to strengthen our internal control over financial reporting through the hiring of additional finance and accounting personnel, and we may take additional actions, including hiring additional personnel, implementing system upgrades or other organizational changes. With the additional personnel, we intend to take appropriate and reasonable steps to remediate this material weakness through the implementation of appropriate segregation of duties, formalization of accounting policies and controls and retention of appropriate expertise for complex accounting transactions. However, we cannot assure you that these measures will significantly improve or remediate the material weakness described above. This material weakness has not been remediated to date.

The actions that we are taking are subject to ongoing executive management review and will also be subject to audit committee oversight. If we are unable to successfully remediate the material weakness, or if in the future, we identify further material weaknesses in our internal control over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. See "Risk Factors—General Risk Factors and Risks Related to Being a Public Company—We have identified a material weakness in our internal control over financial reporting. If our remediation measures are ineffective, or if we experience additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to report our financial condition or results of operations accurately or on a timely basis, which may adversely affect investor confidence in us and, as a result, the value of our common stock."

### **Qualitative and Quantitative Disclosures about Market Risk**

#### ***Interest Rate Risk***

We had cash of \$6.7 million and \$4.0 million as of December 31, 2021 and September 30, 2022, respectively, which consisted of bank deposits. We do not enter into investments for trading or speculative purposes and have not used any derivative financial instruments to manage our interest rate risk exposure. On March 30, 2022, we entered into the March 2022 Loan with Ms. Ngai-Pesic, bearing interest at a rate of 3.25% per annum and payable on March 30, 2023. As of September 30, 2022, the balance of March 2022 Loan including interest was \$0.5 million. On June 13, 2022, we entered into the \$4.0 million 2022 Line of Credit with Ms. Ngai-Pesic, bearing interest at a rate of prime plus 1% per annum. We have drawn \$2.0 million on the 2022 Line of Credit as of September 30, 2022. As of September 30, 2022, the balance of the 2022 Credit Line including interest was \$2.0 million. The interest rate paid on these borrowings is variable, indexed to the prime rate. A hypothetical 10% change in interest rates would not result in a material impact on our consolidated financial statements. We are unable to forecast future interest rates due to recent actions related to increased interest rates set by the Federal Reserve Bank.

#### ***Foreign Currency Exchange Risk***

Our net cash used from the effects of foreign exchange was \$0.4 million and \$0.5 million for the nine months ended September 30, 2021 and 2022, respectively. The change was primarily due to the strength of the U.S. dollar against

the local currencies we price and collect accounts receivable against local currencies, primarily the Korean Won and the Japanese Yen, from our foreign customers and convert foreign currencies to U.S. dollars to support our operations. If foreign currency exchange rates were to change adversely by 10% from the levels at September 30, 2022, the effect on our results before taxes from foreign currency fluctuations on our balance sheet would be approximately \$1.1 million. The above analysis disregards the possibility that rates for different foreign currencies can move in opposite directions and that losses from one currency may be offset by gains from another currency. As our foreign currency risk increases in the future, we will evaluate alternative strategies, including hedging, to mitigate our foreign currency exposure.

#### **Recently Adopted Accounting Pronouncements**

See Note 2 to our consolidated financial statements included elsewhere in this prospectus for information regarding recently issued accounting pronouncements.

## BUSINESS

### Overview

We are a provider of TCAD software, EDA software and SIP. TCAD, EDA and SIP solutions enable semiconductor and photonics companies to increase productivity, accelerate their products' time-to-market and reduce their development and manufacturing costs. We have decades of expertise developing the "technology behind the chip" and providing solutions that span from atoms to systems, starting with providing software for the atomic level simulation of semiconductor and photonics material for devices, to providing software and SIP for the design and analysis of circuits and system level solutions. We provide SIP for SoC, ICs and SIP management tools to enable team collaborations on complex SoC designs. Our customers include semiconductor manufacturers, OEMs and ODMs who deploy our solutions in production flows across our target markets, including display, power devices, automotive, memory, HPC, IoT and 5G/6G mobile markets.

EDA offerings, including our solutions, enable companies to streamline their IC design workflows, develop complex IC designs in a cost-efficient manner, and maintain acceptable IC manufacturing yield, by providing interoperable tools that capture and simulate designs from concept to analysis. Our TCAD device and process simulation tools provide compatible data structures that can be used with our EDA modeling, analysis, simulation, verification and yield enhancement tools. Further, our EDA tools are used for designing SIP and IC designs that can be managed and validated by our SIP management tools.

According to Grand View Research, the global EDA software market was estimated to reach \$10.2 billion in global revenue in 2021 and is expected to reach \$22.2 billion in global revenue in 2030; representing a 9.1% CAGR, driven in part by the growing complexity of semiconductor and photonics designs and increasing challenges associated with advanced materials and shrinking process technology nodes across the EDA market. We believe these trends will increase the need for TCAD, EDA and SIP solutions that accelerate time-to-market at reduced development and manufacturing costs and deliver processes and devices with better operating performance, lower cost, reduced power and improved product yield. In estimating the growth of the EDA software market, Grand View Research considered end-use outlook in market segments including microprocessors and controllers, memory management units and others, the overall growth in the integrated circuits and electronic manufacturing markets, regional outlooks in North America, Europe, Asia Pacific, Latin America and the Middle East and Africa, Grand View Research and considered other variables, including those related to value chains, technology, regulatory frameworks, the impact of certain market drivers and market restraints, including cyber attacks, and competitive and political landscapes affecting the EDA market, and the effects of advancement of technology used in the end-use markets on the demand of EDA software solutions.

We are a global leader in TCAD solutions for the power devices and display markets. Our TCAD solutions are designed to provide complete, fast, and accurate simulations and modeling of semiconductor and photonics device behavior, allowing our customers to design original, value-added processes and devices, explore trade-offs in performance, power, size and reliability and optimize their final design for manufacturing. By reducing the need to run expensive and time-consuming experiments in manufacturing, TCAD solutions enable companies to rapidly bring their products to market. Our TCAD solutions have been adopted by 3 of the 10 largest semiconductor companies by revenue in 2021, by 8 of the 10 largest flat panel display companies by revenue in 2021, and by 4 of the 10 leading power semiconductor devices companies in 2021.

Our EDA solutions provide analog custom design flows that bring electrical and physical layout views together with circuit simulation and physical verification including sign-off at select foundries to help ensure correct-by-design and high-yielding products before committing to final silicon. We provide device characterization and modeling solutions that enable our customers to generate accurate, high-quality models for use in simulation and analysis of analog, mixed-signal and RF circuits across our target markets. Our EDA solutions have been adopted by 6 of the 10 largest semiconductor companies by revenue in 2021 and by 7 of the 10 largest flat panel display companies by revenue in 2021.

SIP solutions, including our offerings, provide pre-verified, high-yielding and silicon-proven SIP blocks designed to accelerate time-to-market for SoC designs. Our patented SIP fingerprint technology authenticates SIP before and after use in complex SoC designs to avoid costly design iterations and silicon re-spins. Our EDA solutions for SIP design integrate patented machine learning technologies with the goal of minimizing simulation time, chip area and power consumption. We provide SIP management software at the enterprise-level for managing, tracking and controlling SIPs that are used in SoC designs.

We leverage decades of extensive technological expertise to provide our customers with agilely developed products. In doing so, we have built long-term relationships with select strategic customers that enable us to work with them

from project inception in order to tailor solutions for their specific needs. These customer relationships help us improve our new product offerings for the larger market.

Since 2015, we have acquired nine businesses, assets and/or technologies to complement our existing product offerings, expand into new markets or grow our existing market share, increase our engineering talent and enhance our technical capabilities. Our acquisition strategy also allows us to accelerate new product offerings. For example, in 2020, we acquired Dolphin's memory compiler assets and resources for providing embedded memory and register files for SoC designers and foundries. In 2021, we acquired PolytEDA to expand our capabilities for rapid physical verification of IC designs prior to mask creation and manufacturing and for cloud enablement of EDA tools. These new products are used as sign-off tools in several foundries.

Our growth has further been driven by semiconductor and photonics companies' increasing research and development spend due to increasing complexities of new material, new devices, and new systems in the markets we address. We address such market needs by:

- Providing EDA, TCAD and SIP solutions that are interoperable and cost-effective and that our customers can use to introduce their products to market in a timely fashion;
- Using advanced research and development and agile product development techniques to provide our customers with tailored solutions in vertical markets such as display, photonics, power devices, and other markets where new materials or structures are being developed;
- Providing leading-edge products that complement IC design flows and are compatible with customers' existing design flows; and
- Providing production ready and proven SIP, EDA SIP, and SIP/IC design management solutions that can be utilized individually, or as a full interoperable solution.

Our business model primarily consists of selling time-based software licenses, with an average of 2.8 years per TBL for the year ended December 31, 2021 and the nine months ended September 30, 2022. We seek to grow our business by renewing TBL contracts and licensing new products. In addition to TBL revenue, we have revenue streams from our maintenance, support, and services. Additionally, we have historically grown our customer base annually as a result of our new product offering and services. We believe this business momentum helps increase the predictability of our bookings forecast. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Indicators and Non-GAAP Financial Measures—Bookings" for the definition of "bookings."

During 2021, we generated \$47.2 million in bookings and recognized \$42.0 million of revenue, which includes substantial recognition of up-front TBL revenue (due to the structure of certain of our customer contracts), a \$1.8 million net loss and \$2.6 million of negative cash flow from operating activities. During the nine months ended September 30, 2022, we generated \$37.3 million in bookings and recognized \$36.7 million of revenue, a \$0.9 million net loss and \$3.4 million of negative cash flow from operating activities. We invest significantly in business growth by continuing to expand our products, sales and marketing footprint. As of September 30, 2022, we had over 800 customers, of which over 200 were academic institutions, that relied on our solutions worldwide. Our academic customers not only have the potential to provide future human resources, but also can act as beta testers and provide feedback that allows us to enhance our products.

## Industry Background

*Increasing semiconductor design complexity.* The latest technological applications require greater semiconductor performance and functionality, which have necessitated the shift towards more advanced manufacturing process technologies, new materials, and continued reduction of transistor sizes. IC and SoC complexity have significantly increased to accommodate the increased number of functional SIP blocks per chip. The slowing of Gordon Moore's, or Moore's law (which states that the number of circuits on a microchip doubles every two years), has also led to the adoption of new semiconductor materials to address varying application requirements.

For example, silicon carbide, or SiC, and gallium nitride, or GaN, materials are being adopted in automotive, consumer, and industrial power applications. New memory technologies, including resistive random-access memory and magneto-resistive random-access memory, or MRAM, are being deployed across mobile, HPC, and IoT applications. All these factors have increased semiconductor design complexity, which in turn increases the probability for significant development delays and project failures. As a result, we believe there is a growing need for differentiated and cost-effective tools such as TCAD, EDA and SIP solutions that enable rapid and reliable development of products containing these newly added materials and technologies.

*Increasing semiconductor manufacturing and development costs.* With each reduction in manufacturing process geometry comes a corresponding increase in manufacturing and development costs. According to IBS, the average

cost of designing a 28nm chip is \$40 million, a 7nm chip is \$217 million, and a 5nm chip is \$416 million and a 3nm chip will cost up to \$590 million. The COVID-19 pandemic and subsequent semiconductor shortage have emphasized the need for supply chain optimization, further accelerating investments in semiconductor foundries. According to SEMI, worldwide foundry spending is expected to increase from \$64.0 billion in 2020 to \$109.0 billion by 2022, representing a 19% CAGR. The latest foundries being built are focused on leading-edge manufacturing process technology nodes, primarily driven by mobile applications, and require higher manufacturing yield efficiencies to offset the substantial development costs. As a result of IC technologies moving to sub 7nm process technology nodes and the resultant increase in design difficulty and development costs, we believe the continuing shift will increase demand for TCAD solutions in the design technology optimization loop to deliver high yields, accelerate time-to-market and further reduce costs by reducing the need to run expensive and time-consuming manufacturing experiments. In addition, as these trends continue, EDA solutions that meet manufacturing requirements and can reduce costs associated with potential production delays and project failures and SIP solutions which can accelerate time-to-market by providing silicon-proven blocks that address complex SoCs and enable new technologies, such as IoT and HPC, are being more readily adopted to mitigate costs and shorten time to market.

*Increasing end market diversity.* There has been a significant growth in semiconductor demand driven by new applications in emerging markets such as automotive, HPC and IoT. Performance and functionality requirements significantly vary across each market, which drives new design complexities and increases manufacturing and development costs. Even traditional markets for semiconductor, such as display applications, are seeing expanded use cases that require different performance and functionality needs. For example, displays in mobile require low power, augmented and virtual reality emphasizes high refresh rates, and televisions are adopting new materials such as quantum dots to reduce manufacturing complexity. The increased diversity of applications in which semiconductors are being used, is leading to a need for more complex semiconductors to satisfy the needs of such applications, which requires further time and cost to develop such semiconductor solutions. As a result, there is a growing need to accelerate time-to-market and reduce costs by adopting complete TCAD, EDA and SIP solutions that enable customers to design, simulate, verify, and analyze their products from the concept stage all the way up to complete product yield.

**Our Markets**

To contend with industry performance requirements and new applications, engineers, researchers, and other professionals rely extensively on TCAD, EDA software tools and SIP for designing and optimizing advanced ICs components. Reliance on software tools and SIP has increased in recent years as design challenges have become increasingly complex.

Rapid increase in complexity of SoCs has been the result of shrinking manufacturing process geometries, application specific customization to improve computing performance, and adoption of new materials for high voltage applications and photonics computing. These changes have led to increased investments in our research and development.

The drive to increase performance and diversification of applications is further accelerated by a broad-scale transition to cloud-based software applications and computing on mobile platforms. The development of semiconductors that are optimized for specific applications, including AI, 5G/6G communications and IoT, has continued to fuel demand for our solutions. Our solutions address the markets set forth below.

Solution/ Market	Automotive	IoT	5G/6G	Display	Memory	HPC	Power Devices
TCAD	✓	----	✓	✓	✓	✓	✓
EDA	✓	✓	✓	✓	✓	✓	✓
SIP	✓	✓	✓	----	----	✓	----

**Automotive Market**

The semiconductor content in the automotive market is rapidly growing and evolving, driven by vehicle electrification, advances in electronic control, vehicle connectivity to the internet and autonomous driving. According to Allied Market Research, these innovations are expected to lead to significant increases in the amount spent on semiconductor content in electrification of cars, from \$38.0 billion in 2020 to a projected \$113.9 billion by 2030, representing a CAGR of 11.8% from 2021 to 2030.

Power devices are at the heart of the electric vehicle revolution, from charging stations to vehicle drivetrain electronics. The new requirements of the automotive market are driving the increasing adoption of different kinds of semiconductor materials such as SiC, GaN and other wide bandgap materials to replace traditional silicon in high-voltage power devices. Companies designing or manufacturing SiC or GaN devices for the power device market can

use TCAD simulations as part of their research and development efforts to understand their devices in detail and in turn use that understanding to improve performance, manufacturing yield and reliability. Simulation replaces design of experiments and enables flexibility of foundry selection by reducing costly and time intensive physical trial and error cycles.

In addition, electrification and advanced controls in new automobiles are increasing the number of conventional (silicon-based) semiconductor devices. Desire for increasing time-to-market and engineering efficiencies pushes designers towards using and reusing SIP.

We are part of the existing ecosystems providing silicon-proven SIP to Tier 1 (module providers) and Tier 2 providers (IC providers) to automotive, truck, motorcycle and E-bike OEMs. We also provide specialized EDA solutions and foundational SIPs that our customers integrate into their IC design flow. The barrier to entry in the automotive market is high due to its requirement for innovative technologies that can include complex structures and high initial costs. Leveraging our silicon-proven SIPs enables customers to develop their solutions with functional interoperability and limit the risk of costly mistakes that may require redesign.

### ***Internet of Things Market***

The IoT market is expected to continue to grow as the industry is still in the early stage. According to Allied Market Research, the global IoT market is estimated to grow at a 18.6% CAGR from 2022 to 2031 and is projected to reach \$413.7 billion by 2031. All IoT devices require a complex SoC to perform sensing, collecting data, processing data and connecting to other IoT devices or a central server or cloud through several wireless solutions. At the edge of IoT, new devices with ultra-low energy demands will be needed to harvest sensor data across a wide variety of environments. Such SoC architectures require advanced low power microprocessors, low power IO, compact bus fabrics that connect SIP blocks, and various types of embedded memories including low power, compact SRAM standards. We provide a comprehensive portfolio of SIPs and tools for the IoT market, including Standard Cell IP, library creation and characterization tools, ultra-low power SRAM compilers, connectivity IOs, microprocessor SIPs, AMRA SIP Cores and Subsystem.

### ***5G/6G and Mobile Communications Markets***

The semiconductor market for mobile phones is expected to continue its rapid transition, with the continuing development from predominantly 4G phones to 5G/6G phones. As the wireless market continues to migrate to 5G/6G, high-bandwidth, low latency networks are expected to emerge among a massive number of connected devices and sensors, accompanied by an equally sophisticated chip design process. IDC estimates that mobile phone semiconductor revenue will reach \$191.9 billion in 2026, and we believe the shift to 5G/6G will increase demand within our industry due to the complex nature and design cycle of 5G/6G chips. The adoption of more advanced process technology nodes for 5G mobile devices means longer circuit simulation times due to substantial increases in unwanted electrical components (parasitics) in nanometer geometries. We believe our parasitic reduction and analysis tools are unique in the market, complementing existing tool flows. Our latest parasitic reduction and analysis tools allow our customers' design teams to accelerate circuit simulation times substantially, as compared to our earlier offerings, and perform fast root cause analyses. The development of RF Front-End Modules, or FEM, Low-Noise Amplifiers, or LNAs, Power Amplifiers, or PAs, and RF switches for millimeter wave, or mmW, and 5G applications can result in many silicon iterations, due to poor correlation between simulation and silicon measurements caused by substrate effects. We provide solutions for RF circuit designers to extract substrate parasitics, enabling designers to model these effects accurately and easily with minimal impact on simulation times. These solutions are complemented by our circuit simulation tool for RF, Physical Verification tools and our full analog/custom flow for analog block creation.

### ***Display Market***

With the growth in adoption of mobile electronics such as smartphones, smart watches, wearables and VR, gaming, flat-screen TVs, and more, we believe semiconductors used in display technologies are of increasing importance. According to Allied Market Research, the global display market was valued at \$114.9 billion in 2021, and is projected to reach \$216.3 billion by 2031, representing a CAGR of 6.7% from 2022 to 2031. Display manufacturers are continuing to make large investments in OLED and AMOLED, as well as new technologies such as quantum dot-LED and MicroLED. At the same time, well-established display technologies, such as LCD, are evolving and improving. Industry adoption of photonics materials, including waveguides and photo detectors, is increasing. These trends are driving large changes in materials and fabrication methods for displays.

Our customers' display development teams use our integrated TCAD solutions with our Analog/Custom design suites to analyze, understand and optimize pixel performance. Our device modeling tools help our customers' display designers to generate accurate models of pixels, which enables them to simulate the correct behavior of displays. Our circuit simulation tool uses advanced modeling of devices to capture the capacity of the given circuit(s), with capacity to handle millions of thin-film transistors, or TFTs. Our Analog/Custom design solution provides powerful pixel array

placement and routing capabilities that our customers use to produce circuit layouts that match the customer's manufacturing requirements and ensure design quality.

Through deep collaborations with industry leaders and academia in the display market, we have developed highly differentiated display design solutions spanning TCAD, circuit simulation and Analog/Custom design. We believe the completeness of our display solution is the reason it is deployed at many of the top 10 largest display manufacturers by revenue in 2021.

### **Memory Market**

The memory market for semiconductors is expected to continue growing at a fast pace, driven by large increases in the demand for dynamic random-access memory and flash memory products. According to Grand View Research, the memory semiconductor market is estimated to grow at a 5.9% CAGR from 2020 to 2027 and is projected to reach \$134.6 billion in 2027. Within data centers, AI technologies require new types of memory technologies such as MRAM that perform weighting calculations in the memory chip itself. We believe our TCAD solution, complemented by our device modeling tools and services, enables memory design teams to explore new materials and device architectures and achieve optimum power and performance for memory elements. Design and technology co-optimization, or DTCO, utilizing both TCAD and EDA solutions to enable designing optimum memory elements is an important steppingstone for many leading-edge ICs in this market, and we provide a targeted DTCO solution for the memory market.

### **High Performance Computing Market**

Today, HPC applications involve customized architectures, which in turn, may require specialized circuit and memory elements to implement. Quantum and photonics computing further apply new technologies to address application specific challenges. All these require complex modeling simulations. Our foundational SIPs, memory compilers and library creation EDA tools have been adopted by our customers in HPC applications, which we believe allow our customers to gain a performance edge by using specialized circuits. We also provide modeling services and circuit libraries for cryogenic temperatures used in quantum computing and our TCAD software is being used to design photonics devices.

We believe there will be significant demand for our solutions that meet the performance, power and latency requirements while reducing overall costs. We believe DTCO utilizing both TCAD and EDA to address the complexity of design in the HPC market is now used by many leading-edge ICs, and we offer a complete suite of DTCO flow optimization solutions to address such needs. According to Allied Market Research, the global HPC chipset market is estimated to grow at a 19.1% CAGR from 2019 to 2027.

### **Power Electronics Market**

With the advent of high-volume manufacturing of new process technologies such as SiC and GaN, many OEMs and ODMs are producing electronic devices and systems that benefit from these technologies. GaN is being used for low power/voltage, high frequency applications and SiC is being used for high power and high voltage switching power applications. These technologies can enable smaller, faster and lower power devices than those built with prior technologies. As a result, many suppliers are switching their products from dated Silicon based devices to wide band-gap, or WBG, semiconductor materials such as GaN. For example, GaN technology has enabled the replacement of existing silicon-based power supplies for laptops, vehicles and battery charging with smaller and lower power solutions.

We have gained new customers that utilized, and were early adopters of, our TCAD and EDA solutions to address their simulation/analysis needs for these new technologies at foundries, device and process levels all the way up to the system design for power management.

According to Allied Market Research, the global power electronics market size was valued at \$26.6 billion in 2021, and is projected to reach \$43.7 billion by 2031, growing at a CAGR of 5.1% from 2022 to 2031. Power electronics play an important role in electrified vehicle applications that provide compact and high-efficient solutions to power conversion. Given the foundries, design houses, ODMs, OEMS, Tier 1s and Tier 2s that provide power electronics solutions, we benefit by enabling our customers in this market with both our TCAD and EDA solutions.

### **Industry Challenges**

Design and manufacturing of SoCs is a time intensive and costly process. Complex IoT class of SoC and GPU class processor cost millions to billions of dollars to develop. The development, qualification and manufacturing cycle for SoCs varies by market and may require lengthy development times. The main challenges for the industry include:

- Rapid increase of design complexity for ICs and SoCs.

Driven by market demands for more functionality, performance, and lower cost, IC design and SoC design organizations are faced with designing and developing more complex designs with every new generation of their products. Today, many multiprocessor ICs have gate complexities of billions of gates, which were not possible to design a decade ago. One key factor that has historically driven IC and SoC design complexity is the need to scale and reduce transistor sizes over time, as predicted by Moore's law over three decades ago. As designs approach below 7nm and down to 3nm process technologies, IC/SoC complexity and differentiation is increasingly handled through product-development and design tools rather than manufacturing. Many IC and SoC makers are outsourcing IC manufacturing to foundries, and product differentiation is achieved during design through utilization of EDA tools, TCAD tools and SIPs.

We seek to reduce design complexity of ICs and SoCs by providing silicon-proven, re-useable SIPs, EDA tools for automatic generation of low power and small area SIPs, design management tools for revision-controlled collaboration among the team, and EDA tools enabling fast simulation of chips and automated layout generation and verification.

- Rapid increase of design cost and time for ICs and SoCs.

Generally, as design complexity increases so do design costs and time to get the product to market. The main factors driving development cost and time are associated with the number of personnel required to design, the verification of the design, and the test and validation of the design, as well as the cost of tools for design, verification, test and validation, and the associated manufacturing costs of masks, wafers and production costs, including testing. In general, the more complex the IC, the more personnel and more tools per personnel are needed, hence increasing the cost of design. Many new GPU processors require thousands of engineers to design over many years.

- Evolving manufacturing complexity processes, supply chains and yields.

The semiconductor industry has made great strides in progressing semiconductor innovation. Researchers have consistently kept pace with Moore's Law where the latest IC process technology nodes are at 7nm, 5nm, 3nm and 2nm. The industry has accomplished this by experimenting with variations of semiconductor materials and corresponding processes to enable high-volume production for devices made of SiC and GaN. We seek to provide for acceptable manufacturing yield through our TCAD and EDA tools, which utilize machine learning and computer experiments to simulate processes with different materials without having to go through the costly and lengthy fabrication processes. We believe that our tools allow fast convergence on candidate materials and processes to meet market requirements by replacing fabrication and wafer level yield design of experiments with simulation driven manufacturing and yield enhancements.

As a result of such pervasive and challenging requirements, companies must allocate significant time and resources towards the design cycle. Engineers have, in turn, come to rely on powerful software tools to simulate, optimize, approve, plan, validate and verify all aspects of the design process, thereby maximizing reliability, agility and performance at reduced cost. We believe this strong value proposition will continue to drive demand for our design automation software tools.

### **Our Solutions and Competitive Strengths**

We are a provider of TCAD, EDA and SIP solutions. We have decades of expertise developing the "technology behind the chip" and providing solutions that span from atoms to systems, from providing software for the atomic level simulation of semiconductor and photonics material for devices, to providing software and SIP for the design and analysis of circuits and system level solutions. Our primary strengths include:

- *Enabling companies to accelerate IC and photonics designs to efficiently optimize devices.* Companies use TCAD solutions to model the fabrication process and devices used in semiconductors and photonics, thus potentially accelerating the time to develop technology and ramping to yield, reducing the need to run wafers, and optimizing devices, all of which can contribute to lower development costs. We develop our EDA design and simulation solutions and SIP to be tailored to specific technologies and market segments, to enhance design flows that optimize Power, Performance and Area-Cost, or PPA. For example, our Victory process and Victory device along with simulation and machine learning is capable of DTDO flow that can optimize photonics devices such as image sensors, quantum dots, micro-LEDs and displays.
- *Early mover advantage in vertical markets.* For decades we have focused on vertical markets, such as display and power, and have developed industrial and academic partnerships that enable our agile and fast development of solutions aligned with market needs, such as our TCAD and EDA software solutions tailored for use in the display and power markets. The lessons learned in these markets have prepared us for tailoring solutions for new vertical markets including the photonics and memory markets.
- *Leading point tools complement existing chip design flows.* Point tools offer the capability of optimizing very specific aspects in a design. These capabilities are often included as features in other design tools; by



offering them as stand-alone capabilities to be integrated in any design flow, we believe we can extract more value from these capabilities. They include Jivaro (parasitic reduction, often included in circuit simulation), Viso (parasitics analysis, often included in extraction), and Varman (statistical variation analysis, used in advanced technologies for cell and memory characterization).

- *Production-ready, also known as silicon-proven, SIP for SoC design.* The SIP market continues to be the fastest growing segment of the overall EDA market. A key factor in reducing our customers' design complexity is our ability to provide production-ready SIP to our customers. We provide production-ready SIP to our customers in the automotive market (Flexcan, Flexray and I3C), and consumer markets (GPIO, I3C and AMRA) by productizing our partner's, NXP Semiconductor Netherlands B.V., or NXP, production-ready SIP. In addition, we provide production-ready standard cells, memory and I/O SIP that is developed in-house. Lastly, we provide SIP and design management tools that enable SIP validation at SoC level, potentially streamlining design workflows.
- *Development and support of our customers' specific needs.* Our size and focus on specific market segments allow us to develop highly agile solutions and to work with our customers with a goal of developing solutions that meet their specific needs. Our field support engineers interact strongly with our development team to facilitate competent, timely support. Through our collaboration with our academic partners such as Purdue University and Christian Doppler Labs at the University of Vienna, our TCAD and EDA tools are made ready for the next generation of processes, materials and systems.
- *Interoperable product Portfolio among TCAD, EDA and SIP.* Our tools have compatible databases across all of our products for seamless scaling of customer designs. Our product interoperability allows our customers to extend select competitors' tools to aid our customers in choosing their preferred tools for any given design step. For example, our customers can use our simulation tools and parasitic reduction tools through the graphical user interface or menu pull downs built into our competitors' tools.
- *Cost-effective end-to-end solutions.* We offer complete solutions for device characterization, compact model development and circuit simulation; analog custom design, including schematics, layout, extraction and design rule check, or DRC, and process and device TCAD. We believe that our software solution pricing is competitive, which is derived from factors such as costs associated with research and development, inflation, licenses mix, number of licenses per product, and number of years per TBL, as well as required license maintenance and services. Furthermore, our solutions are largely self-sufficient in that no third-party tools are necessary to address the end-to-end tasks preformed. Our atoms to systems and interoperable solutions enable customers to start their designs from concept and take them to manufacture ready and verified complete design. For example, customers can simulate a new device technology at the atomic level (e.g., nanowire and nanosheet) using our Victory Atomistic TCAD, which generates accurate models that are handed off to our device simulators such as Smart Spice, while larger circuits generate block level SIP with our analog custom suite of tools (Gateway, Expert, Smart Spice, Smart LV/DRC, Hipex, Jivaro and Varman) verified at the SoC level for manufacturing.

Based on a report conducted by Electronic System Design Alliance, in 2021 we ranked second worldwide in the TCAD market based on revenue. Our solutions, many of which can be used in tandem with our competitors' tools, have been adopted by some of the leading display and power devices providers. These customers use our design software to address certain design challenges. We believe that our positions in the TCAD and displays and power devices markets are strengthened by our EDA product line capabilities. For example, our display simulation models and features help us differentiate when we combine EDA with TCAD. We believe that we have a competitive advantage in these markets in part due to our investment in advanced semiconductor and photonics TCAD solutions, including investments in atomistic simulations, process etch, process deposition and design of experiments, or DOE, that are AI driven. We also believe that our academic partnerships with key research universities, including Purdue, the University of Vienna and Stanford, who have focused TCAD related studies, gives us a competitive advantage relative to peer companies. Lastly, we believe that we differentiate our products from our competitors' products by providing solutions that address specific customer needs and requirements in the TCAD and displays and power devices markets.

We believe that our agility and synergies among product lines play a crucial role in competing in EDA. For example, our circuit simulator offers capabilities for the display market, such as a differentiated model for Thin Film Transistors (a device extensively used in displays), and hysteresis and stress simulation features. Customers using our TCAD products can adopt our EDA products and TCAD simulation, device modeling (UTMOST product and services) and circuit simulation (SmartSpice) form a natural combination. We have also developed software that certain of our customers have labelled as having best-in-class point tools capabilities. To our knowledge, standalone RC reduction (Jivaro) is not offered by competitors and is included in products like circuit simulation. We believe that we have a strong market position in this market niche and that our solution is competitive to other solutions in the market. Also, in the highly competitive analog custom design market, particularly for more mature technologies, we believe that our willingness and capability of developing process design kits, or PDKs, for specific technologies has the potential to give us a natural advantage.

We believe that we provide competitive SIP solutions targeting certain end markets. For example, we license our SIP solution that targets the automotive industry from NXP, which is a leading provider of SoCs for the automotive market. In addition, our SIP solutions are qualified and silicon-proven at certain foundries, which we believe enables our customers using such foundries to lower their cost of development and reduce their time to market compared to SIP solutions that are not silicon-proven at such foundries. Additionally, the commercialization of proven SIP from our semiconductor partners has the potential to help our customers get to market in a timely fashion, and our SIP software tools automatically generate and characterize SIP such as standard cells, embedded memories and I/O, each of which provide for a competitive edge.

To our knowledge, we are one of only two EDA/TCAD companies in the world that provide SIP to their customers. Unlike the non-EDA SIP companies, as an EDA company, we have open access to our own Analog Custom Design flow EDA software that we use for designing SIP for our customers hence not incurring the EDA tool costs that non-EDA SIP providers incur. Further, we are commercializing silicon-proven SIP from our partners such as NXP that we believe improves our customers' time to market compared to the SIP providers that have to create, qualify and verify their unproven designs. Finally, we have developed SIP tools that not only automate generation and characterization of some of our SIPs, but also have SIP management tools as our product that we utilize to manage our SIP and customer SIPs.

## Growth Strategy

We believe that as the demands of semiconductor technology continue to grow and increase in complexity, we are favorably positioned to deliver value to our customers with our TCAD, EDA and SIP solutions. To further our long-term growth and increase our market share, we have made initial investments in the following areas:

- *Focus on large, growing markets where we have cemented ourselves as a reliable solutions provider.* We seek to continue and expand our presence in the display, automotive semiconductor, memory device and IoT markets. The display, automotive semiconductor, memory, HPC and IoT markets are projected to grow at a CAGR of 6.7%, 11.8%, 5.9%, 19.1% and 18.6%, respectively (for the respective periods described elsewhere in this prospectus). We believe our current position will allow us to capitalize on the growth of our existing customers in these markets. Proof of the point is the fact that our revenue and bookings have grown in these markets with existing and new customers since 2019. For example, our revenue was \$40.3 million and \$42.0 million, for the years ended December 31, 2020 and 2021, respectively, and our bookings were \$44.0 million and \$47.3 million, for the years ended December 31, 2020 and 2021, respectively.
- *Expand into established market segments.* We plan to expand into established market segments, which include FinFET and specialized SIP, fabrication process optimization, and photonics. We have established beta and strategic customers and generated revenue in 2021 and 2022 from the beta customers in our target markets to further our expansion in these market segments. Many of our strategic customers engage in advanced research and development projects with us, with a goal of further developing their product simulation capabilities. We believe that their participation in verification and validation of our newly developed products has the potential to enhance our product quality and market testing.
- *Continue our history of strategic acquisitions to accelerate growth and expand our market footprint.* We have a strong history of acquisitions that have enabled our research and development endeavors and target to realize revenue from new product introductions from such acquisitions beginning in the second-year post-acquisition. Since 2015, we have acquired nine companies that have enhanced and expanded our product portfolio. For example, we acquired PolyEDA in 2021, which expanded our capabilities for rapid physical verification of IC designs prior to mask creation and manufacturing and cloud enablement of EDA tools. We also acquired Dolphin's memory compiler team and select SIPs in 2020. This acquisition added memory and memory compiler capabilities to our SIP. Certain of our customers who require embedded memories in their IC and SoC designs are taking advantage of our low power and small area embedded memory. Historically, we have focused on acquisitions that provide us with technology (e.g., Purdue Atomics simulation tools, commercialized under our Victory Atomistic tools), technical talent, and revenue in new markets. Examples of such acquisitions are EdExact in France and Invarin in the United States, which provided us with additional talent pools as well as tools, such as Jivaro and Invar, that we successfully introduced to market. We intend to continue to target acquisitions that allow us to expand our solutions portfolio to better service our customers' needs.
- *Leverage our technology in TCAD, EDA, SIP and SIP management software.* We plan to continue to invest in the technology that differentiates us and where we can establish or expand our leadership position, such as TCAD for display, power devices and photonics, simulation of large panels with complex device models, parasitic analysis and reduction, SIP management and fingerprinting, device characterization tools and services and development of additional SIP.
- *Optimize our competitive advantage by addressing unique customer needs.* We pride ourselves on research and development agility, allowing us to design capabilities specific to customers' requirements and, where

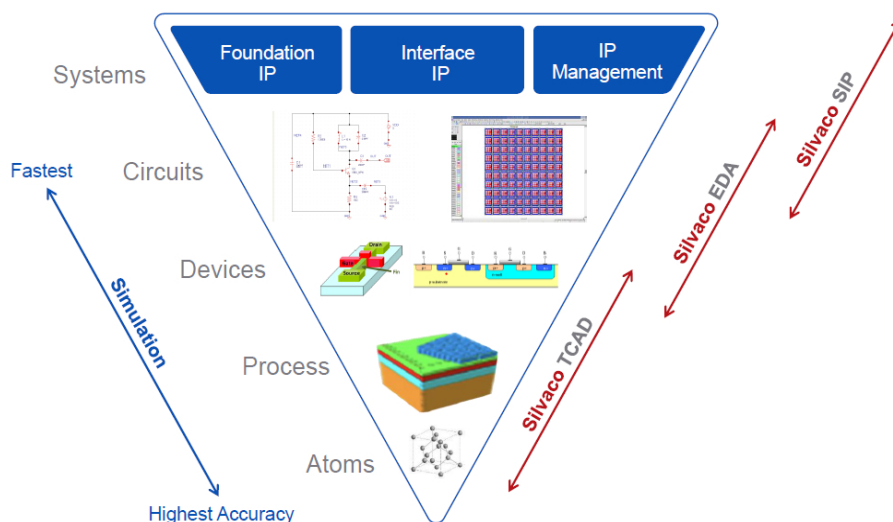
appropriate, integrate those capabilities into our software solutions. We also offer cost-effective complete solutions due to the synergies across our product portfolio.

- *Focus on a portfolio approach to the licensing and sale of our software platform.* We seek to differentiate ourselves through the breadth of our software and SIP offerings, addressing the full design cycle needs of our customers across applications and industries. In 2022, we began engaging with beta customers on our newly planned software platforms.
- *Expand our customer base through increased investment in sales and marketing.* We believe our serviceable market is under penetrated and that we can expand our customer base by increasing our marketing and sales resources, particularly in growing segments such as automotive and IoT.
- *Establish, maintain and expand relationships with key technology providers and academic partners.* We maintain successful relationships with SIP providers, foundries, design service companies, EDA companies, our commercial customers and academia. These relationships range from seminal technology work with universities to distribution and maintenance of SIP. For example, our master license agreement with the Purdue Research Foundation, or Purdue, allows us to commercialize, make, sell, use, distribute, modify and create derivative works of certain atomistic simulation technologies developed under our strategic alliance agreement with Purdue, and our technology license and distribution agreement with NXP enables us to license, market, promote, distribute and sell certain products and services based on certain NXP SIP technologies, which allows us to better serve our customers' needs. We plan to continue to expand our ecosystem to maximize our reach, integrate into established flows and offer world-class solutions.

## Products and Technology

We are a provider of TCAD software, EDA software and SIP, and also provide general engineering and research support to serve our target markets. Within our TCAD, EDA and SIP product lines, we offer a multitude of products and offerings to efficiently develop new semiconductor processes and devices. By employing our visualization and simulation tools, users are able to “see” inside the device during the production and design phases. Our focus is on the development of flexible software solutions that enable users to analyze electronics and optics designs directly on their desktops, laptops, and servers, providing a common platform for fast, efficient, and cost-conscious product development. This is done from design concept to final stages of verification and validation of design with hand off support to manufacturing.

We have regularly developed and delivered updates that provide product enhancements to our customers. We have a demonstrated history and commitment to remaining at the forefront of innovation for semiconductor design optimization, simulation, and modeling software. Below are examples of our products and technologies:



## TCAD Solutions and Products

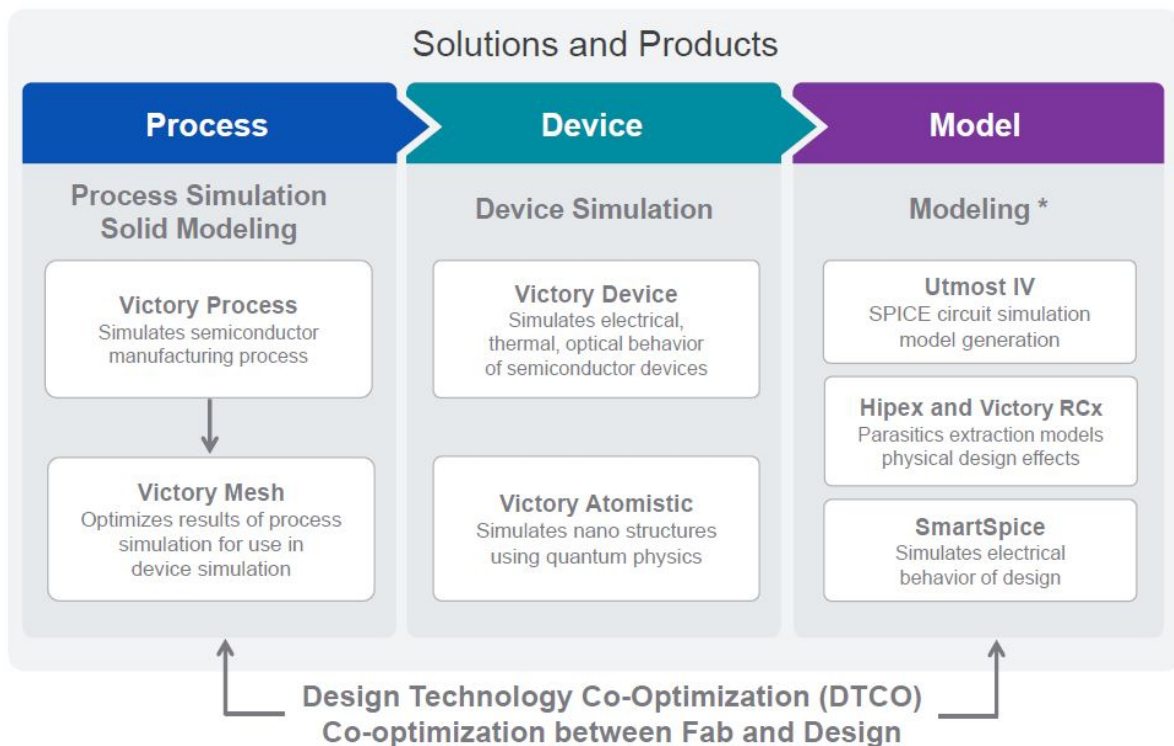
TCAD software solutions, including our offerings, are used to help reduce the time and manufacturing cycles spent to develop semiconductor technologies and help reduce the costs during development cycles. TCAD is part of a DTCO flow that is intended to improve designs across multiple domains (Layout, Process, Device, SPICE and RC

extraction). A full TCAD to SPICE flow, in an integrated DTCO environment, helps deliver clear actionable results for circuit design optimization. Typical applications include:

- physical etch and deposition process simulation;
- calibration of doping profiles and MOS/bipolar transistors;
- modeled effects (including self-heating and thermal gradients for power device and TFT);
- photonics simulation for solar cell, CCD, CIS, TFT, LCD and OLED using ray tracing/FDTD/TMM;
- single event effect and total dose simulation; and
- stress simulation.

We also offer TCAD modeling services that provide a solution for customers who have unique semiconductor device modeling requirements, but do not have the time or resources to operate TCAD software in-house. Using TCAD modeling services provides access to our expertise in semiconductor physics and TCAD software operation to help provide a complete, fast and accurate solution. TCAD modeling services deliverables include graphical output (plots of structures and behaviors), structures (TCAD device files and meshes) and device characteristics (electrical, thermal and/or photonics). The graphical results can be delivered through results files and one license of our viewer/plotter tool or final result plots printed by us.

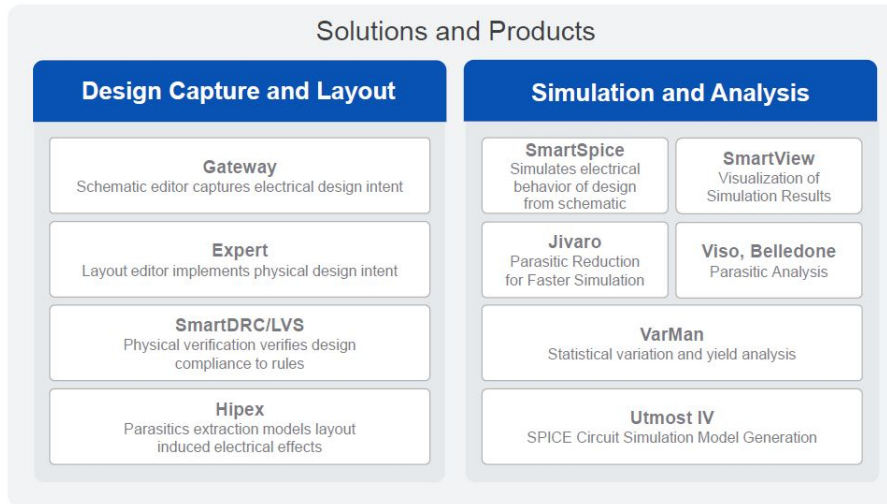
The graphic below shows the three classes of TCAD products we provide, namely Process, Device and modeling. Utilizing all three classes of TCAD products enables our design co-optimization solutions for design and fabrication. Further Purdue is noted in our Victory Atomistic product box since we acquired the technology from Purdue University.



### EDA Software and Modeling Services

Our EDA software solutions cover multiple areas of analog/mixed-signal/RF circuit simulation, custom IC CAD and interconnect modeling, including support for CMOS, bipolar, diode, JFET, SOI, TFT, HEMT, IGBT, resistor and capacitor models. We also provide complete SPICE modeling services for the semiconductor industry, ideally suited to either complement in-house SPICE modeling capabilities when time is critical, or to provide complete SPICE modeling services for occasional needs.

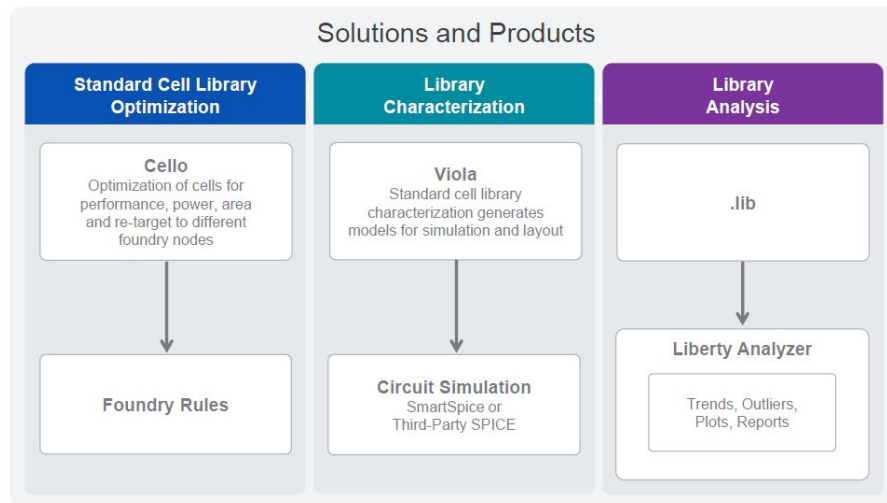
The graphic below shows our EDA products in the design capture and layout and design simulation and analysis classes and highlights select companies that contributed to our product offerings through our acquisitions. We can address specific customer needs by combining any of the products.



### SIP and EDA Software and Design Services

We provide software that optimizes and re-targets standard cell libraries. Automated tools improve productivity by automating standard cell library designs that would otherwise need to be done manually, sometimes by tens of designers. In addition, we provide automated standard cell library characterization tools that replace manual and labor-intensive characterization of standard cells.

The graphic below shows our SIP EDA software and solutions enabling foundries, design houses and allowing integration and utilization of our library characterization tools with SmartSpice or third-party SPICE simulators.



We have more than 20 years of experience in developing foundational SIPs in process technology nodes from .35um down to 16nm and have delivered more than 50 standard cell libraries and 96 memory compilers. Our full-featured standard cell libraries have demonstrated maximal density and routing performance. The cell schematic used on more complex cells also provides options for high performance or high-density design optimizations. As a standard feature, all industry standard views (CDL netlist, LEF, GDSII, Liberty, PEX Spice netlist, Verilog, VITAL, EDIF and others) are provided from a consistent database.

Standard cell library development and characterization services, either as a fully independent third-party SIP vendor for foundries or as a partner in the development of specialty libraries, are provided for fabless companies. The most common services provided are:

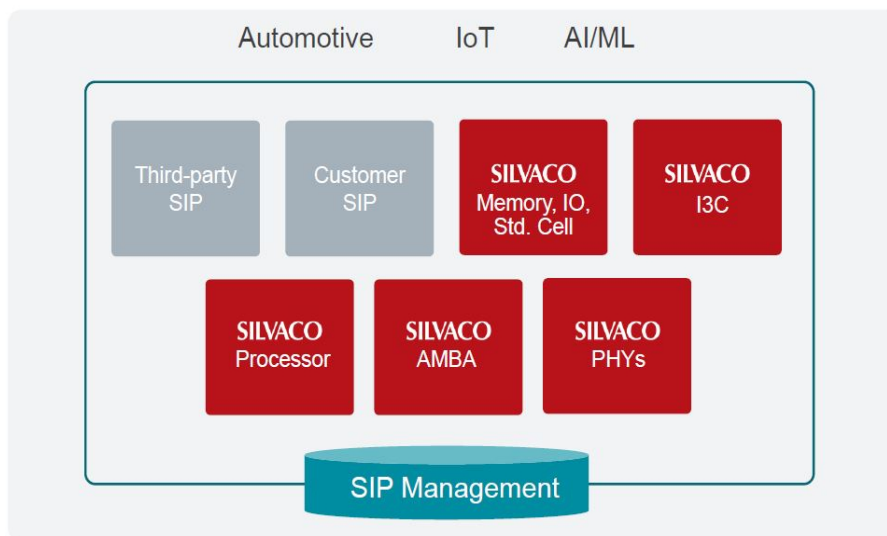
- Complete standard cell library development;
- IP migration to new process;
- Embedded memory compilers such as SRAM, Read Only Memories, or ROM, and Register files both as services and standard products. Our embedded memories span many process technology nodes optimized for speed, power and area;
- Library characterization services; and
- General purpose and custom I/Os as part of our SIP service to our customers.

### SIP Management Tools and SIP

*SIP and SoC Management Software.* Our SIP and SoC Management Software (Xena) helps teams of designers to manage (release, revision control and contracts) and collaborate amongst the internal team, the SIP providers, and customers. Xena also provides the ability for the team to authenticate SIP blocks from various providers and also authenticate and fingerprint the chip that utilize these SIP blocks to verify that the correct SIP is being used in an SoC.

*Silicon-Proven Soft IP Blocks.* Our silicon-proven Soft IP blocks are embedded in SoCs and ICs in our targeted markets of automotive, IoT, wireless and High-performance Computing. These SIP blocks are developed internally by our engineers, or in collaboration with our semiconductor partners such as NXP.

The graphic below shows the SIP management software encompassing all of the SIP designs used in an SoC.



### Customers

We provide end-to-end solutions such as software, design IP, and world-class support to a global and diverse customer base of engineers and researchers in both semiconductor companies and academia. We aim to support our customers' use of our products to solve semiconductor design challenges spanning the levels of atoms, devices, and systems. Through decades of collaboration with academia, we have created an end-to-end solution for display visualization and simulated stress-testing coupled with an integrated support system and SIP services. With our combined platform, we believe we can attract new customers, retain existing ones, and create upsell opportunities. As of September 30, 2022, we had over 800 customers that relied on our solutions worldwide, of which over 200 are academic institutions.

As of July 1, 2022, our customers were geographically distributed as follows: 52% in Asia, 24% in the United States., 15% in Europe and 9% in other regions. During 2021, in addition to organic growth within our existing customer base, we added 56 net new customers. During 2020, we added 68 net new customers.

## **Sales and Marketing**

We work closely with our customers throughout the semiconductor lifecycle with our solutions, and support offerings to meet their specific and complex needs. We utilize account managers to engage with our customers early in their design-in cycles and collaborate with them throughout the design journey. We rely primarily on direct sales channels across the world and augment our sales efforts with distributors in growth or emerging markets, such as Israel, India and Southeast Asia. To handle the complexities of the industry, we use account managers with specialized knowledge who cover and can speak to all company products. In addition, we rely upon field application engineers for product specialization and sales operations to handle universities and smaller opportunities.

Although the specific terms of our contracts vary from customer to customer, the license agreements are commonly one or three-year commitments. Sales cycles vary depending upon the product and offerings along with the specific needs and complexities of the individual customer. TCAD and EDA opportunities generally have a sales cycle of six to nine months whereas SIP opportunities generally range from three to eight months. Renewal engagement generally starts six to 12 months prior to license expiration.

Our sales and marketing teams have international coverage segmented into three distinct regions: the Americas (USA and Brazil), EMEA and APAC (Japan, China, Korea, Taiwan and Singapore). As of July 1, 2022, our sales and marketing team included 29 regional sales representatives positioned across these geographies. As of July 1, 2022, our sales and marketing management team had an average of over 25 years of sales experience.

## **Research and Development**

We believe that our future growth and acquisition of new customers depends on our ability to introduce enhancements to our existing products and to develop new products for both existing and new markets. As a result, a material portion of our operating expenses have been allocated towards this effort. Our research and development efforts are focused primarily on TCAD, Analog and Custom Design, Circuit Simulation, and SIP.

We have assembled a core team of experienced engineers and systems designers who conduct research and development activities in the United States, EMEA, and Brazil. As of September 30, 2022, we had 175 engineers worldwide, representing approximately 68% of our total employee base, and approximately 73% of our engineers hold advanced degrees in science or engineering.

We are currently expanding our research and development efforts, with key updates to our product lines, including Victory Process and Device (TCAD), SmartSpice (Circuit Simulation) UTMOST (Modeling), Viso (parasitics Analysis), Jivaro (parasitics Reduction), Varman (Variation Analysis) and Analog Custom Design, or ACD, including Schematics, Layout, Smart DRC, Smart LVS and Extraction. To support our growth, we intend to continue our investments in research and development.

## **Intellectual Property**

Our patents and other legal intellectual property protections are created when we believe we have developed proprietary and unique technologies that may impact our customers' businesses and help differentiate our products. We utilize patents to provide protection for our developed products, helping maintain product differentiation. Currently, our patent portfolio is focused on SIP ("fingerprinting" and "DNA-analysis"), circuit and standard cell design, generation and optimization, cell libraries with a large number of cells, memory cells and arrays, physical verification, simulation of light emitting diodes, or LED, and other related spaces. Our accomplishments of developing our technology and products, and our ability to compete worldwide, is made possible by our commitment to develop and maintain leadership of our products and to stay current with filings to protect our intellectual property.

We rely on patent, copyright, trademark, and trade secret laws, as well as confidentiality and non-disclosure agreements, other contractual protections, and distribution of software licenses only to protect our technologies and proprietary know-how. As of July 1, 2022, we had 19 issued U.S. patents expiring generally between 2028 and 2039, 2 pending U.S. patent applications, 3 issued foreign patents (including 2 French patents and 1 Taiwanese patent) expiring generally between 2032 and 2036, 1 pending Taiwanese application and 2 pending international Patent Cooperation Treaty patent applications. Our issued patents and pending patent applications generally relate to SIP characterization, standard cells, memory, physical verification and LED simulation. As of July 1, 2022, we have obtained registered U.S. federal trademarks for SILVACO, VIRTUAL WAFER FAB, CORE STORE (Stylized), IPEXTREME (Stylized) and XENA (Stylized).

## **Competition**

Within the TCAD software segment, we compete against several other vendors, including Synopsys, and Coventor, Inc., a LAM Research Company. We compete in the industry based on the market segments we serve, technology leadership, product efficiency, ease of integration, ease of use, payment structures, customer support, and time to

market. Several factors drive TCAD customers' buying decisions, and we compete across all customer needs in order to capture a portion of our customers' budgets. We believe that the market for TCAD software is highly consolidated, with various inorganic growth strategies, such as mergers and acquisitions, partnerships, and collaboration driving this consolidation.

The EDA industry is highly competitive. We compete against other EDA vendors and against our customers' own design tools and internal abilities. We compete in the industry primarily on principles of technology leadership, product quality and efficiency, ease of integration, license terms, payment structures, and customer support. Major players in the EDA sector include Synopsys, Cadence Design Systems, Inc., or Cadence, and Siemens EDA. The industry also features numerous smaller providers of EDA software and services that often focus on specific market niches and phases within the design process.

In SIP, we compete with solutions developed internally by our SoC customers, other third-party providers, and other smaller providers. The largest market segments of SIP such as processors and I/O require large development budgets and are dominated by large players such as Arm and Synopsys. In other segments SIP deployment competes mainly against internally developed solutions, and competitors often consist of smaller companies that provide targeted, specific product solutions rather than comprehensive solutions. In the SIP segment, we compete based on PPA, idle power consumption, data movement performance such as frequency, latency, bandwidth, and time to market. Major players in this industry include Arm, Synopsys, Cadence, and CEVA, Inc.

### **Agreement with NXP**

On September 1, 2016, we entered into a Technology License and Distribution Agreement, as amended, or the Agreement, with NXP, whereby we assumed the rights and obligations of IPextreme, Inc., our predecessor to the Agreement. Pursuant to the Agreement, NXP granted us a limited, non-exclusive, non-transferable, worldwide license to use, perform, display, copy, reproduce, modify, adapt, alter, customize, translate or otherwise create derivative works based on certain NXP technology to develop and make licensed designs for our own account, and to market, demonstrate, promote, sell, offer to sell, distribute and otherwise dispose of such licensed designs, directly or indirectly, to our customers. The Agreement was amended on October 18, 2016 to provide for the transfer of certain technical information regarding I3C Controller technology to us. The Agreement was amended again on November 10, 2018 to provide for the transfer of certain technical information regarding the LinFlexD Controller to us, and amended again on March 22, 2022 to provide for the transfer of certain technical information regarding the e200z760 core technology to us. NXP has the right to terminate the Agreement by notifying us in writing if (i) we fail to make a payment within 30 days of the date that payment was due; (ii) we are in breach of the Agreement and the breach is not capable of being remedied, such breach, if capable of remedy, is not remedied within 30 days after written notice of such breach, or we are otherwise in default; (iii) one of our creditors take possession of our assets; (iv) a voluntary or involuntary petition in bankruptcy or winding up is filed; (v) any proceeding in insolvency or bankruptcy are instituted against us; (vi) a trustee or receiver is appointed over us; (vii) any assignment is made for the benefit of our creditors; or (viii) we have a change of control (as defined in the Agreement). The Agreement provides that upon termination, all licenses will end, payments owed to NXP will become immediately due and payable, and we will immediately return or destroy all technology and confidential information furnished under the Agreement. The Agreement expires on October 30, 2023 and may be renewed for consecutive two-year periods if mutually agreed by us and NXP.

### **Government Regulation**

We face increasingly stringent and evolving regulatory challenges. For example, we are subject to anti-corruption, anti-bribery, anti-money laundering, and similar laws in the United States and other countries in which we conduct activities, including the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and the United Kingdom Bribery Act 2010, which generally prohibit companies and their employees, agents, intermediaries and other third parties from directly or indirectly promising, authorizing, making or offering improper payments or other benefits to government officials and others in the private sector. Noncompliance with these regulations could subject us to investigations, severe criminal or civil sanctions, settlements, prosecution, loss of export privileges, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, whistleblower complaints, adverse media coverage and other consequences. We are also subject to governmental export and import controls that could impair our ability to compete in international markets due to licensing requirements and subject us to liability if we are not in compliance with applicable laws. For example, certain of our software solutions are subject to U.S. export controls and sanctions, including the Export Administration Regulations, U.S. Customs regulations, and the economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control, which may limit our ability to export our software solutions and technology or may require export authorizations and conditions prior to export. We regularly engage with outside experts and review our internal compliance related to such U.S. export controls laws, regulations and sanctions programs and have filed certain voluntary disclosures related to potential violations of such



U.S. export control laws and regulations and sanctions programs. Such voluntary disclosures remain pending and if an enforcement action was brought against us in relation to such potential violations, such actions could result in the imposition of significant penalties against us. Furthermore, because we may process personal data in the ordinary course of our business we are, or may become, subject to numerous data privacy and security obligations, including federal, state, local, and foreign laws, regulations, guidance, and industry standards related to data privacy, security and protection, including, without limitation, the EU GDPR and the UK GDPR, the CCPA and other U.S. state laws. These privacy, security, and protection laws may increase our compliance obligations and exposure for any noncompliance. See the section titled “Risk Factors—Risks Related to Legal, Regulatory, Accounting and Tax Matters” for additional information about the laws and regulations to which we are or may become subject and about the risks to our business associated with such laws and regulations.

### **Employees and Human Capital Resources**

As of September 30, 2022, we had 257 employees worldwide, including 92 full-time equivalent employees located in the United States, consisting of 52 in research and development, 12 in sales and marketing, 18 in general and administrative, and 10 in operations. We consider relations with our employees to be good and have never experienced a work stoppage. None of our employees are either represented by a labor union or subject to a collective bargaining agreement.

### **Facilities**

Our principal executive offices are located in a leased facility in Santa Clara, California, consisting of approximately 11,118 square feet of office space under a lease that expires in March 2025. This facility accommodates our principal engineering, sales, marketing, operations, finance, and administrative activities. We also lease offices in Brazil, China, France, Japan, Korea, Singapore, Taiwan, Ukraine, the United Kingdom and Georgia, U.S.A. We believe that our facilities are generally sufficient to meet our current needs and that, if we require additional space, we will be able to obtain additional facilities on commercially reasonable terms.

### **Legal Proceedings**

From time to time, we may be subject to legal proceedings in the ordinary course of our business. We are not currently a party to any proceedings that we believe will have, individually or in the aggregate, a material adverse effect on our business. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors. For more information regarding our current legal proceedings, see “Risk Factors—Risks Related to Legal, Regulatory, Accounting and Tax Matters—Pending or future investigations or litigation could have a material adverse effect on our results of operations and our stock price” and Note 12 to our consolidated financial statements appearing elsewhere in this prospectus.

## MANAGEMENT

### Executive Officers and Directors

The following table sets forth information regarding our executive officers and directors as of December 16, 2022:

Name	Age	Position
<b>Executive Officers</b>		
Dr. Babak A. Taheri	61	Chief Executive Officer and Director
Robert J. McMullan	68	Chief Financial Officer
Dr. Raúl Camposano	67	Chief Technology Officer
Dr. Eric Guichard	55	Senior Vice President and General Manager of TCAD
<b>Non-Employee Directors</b>		
Katherine S. Ngai-Pesic	73	Chair of the Board and Director
John W. Cleveland	66	Director
Dr. Hau L. Lee	70	Lead Independent Director
William H. Molloie, Jr.	58	Director
Anthony K. K. Ngai	40	Director
Iliya I. Pesic	41	Director
Dr. Walden C. Rhines	76	Director
Jodi L. Shelton	57	Director

(1) Member of the audit committee.

(2) Member of the nominating and corporate governance committee.

(3) Member of the compensation committee.

### Executive Officers

*Babak A. Taheri, Ph.D.*, has served as our Chief Executive Officer and member of our board of directors from August 2019 to September 2021 and from November 2021 to present. From October 2018 to August 2019, Dr. Taheri served as our Chief Technology Officer and Executive Vice President of Products. Prior to joining Silvaco, Dr. Taheri served as Chief Executive Officer and President of Integrated Biosensing Technologies (IBT), an advisory and consulting firm, from May 2015 to October 2018. Dr. Taheri has also served on various advisory boards, including MEMS World Summit, a conference for MEMS manufacturers, equipment and material suppliers and research institutes, Novasentis, Inc., an electromechanical polymer technology development company, and as the advisory board chair of the electrical engineering department at the University of California, Davis. Dr. Taheri also served on the board of directors of Parisi House on The Hill, a residential alcohol and drug non-profit, from June 2021 to May 2022. Dr. Taheri received a B.S. in engineering from San Francisco State University, a M.S. in electrical engineering from San Jose State University and a Ph.D. in biomedical engineering from the University of California, Davis. We believe that Dr. Taheri is qualified to serve on our board of directors due to his experience in the semiconductor and technology industries and extensive leadership, board of director experience, and management experience, including his experience serving as our Chief Executive Officer.

*Robert J. McMullan* has served as our Chief Financial Officer since February 2022. Prior to joining Silvaco, Mr. McMullan served as Chief Financial Officer of PharmScript LLC, a pharmacy services company, from September 2019 to March 2021. From January 2014 to June 2019, Mr. McMullan served as Senior Vice President and Chief Financial Officer of MACOM Technology Solutions Holdings, Inc. (Nasdaq: MTSI), a semiconductor designer and manufacturing company, or MACOM. Throughout his career, Mr. McMullan has served in several chief financial officer and chief executive officer roles at various semiconductor companies and other IT service businesses. Mr. McMullan received a B.A. in business administration from Saint Michael's College.

*Raúl Camposano, Ph.D.*, has served as our Chief Technology Officer since February 2022. Dr. Camposano has served as a partner at Silicon Catalyst LLC, an incubator for semiconductor solutions, since April 2015 and as a lecturer on EDA and Machine Learning Hardware at Stanford since April 2018. From July 2020 to January 2022, Dr. Camposano served as an advisor to Applied Materials, Inc. (Nasdaq: AMAT), a semiconductor equipment company, or Applied Materials. From August 2015 to July 2020, Dr. Camposano served as Chief Executive Officer of Sage Design Automation, Ltd., a software tools company acquired by Applied Materials in 2020. From November 2010 to May 2014, Dr. Camposano served as Chief Executive Officer of Nimbic, Inc., an EDA cloud company, acquired by Mentor Graphics Corporation in 2014. From January 1994 to January 2007, Dr. Camposano served in various roles at Synopsys (Nasdaq: SNPS), an EDA solutions company, including as its Chief Technology Officer, Senior Vice

President, and General Manager. Prior to that, Dr. Camposano served on the board of directors of the German National Research Center for Computer Science, as a professor of computer science at the University of Paderborn, and as a Research Staff Member at the IBM T.J. Watson Research Center. Dr. Camposano received a B.S. and M.S. in electrical engineering from Universidad de Chile and a Ph.D. in computer science from Karlsruhe Institute of Technology. Dr. Camposano was elected as a Fellow of the IEEE in 1999 and to serve on the board of directors of ESDA, the EDA Consortium, in 2012.

*Eric Guichard, Ph.D.*, has served as our Senior Vice President and General Manager of our TCAD division since November 2012, and as our Vice President of Applications from July 2008 to November 2012. From September 1995 to July 2008, Dr. Guichard served in various roles with Silvaco SA, formerly known as Silvaco Data Systems, one of our wholly-owned subsidiaries, including as an applications engineer. Dr. Guichard received a M.S. in material science and a Ph.D. in semiconductor physics from Instituto Politécnico Nacional de Grenoble, France.

### **Non-Employee Directors**

*Katherine S. Ngai-Pesic* co-founded Silvaco in 1984 and is our controlling stockholder. Ms. Ngai-Pesic has served as a member of our board of directors since November 2012 and as chair of our board of directors since December 2021. Ms. Ngai-Pesic has also served as a member of our compensation committee since May 2021 and as chair of our compensation committee from December 2021 to September 2022, as chair of our nominating and corporate governance committee from May 2021 to December 2021 and as a member of our nominating and corporate governance committee since December 2021 and as a member of our Audit Committee from May 2021 to September 2022. In addition, Ms. Ngai-Pesic founded Kipee in March 2001 and has served as its President since inception and founded the Lee Ho Yee Foundation in April 2021 and has served as chair of its board of directors since inception. Mrs. Ngai-Pesic has served as president of the Marriott Business Center HOA Association since October 2012. Ms. Ngai-Pesic also has an endowed associate professorship at Purdue University's Department of Electrical & Computer Engineering. Ms. Ngai-Pesic received a B.S. in chemistry and an M.S. in electrical engineering from Santa Clara University. We believe that Ms. Ngai-Pesic is qualified to serve on our board of directors due to her over 30 years of experience in the semiconductor industry and extensive leadership and management experience.

*John W. Cleveland* has served as a member of our board of directors since July 2022 and as chair of our compensation committee since September 2022. Since April 2017, Mr. Cleveland has been the lead advisor of SkyDeck Berkeley, a startup accelerator at the University of California, Berkeley. Mr. Cleveland has also been an executive advisor to Neowork Ventures since June 2021 and an advisor to Empath Ventures since February 2020. From August 2018 to June 2021, Mr. Cleveland served as an adjunct faculty lecturer at San Jose State University. From December 2017 to January 2020, Mr. Cleveland served as the Chief Human Resources Officer of Seagate Technology Holdings plc (Nasdaq: STX), a data storage and management solutions company, and as its Vice President Global Compensation, Benefits, Mobility, Compliance, M&A from June 2006 to December 2017. Mr. Cleveland received a B.A. in industrial psychology from the University of California, Berkeley and an M.B.A. from Pepperdine University. We believe that Mr. Cleveland is qualified to serve on our board of directors due to his extensive leadership and management experience at public technology companies, and experience with various public company boards.

*Hau L. Lee, Ph.D.*, has served as a member of our board of directors, as our lead independent director and as a member of our compensation committee since September 2022. Since September 2002, Dr. Lee has served as an Operations, Information and Technology Professor at the Graduate School of Business at Stanford University, where he has been a professor since 1983. Since February 2012, Dr. Lee has also served on the board of directors of TD SYNEX Corporation (NYSE: SNX), a distributor and solutions aggregator for the IT ecosystem. Since April 2013, Dr. Lee has served as a member of the board of directors and on the audit and compensation committees of Lion Rock Group Limited (HKG: 1127). In addition, from March 2014 to July 2020, Dr. Lee served as a member of the board of directors and on the compensation committee of Frontier Services Group (HKG: 0500), a Chinese Africa-focused security, aviation, and logistics company. From June 2014 to September 2020, he served as a member of the board directors and on the compensation committee of Global Brands Group (SEHK: 787), a bankruptcy holding and brand management company, and from February 2019 to September 2022, Dr. Lee served as a member of the board of directors and on the compensation committee of LF Logistics, a logistics solution company. In November 1999, Dr. Lee co-founded DemandTec, Inc., a retail pricing technology company. Dr. Lee received a B.Soc.Sc. degree in Economics and Statistics from the University of Hong Kong, an M.Sc. degree in operational research from the London School of Economics and an M.S. and Ph.D in operations research from the Wharton School of the University of Pennsylvania. We believe that Dr. Lee is qualified to serve on our board of directors due to his extensive experience in the semiconductor industry and extensive leadership experience.

*William H. Molloie, Jr.* has served as a member of our board of directors and as chair of our audit committee since May 2022. Since March 2021, Mr. Molloie has been a lecturer at the University of California, San Diego Rady School of Management. In July 1986, Mr. Molloie joined PricewaterhouseCoopers, a public accounting firm, and served as an

assurance partner from October 1997 to June 2020. Since June 2021, Mr. Molloie has served on the board of directors of WinSanTor Inc., a private clinical-stage biotechnology company, and has served as a member of its compensation committee since April 2022. Mr. Molloie received a B.A. in accounting and finance from Temple University. We believe that Mr. Molloie is qualified to serve on our board of directors due to his financial expertise and his extensive leadership experience in the technology industry.

*Anthony K. K. Ngai* has served as a member of our board of directors since October 2018 and has served as a member of our nominating and corporate governance, compensation and audit committees since that time. Mr. Ngai has also served as chair of our nominating and corporate governance committee since September 2022 and as chair of our audit committee from October 2018 to April 2022. Since June 2022, Mr. Ngai has served as the Chief Financial Officer of Unience.io, a technology company based in Hong Kong that develops blockchain and Web3 applications and community. From September 2020 to June 2022, Mr. Ngai served as a Partner of Gravity Capital Partners Co. and the Responsible Officer of Avanta Investment Management, an asset management company. Prior to that, Mr. Ngai served as the Head of Credit Trading at J.P. Morgan Asia Pacific, a global financial services firm, from June 2004 to September 2018. In November 2018, Mr. Ngai co-founded JUST FEEL, a nonprofit charity focused on mental health in education. Since July 2020, Mr. Ngai served on the Board of Trustees of the Chinese University of Hong Kong, Chung Chi College. Mr. Ngai received a B.S. in quantitative finance from The Chinese University of Hong Kong and is a graduate of the Program for Management Development from Harvard Business School. We believe that Mr. Ngai is qualified to serve on our board of directors due to his financial expertise and extensive leadership and management experience.

*Iliya I. Pesic* has served as a member of our board of directors since November 2012. Mr. Pesic served as chair of our board of directors from November 2012 to September 2014 and as executive chair of our board of directors from September 2014 to April 2021. Since May 2021, Mr. Pesic has also served on our compensation committee, nominating and corporate governance committee and audit committee. Mr. Pesic also served as chair of our nominating and corporate governance committee from December 2021 to September 2022 and as chair of our compensation committee from April 2021 until December 2021. Mr. Pesic is presently an advisor to us. Mr. Pesic holds a B.S. in electrical engineering from Santa Clara University and an M.S. in electronic engineering from Tohoku University in Japan. We believe that Mr. Pesic is qualified to serve on our board of directors due to his extensive knowledge of and experience in the semiconductor industry.

*Walden C. Rhines, Ph.D.*, has served as a member of our board of directors and as a member of our audit committee since September 2022. Since March 2020, Dr. Rhines has served as President and Chief Executive Officer of Cornami, Inc., a fabless semiconductor company. Prior to joining Cornami, Inc., from October 1993 to March 2017, Dr. Rhines served as Chief Executive Officer of Mentor Graphics Corporation, an EDA company, and as chairman of its board of directors from 2000 until the acquisition of Mentor Graphics Corporation by Siemens AG in 2017. Dr. Rhines has served as a member of the board of directors and as chair of the compensation committee of Qorvo, Inc. (Nasdaq: QRVO), a semiconductor company, since January 2015. He served as a member of the board of directors of PTK Acquisition Corp. (NYSE: PTK), a special purpose acquisition company from July 2020 until September 2021 and served on its audit, nominating and compensation committees. Dr. Rhines received a B.S.E. in metallurgical engineering from the University of Michigan, an M.S. and Ph.D. in materials science and engineering from Stanford University, and a M.B.A. from the Southern Methodist University, Cox School of Business. We believe that Dr. Rhines is qualified to serve on our board of directors due to his experience in the semiconductor and EDA industries, extensive leadership and management experience in technology-based corporations, and experience on public company boards.

*Jodi L. Shelton* has served as a member of our board of directors and as a member of our nominating and corporate governance committee since September 2022. Ms. Shelton co-founded Global Semiconductor Alliance, a leading semiconductor industry organization, in June 1994 and has served as its Chief Executive Officer since June 1994. Ms. Shelton also co-founded Shelton Group, a strategic investor relations firm in February 1994 and has served as its chair since February 1994. Since March 2021, Ms. Shelton has also served on the board of directors and as a member of the audit and compensation committees of LF Capital Acquisition Corp (Nasdaq: LFAC), a special purpose acquisition company. Ms. Shelton received a B.S. in political science from San Diego State University and an M.S. in political science from University of Houston. We believe that Ms. Shelton is qualified to serve on our board of directors due to her extensive experience in the semiconductor industry and her experience on various boards.

### **Familial Relationships**

Ms. Ngai-Pesic is the mother of Iliya I. Pesic and aunt of Anthony K. K. Ngai. Ms. Ngai-Pesic, Mr. Pesic, and Mr. Ngai are members of our board of directors. Anthony K. K. Ngai and Iliya I. Pesic are first cousins.

## Board Composition

Our business and affairs are organized under the direction of our board of directors, which currently consists of nine members. Ms. Ngai-Pesic serves as chair and Dr. Hau L. Lee serves as our lead independent director of our board of directors. The primary responsibilities of our board of directors are to provide oversight, strategic guidance, counseling, and direction to our management. Our board of directors meets on a regular basis and additionally as required.

In accordance with the terms of our amended and restated charter, which will become effective as of immediately prior to the completion of this offering, our board of directors will be divided into three classes, Class I, Class II, and Class III, with members of each class serving staggered three-year terms.

Effective upon completion of this offering, our board of directors will be divided into the following classes:

- Class I, which will consist of \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_, whose terms will expire at our first annual meeting of stockholders to be held after the completion of this offering;
- Class II, which will consist of \_\_\_\_\_ and \_\_\_\_\_, whose terms will expire at our second annual meeting of stockholders to be held after the completion of this offering; and
- Class III, which will consist of \_\_\_\_\_ and \_\_\_\_\_, whose terms will expire at our third annual meeting of stockholders to be held after the completion of this offering.

At each annual meeting of stockholders to be held after the initial classification, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following their election and until their successors are duly elected and qualified. This classification of our board of directors may have the effect of delaying or preventing changes in our control or management. Our directors may be removed for cause by the affirmative vote of the holders of at least two-thirds (2/3) of our voting stock.

## Lead Independent Director

Our board of directors has adopted corporate governance guidelines that provide that the board of directors shall appoint an independent director to serve as our lead independent director for so long as we have a non-independent chair. Our board of directors has appointed Dr. Hau L. Lee to serve as our lead independent director. As lead independent director, Dr. Lee will have primary responsibilities to preside over all meetings at which the chair is not present, and serve as a liaison between the chair and the independent directors.

## Director Independence and Controlled Company Exemption

We intend to apply to have our common stock listed on Nasdaq. Under the rules of Nasdaq, a director will only qualify as an “independent director” if that company’s board of directors affirmatively determines that such person does not have a relationship with our company that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

Prior to the closing of this offering, our board of directors undertook a review of the independence of our directors and considered whether any director has a material relationship with us that could compromise that director’s ability to exercise independent judgment in carrying out that director’s responsibilities. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that none of John W. Cleveland, Dr. Hau L. Lee, William H. Molloie, Jr., Anthony K. K. Ngai, Dr. Walden C. Rhines and Jodi L. Shelton, representing six of our eight total directors, has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is “independent” as that term is defined under Nasdaq’s rules. In making these determinations, our board of directors considered the current and prior relationships that each director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including their beneficial ownership of our capital stock and relationships with certain of our significant stockholders, and the transactions involving them described in the section titled “Certain Relationships and Related Party Transactions.”

Immediately upon completion of this offering, we will be a “controlled company” within the meaning of the Nasdaq listings rules. As a result, we qualify for exemptions from certain corporate governance requirements under the rules, including the requirements that within one year of the completion of this offering, we have a board, a compensation committee and a nominating and corporate governance committee that is each composed entirely of independent directors. We intend to make use of these corporate governance requirement exemptions. In addition, we will be subject to the rules of the SEC and Nasdaq relating to the membership, qualifications, and operations of the audit committee (as discussed below), which requires that the audit committee be comprised of at least three members composed entirely of independent directors as of the first anniversary of this offering.

The rules of Nasdaq define a “controlled company” as a company of which more than 50% of the voting power for the election of directors is held by an individual, a group or another company. Upon completion of this offering, Ms. Ngai-Pesic will own approximately % of our outstanding common stock (approximately % if the underwriters exercise their option to purchase additional shares in full), representing % of the voting power of the outstanding common stock (approximately % if the underwriters exercise their option to purchase additional shares in full), and the SMIK Trust will own approximately % of our outstanding common stock (approximately % if the underwriters exercise their option to purchase additional shares in full), representing % of the voting power of the outstanding common stock (approximately % if the underwriters exercise their option to purchase additional shares in full). Ms. Ngai-Pesic is a beneficiary of the SMIK Trust and has no voting and dispositive power over the shares held by the SMIK Trust. Through Ms. Ngai-Pesic and the SMIK Trust’s collective control of shares of common stock representing a majority of the votes entitled to be cast in the election of our board of directors, Ms. Ngai-Pesic and the SMIK Trust have the ability to control the vote to elect all of our directors. However, if we cease to be a controlled company and we continue to be listed on Nasdaq, we will be required to comply with the director independence requirements of Nasdaq relating to the board of directors, compensation committee and nominating and corporate governance committee by the date our status as a controlled company changes or within specified transition periods applicable to certain provisions, as the case may be.

### **Role of Our Board of Directors in Risk Oversight**

A function of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through our board of directors, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The audit committee also monitors compliance with legal and regulatory requirements. Our compensation committee also assesses and monitors whether our compensation plans, policies and programs comply with applicable legal and regulatory requirements.

### **Board Committees**

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. Our board of directors will adopt a charter for each respective committee in connection with this offering, which will comply with the applicable requirements of current Nasdaq rules. We intend to comply with future requirements to the extent they are applicable to us. Following the completion of this offering, copies of the charters for each committee will be available on the investor relations portion of our website.

### **Audit Committee**

Upon effectiveness of the registration statement of which this prospectus forms a part, our audit committee will consist of William H. Molloie, Jr., Walden C. Rhines and Anthony K. K. Ngai. Our board of directors has affirmatively determined that each of the members of our audit committee satisfies the independence requirements of Nasdaq and Rule 10A-3 under the Exchange Act. Each member of our audit committee meets the financial literacy requirements of the Nasdaq rules and the SEC. In arriving at this determination, our board of directors has examined each audit committee member’s scope of experience and the nature of their prior and/or current employment.

William H. Molloie, Jr. serves as the chair of our audit committee. Our board of directors has determined that Mr. Molloie qualifies as an “audit committee financial expert”, within the meaning of SEC regulations and meets the financial sophistication requirements of the Nasdaq listing rules. In making this determination, our board has considered Mr. Molloie’s formal education and previous experience in financial roles. Both our independent registered public accounting firm and management periodically meet privately with our audit committee.

The functions of this committee include, among other things:

- evaluating the performance, independence and qualifications of our independent auditors and determining whether to retain our existing independent auditors or engage new independent auditors;
- reviewing our financial reporting processes and disclosure controls;
- reviewing and approving the engagement of our independent auditors to perform audit services and any permissible non-audit services;
- reviewing the adequacy and effectiveness of our internal control policies and procedures, including the responsibilities, budget, staffing and effectiveness of our internal audit function;
- reviewing with the independent auditors the annual audit plan, including the scope of audit activities and all critical accounting policies and practices to be used by us;

- obtaining and reviewing at least annually a report by our independent auditors describing the independent auditors' internal quality control procedures and any material issues raised by the most recent internal quality-control review;
- monitoring the rotation of partners of our independent auditors on our engagement team as required by law;
- prior to engagement of any independent auditor, and at least annually thereafter, reviewing relationships that may reasonably be thought to bear on their independence, and assessing and otherwise taking the appropriate action to oversee the independence of our independent auditor;
- reviewing our annual and quarterly financial statements and reports, including the disclosures contained in "Management's Discussion and Analysis of Financial Condition and Results of Operations," and discussing the statements and reports with our independent auditors and management;
- reviewing with our independent auditors and management significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls and critical accounting policies;
- reviewing with management and our auditors any earnings announcements and other public announcements regarding material developments;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding financial controls, accounting, auditing or other matters;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and providing oversight of any related person transactions in accordance with our related person transaction policy and reviewing and monitoring compliance with legal and regulatory responsibilities, including our code of business conduct and ethics;
- reviewing our major financial risk exposures, including the guidelines and policies to govern the process by which risk assessment and risk management is implemented; and
- reviewing and evaluating on an annual basis the performance of the audit committee and the audit committee charter.

### **Compensation Committee**

Upon effectiveness of the registration statement of which this prospectus forms a part, our compensation committee will consist of John W. Cleveland, Hau L. Lee, Ms. Ngai-Pesic, Anthony K. K. Ngai, and Iliya I. Pesic. Mr. Cleveland will serve as the chair of our compensation committee. The functions of this committee include, among other things:

- reviewing and approving the corporate objectives that pertain to the determination of executive compensation;
- reviewing and approving the compensation and other terms of employment of our executive officers;
- reviewing and approving performance goals and objectives relevant to the compensation of our executive officers and assessing their performance against these goals and objectives;
- making recommendations to our board of directors regarding the adoption or amendment of equity and cash incentive plans and approving amendments to such plans to the extent authorized by our board of directors;
- reviewing and making recommendations to our board of directors regarding the type and amount of compensation to be paid or awarded to our non-employee board members;
- reviewing and assessing the independence of compensation consultants, legal counsel and other advisors as required by Section 10C of the Exchange Act;
- administering our equity incentive plans, to the extent such authority is delegated by our board of directors;
- reviewing and approving the terms of any employment agreements, severance arrangements, change in control protections, indemnification agreements and any other material arrangements for our executive officers;
- overseeing the development and implementation of our human capital management, including those policies and strategies regarding recruiting, retention, career development, opportunity, and advancement, and succession, diversity, equity, inclusion, and employment practices;
- reviewing with management our disclosures under the caption "Compensation Discussion and Analysis" in our periodic reports or proxy statements to be filed with the SEC, to the extent such caption is included in any such report or proxy statement;
- preparing an annual report on executive compensation that the SEC requires in our annual proxy statement; and
- reviewing and evaluating on an annual basis the performance of the compensation committee and recommending such changes as deemed necessary with our board of directors.

### **Nominating and Corporate Governance Committee**

Upon effectiveness of the registration statement of which this prospectus forms a part, our nominating and corporate governance committee will consist of Hau L. Lee, Anthony K. K. Ngai, Ms. Ngai-Pesic, Iliya I. Pesic and Jodi L.

Shelton. Mr. Ngai will serve as the chair of our nominating and corporate governance committee. The functions of this committee include, among other things:

- identifying, reviewing and making recommendations of candidates to serve on our board of directors;
- evaluating the performance of our board of directors, committees of our board of directors and individual directors and determining whether continued service on our board is appropriate;
- evaluating nominations by stockholders of candidates for election to our board of directors;
- evaluating the current size, composition and organization of our board of directors and its committees and making recommendations to our board of directors for approvals;
- developing a set of corporate governance policies and principles and recommending to our board of directors any changes to such policies and principles;
- reviewing issues and developments related to corporate governance and identifying and bringing to the attention of our board of directors current and emerging corporate governance trends;
- overseeing environmental and social governance matters relevant to us; and
- reviewing periodically the nominating and corporate governance committee charter, structure and membership requirements and recommending any proposed changes to our board of directors, including undertaking an annual review of its own performance.

### **Compensation Committee Interlocks and Insider Participation**

Ms. Ngai-Pesic has served as a member of our compensation committee since May 2021 and as chair of our compensation committee from December 2021 through August 2022. Mr. Pesic has served on our compensation committee since May 2021. Ms. Ngai-Pesic is the mother of Iliya I. Pesic. None of our current executive officers currently serve, or has served during the last completed fiscal year, on the compensation committee or board of directors of any other entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

For information regarding agreements between us and Ms. Ngai-Pesic, Iliya I. Pesic and Anthony K. K. Ngai, see “Certain Relationships and Related Party Transactions—Consulting and Employment Arrangements.”

### **Limitation on Liability and Indemnification of Directors and Officers**

Our amended and restated bylaws, which will become effective as of immediately prior to the completion of this offering, limits our directors’ liability to the fullest extent permitted under the DGCL. The DGCL provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability:

- for any transaction from which the director derives an improper personal benefit;
- for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- for any unlawful payment of dividends or redemption or repurchases of shares; or
- for any breach of a director’s duty of loyalty to the corporation or its stockholders.

If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors will be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Delaware law and our amended and restated bylaws provide that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and other agents, to the fullest extent permitted by law. Any indemnified person is also entitled, subject to certain limitations, to advancement, direct payment or reimbursement of reasonable expenses (including attorneys’ fees and disbursements) in advance of the final disposition of the proceeding.

In addition, we intend to enter into separate indemnification agreements with our directors and officers. These agreements, among other things, will require us to indemnify our directors and officers for certain expenses, including attorneys’ fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as one of our directors or officers or any other company or enterprise to which the person provides services at our request.

We maintain a directors’ and officers’ insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.



Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or control persons, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

### Code of Business Conduct and Ethics for Employees, Executive Officers, and Directors

We intend to adopt a Code of Business Conduct and Ethics, or the Code of Conduct, that will be applicable to our directors, officers and employees (including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions), which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part. The Code of Conduct will be available on our website at [www.silvaco.com](http://www.silvaco.com). Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. The nominating and corporate governance committee of our board of directors is responsible for overseeing the Code of Conduct and must approve any waivers of the Code of Conduct for employees, executive officers and directors. We expect that any amendments to the Code of Conduct, or any waivers of its requirements, will be disclosed on our website.

### Non-Employee Director Compensation

We have paid cash retainers or other compensation to certain members of our board of directors. We have reimbursed and will continue to reimburse all of our non-employee directors for their reasonable travel and out of pocket expenses incurred in attending meetings of our board of directors and committees of our board of directors in accordance with our reimbursement procedures.

The following table presents summary compensation information of our current non-employee members of our board of directors for the fiscal year ended December 31, 2021.

Name	Fees Earned or Paid in Cash (\$) <sup>(1)</sup>	RSU Awards (\$) <sup>(2) (3)</sup>	All Other Compensation (\$) <sup>(4)</sup>	Total (\$) <sup>(5)</sup>
Katherine S. Ngai-Pesic	—	—	96,144	96,144
John W. Cleveland <sup>(5)</sup>	—	—	—	—
Dr. Hau L. Lee <sup>(5)</sup>	—	—	—	—
William H. Molloie, Jr. <sup>(5)</sup>	—	—	—	—
Anthony K. K. Ngai	18,750	53,250	—	72,000
Iliya I. Pesic	—	106,500	196,548	303,048
Dr. Walden C. Rhines <sup>(5)</sup>	—	—	—	—
Jodi L. Shelton <sup>(5)</sup>	—	—	—	—

- (1) Amounts shown in this column include applicable annual retainers for the individual's service on our board of directors and committees thereof.
- (2) Amounts shown in this column represent the aggregate grant date fair value of RSU awards made during 2021, calculated in accordance with Accounting Standards Codification, or ASC, Topic 718. See Note 2 to the notes to our consolidated financial statements for a discussion of the relevant assumptions used in calculating these amounts.
- (3) As of December 31, 2021, the aggregate number of shares underlying outstanding RSU awards held by Anthony K. K. Ngai and Iliya I. Pesic is 15,000 shares and 329,680 shares, respectively.
- (4) Ms. Ngai-Pesic earned compensation of \$96,144 for her service as an employee of the company in 2021. We did not enter into a written agreement with Ms. Ngai-Pesic governing the terms of her employment.
- (5) This individual joined our board of directors subsequent to December 31, 2021.
- (6) Mr. Pesic earned compensation of \$189,596 for his service as an employee of the company in 2021, and we made \$6,952 in car lease payments on behalf of Mr. Pesic in 2021. We did not enter into a written agreement with Mr. Pesic governing the terms of his employment.

In connection with their joining our board of directors, we granted each of John W. Cleveland and William H. Molloie, Jr. 15,000 liquidity-contingent RSUs on August 26, 2022, and each of Dr. Hau L. Lee, Jodi L. Shelton and Dr. Walden C. Rhines 15,000 liquidity-contingent RSUs on September 15, 2022. Each RSU award will vest on the first date upon which both the Time-Based Requirement and the Liquidity Event Requirement are satisfied with respect to the applicable award. The liquidity event requirement will be satisfied as to any then-outstanding RSUs on the first to occur of: (1) a change in control event (as defined in the award agreement) or (2) the first sale of common stock pursuant to an underwritten initial public offering, including the consummation of this offering, in either case, within 10 years of the grant date. The Time-Based Requirement will be satisfied in installments over four years as follows: 25% of the RSUs will vest on the one-year anniversary of the vesting start date (as set forth in the applicable award agreement), with the remaining 75% of the RSUs vesting, in equal quarterly installments during the next 12 quarters thereafter, in each case subject to the award recipient's continuous service through each such date.

Upon the completion of this offering, the Time-Based Requirement applicable to any unvested RSUs subject to the aforementioned awards will accelerate with respect to 50% of the then unvested portion of the such RSU awards outstanding as of the closing of the offering, subject to the applicable director's continued employment through such closing. If we terminate a director's service with us, or any successor of ours, without cause (as defined in the director's RSU award agreement) or by such director's resignation for good reason (as defined in the director's RSU award agreement), within 12 months after the closing of a change of control (as defined in the director's RSU award agreement), 100% of the then-outstanding unvested RSUs will be deemed to have satisfied the Time-Based Requirement.

Our board of directors approved the following proposed cash compensation, which is based on a review of director compensation at comparable companies in our industry. We anticipate that our board of directors or the compensation committee will approve cash compensation for non-employee directors consisting of a \$40,000 annual retainer, an additional \$30,000 annual retainer for the non-executive chair and for the lead independent director, if any, and the following additional annual retainers for committee service:

<b>Committee</b>	<b>Chair<sup>(1)</sup></b>	<b>Member</b>
Compensation Committee	\$ 10,000	\$ 5,000
Nominating and Corporate Governance Committee	\$ 10,000	\$ 5,000
Audit Committee	\$ 10,000	\$ 5,000

(1) Retainer is in addition to the retainer received for committee membership.

Following the completion of our initial public offering, our non-employee directors who will continue serving as a member of our board of directors will also receive an annual grant of RSUs under the 2023 Plan following the conclusion of each regular annual meeting of our stockholders, commencing with the 2023 annual meeting. The annual RSU award will be with respect to a number of shares of common stock having an aggregate fair market value equal to \$150,000 calculated on the date of grant. Each annual RSU award will become fully vested, subject to continued service as a director, on the earliest of the 12-month anniversary of the date of grant, the next annual meeting of stockholders following the date of grant, or the consummation of a change in control as defined in the 2023 Plan.

For information regarding cash compensation earned by our current non-employee directors in connection with their service as employees of the company and pursuant to the terms of consulting agreements entered into in 2022, see "Certain Relationships and Related Party Transactions—Consulting and Employment Arrangements."

## EXECUTIVE COMPENSATION

Our named executive officers, who consist of our principal executive officer, and our two most highly compensated executive officers, for the year ended December 31, 2021 were:

- Dr. Babak A. Taheri, Chief Executive Officer and Director;
- Gregory F. Swyt, former Chief Financial Officer; and
- Dr. Eric Guichard, Vice President and General Manager TCAD.

On February 4, 2022, Robert McMullan commenced employment as our Chief Financial Officer. Although Mr. McMullan joined us in 2022, we have included certain information in parts of the following narrative regarding his compensation where it may be material to an understanding of our executive compensation program.

### Summary Compensation Table

The following table presents summary information regarding total compensation for each of our named executive officers for the year ended December 31, 2021.

Name and Principal Position	Year	Salary (\$) <sup>(1)</sup>	Bonus (\$) <sup>(2)</sup>	Stock Awards (\$) <sup>(3)</sup>	Nonequity Incentive Plan Compensation (\$) <sup>(4)</sup>	Nonqualified Deferred Compensation Earnings (\$)	All Other Compensation (\$) <sup>(5)</sup>	Total (\$)
<b>Dr. Babak A. Taheri</b> <sup>(6)</sup> <i>Chief Executive Officer and Director</i>	2021	298,477	—	728,150	40,520	—	180,000	1,247,147
<b>Gregory F. Swyt</b> <sup>(7)</sup> <i>Former Chief Financial Officer</i>	2021	157,385	40,000	248,700	—	—	—	446,084
<b>Dr. Eric Guichard</b> <i>Vice President and General Manager of TCAD</i>	2021	247,386	—	73,350	15,000	—	—	335,736

(1) The amounts in this column represent regular salary, holiday pay and vacation pay.

(2) The amount in this column represents a signing bonus payment to Mr. Swyt in connection with his commencement of employment.

(3) The amounts in this column represent the aggregate grant-date fair value of awards granted to each individual under our equity incentive plans, computed in accordance with ASC Topic 718. See Note 2 to our audited consolidated financial statements included elsewhere in this prospectus for a discussion of the assumptions we made in determining the grant-date fair value of our equity awards.

(4) The amounts in this column represent the applicable service provider's total annual performance-based cash bonus for the year ended December 31, 2021.

(5) Represents one half of the aggregate severance payment due to Dr. Taheri pursuant to the terms of Dr. Taheri's Separation Agreement as finally settled upon entry into his offer letter dated November 23, 2021, as described further below.

(6) Dr. Taheri served as our Chief Executive Officer, Chief Technology Officer, and Executive Vice President of Products until August 2021, and then again served as our Chief Executive Officer beginning in November 2021.

(7) Represents the pro rata salary amount earned by Mr. Swyt following his commencement of service with us in June 2021. Mr. Swyt departed on January 5, 2022.

In setting executive base salaries and bonuses, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to us. We do not target a specific competitive position or a specific mix of compensation among base salary or bonus.

### Agreements with Our Named Executive Officers and Potential Payments Upon Termination or Change of Control

Below are descriptions of our agreements with our named executive officers. The agreements generally provide for at-will employment and set forth the executive officer's initial base salary and eligibility for employee benefits. Furthermore, each of our executive officers has executed a form of our standard proprietary information and inventions assignment agreement.

#### *Agreement with Dr. Babak A. Taheri*

We entered into an offer letter agreement with Dr. Taheri, dated November 23, 2021, as amended on November 16, 2022, to serve in the position of Chief Executive Officer. This offer letter provides for an annual base salary of \$400,000 and eligibility to receive an annual cash bonus in an amount ranging from \$62,000 to \$800,000, based upon the achievement of certain company net profit objectives, which were revised in November 2022.

Dr. Taheri's offer letter provides that he will be granted a number of RSUs ranging from 87,000 to 200,000 RSUs annually, based on the total amount of our annual bookings. These annual RSU awards will each be subject to vesting over four years (25% per year), with additional details to be set forth in the applicable award agreements. In addition, the offer letter provides that if we undergo an initial public offering, including this offering, Dr. Taheri will be granted 700,000 to 900,000 additional RSUs depending on the date of the initial public offering. The terms of Dr. Taheri's equity awards are described in more detail under "—Outstanding Equity Awards at 2021 Year End."

Dr. Taheri's offer letter provides that if we terminate his employment without "cause" or he resigns from employment with "good reason" (as such terms are defined in his offer letter), Dr. Taheri will be entitled to (i) a cash payment equal to 15 months of his annual base salary and annual bonus at target level at the rate in effect immediately prior to his separation date, (ii) full payment of COBRA premiums for Dr. Taheri and his eligible dependents for 12 months, and (iii) full acceleration of the Time-Based Requirement applicable to each outstanding and unvested equity award that would have vested during the 12-month period following his separation date, and the lapse of any forfeiture restrictions or rights on repurchase thereon. In addition, if he is terminated by us under these circumstances within three months prior to or 12 months following a change in control, then each of Dr. Taheri's outstanding and unvested equity awards will automatically become fully vested and, if applicable, exercisable, and any forfeiture restrictions or rights on repurchase will lapse.

The offer letter also notes that Dr. Taheri entered into a separation and release agreement with us on September 1, 2021, in connection with his resignation in August 2021, but that such agreement is null and void as of November 24, 2021 as a result of his renewed service as our Chief Executive Officer. In connection with the termination of this separation agreement, any unvested RSUs granted to Dr. Taheri prior to August 2021 are treated as granted as of their original grant date and resumed vesting in accordance with their original vesting schedules, and Dr. Taheri's service between the effective date of the separation agreement and November 24, 2021 is credited as vesting service under such RSUs.

#### *Separation and Release Agreement with Dr. Babak A. Taheri*

We entered into a confidential separation and release agreement with Dr. Taheri on September 1, 2021 that provided Dr. Taheri with certain severance benefits in connection with his resignation from his position as a director, Chief Technology Officer and Chief Executive Officer of the company. In consideration of Dr. Taheri's execution of a release in the company's favor and agreement to be bound by the conditions of the separation agreement, we agreed (a) to pay Dr. Taheri \$360,000, or the Severance Amount, half of which was payable in September 2021 and the remainder of which was payable on or about February 28, 2022 and (b) to pay the entire monthly COBRA premiums for Dr. Taheri and his dependents for the months of September 2021 through February 2022. In addition, the agreement states that Dr. Taheri had service vested in 157,500 RSUs as of his termination date, but that none of these RSUs will fully vest until the occurrence of a liquidity event (as defined in the award agreements underlying such RSUs). Furthermore, the agreement provides that Dr. Taheri will forfeit, as of his separation date, all then-unvested RSUs, and that he will also forfeit all 157,500 service vested RSUs if we do not experience a liquidity event before their applicable expiration dates.

As noted above, this agreement was rendered null and void as of November 24, 2021 in connection with Dr. Taheri's renewed service as our Chief Executive Officer. Dr. Taheri received and will retain the initial \$180,000 of the Severance Amount and did not receive COBRA premiums through February 2022, as he was reinstated as our Chief Executive Officer within three months of his departure date and his November 2021 offer letter rendered the separation agreement null and void.

#### *Agreement with Gregory F. Swyt*

We entered into an offer letter agreement with Mr. Swyt, dated May 21, 2021, to serve in the position of Chief Financial Officer. This offer letter provides for an annual base salary of \$310,000 and eligibility to receive an annual bonus with an estimated value equal to 45% of his annual salary based upon the achievement of individual and corporate goals. In addition, the offer letter provides for a sign-on bonus equal to \$40,000, payable in two tranches: \$20,000 paid 90 days after his hire date and \$20,000 paid six months after his hire date.

Mr. Swyt's offer letter also provided for an initial grant of 60,000 RSUs, subject to our board's approval, which vested as to 25% per year over a four-year period, subject to Mr. Swyt's continuous service with us through each such vesting date. Mr. Swyt was not entitled to any cash severance entitlement under his offer letter.

Mr. Swyt terminated employment with us on January 5, 2022. Mr. Swyt did not receive any severance in connection with his departure from the company.

#### *Agreement with Dr. Eric Guichard*

We entered into an offer letter agreement with Dr. Guichard, dated May 1, 2017, to serve in the position of Vice President of Applications, TCAD Division. This offer letter provides for an annual base salary of \$210,080 and eligibility to participate in our annual bonus plan, with his bonus awarded based on the achievement of corporate and individual goals. Dr. Guichard's offer letter does not include a description of an equity grant and Dr. Guichard is not entitled to any severance benefits under his offer letter.

#### *Agreement with Robert McMullan*

We entered into an offer letter agreement with Mr. McMullan, dated January 27, 2022, as amended on November 16, 2022, to serve in the position of Chief Financial Officer. This offer letter provides for an annual base salary of \$250,000 and eligibility to receive an annual bonus with an estimated value equal to 50% of his annual salary based upon the achievement of individual and corporate goals, which were amended in November 2022. In addition, the offer letter provides for a sign-on bonus of 5,000 RSUs which vested six months after his hire date and an additional 5,000 RSUs which vest nine months after his hire date. Mr. McMullan's offer letter also provides for an initial grant of 90,000 RSUs, subject to our board's approval, which vest over four years, vesting as to 25% after one year with the remaining 75% vesting quarterly over the following three years, subject to Mr. McMullan's continuous service with us through each such vesting date, and subject to acceleration in connection with the Executive Change in Control Plan (as defined below).

Mr. McMullan's offer letter provides that if we terminate his employment without "cause" (as such term is defined in his offer letter), Mr. McMullan will be entitled to (i) a cash payment equal to 12 months of his annual base salary and pro-rated annual bonus at target level at the rate in effect immediately prior to his separation date and (ii) COBRA coverage as required under applicable laws.

#### *Executive Change in Control Plan*

We believe that reasonable severance benefits for our executive officers are important because it may be difficult for them to find comparable employment within a short period of time. We also believe that it is important to protect our executive officers in the event of a change of control transaction as a result of which such officers might have their employment terminated. In addition, we believe that the interests of management should be aligned with those of our stockholders as much as possible, and we believe that providing protection upon a change of control is an appropriate counter to any disincentive such officers might otherwise perceive in regard to transactions that may be in the best interest of our stockholders.

Accordingly, in April 2022, our board of directors approved an executive change in control plan, or the Executive Change in Control Plan, which became effective on April 22, 2022, for our executive officers, including Dr. Taheri, Dr. Guichard and Mr. McMullan. The Executive Change in Control Plan will provide for vesting acceleration benefits in the event of a qualifying initial public offering including this offering and severance benefits upon a qualifying termination of employment in connection with a change of control, as described below. To the extent an executive participates in any other Company plan or has entered into another agreement with us that also provides for one or more of the severance benefits provided for in the Executive Change in Control Plan, then the executive will be entitled to receive either (i) the payments or benefits under such other plan or agreement, or (ii) the payments or benefits provided in the Executive Change in Control Plan, whichever results in receipt by the executive on an after-tax basis of the greater payment or benefit, and provided that the executive will not receive any duplication of payments or benefits. The initial term of the Executive Change in Control Plan ends on April 22, 2027, after which time the Executive Change in Control Plan will automatically renew for successive additional terms of five years on the same terms and conditions, unless it is either terminated or amended.

#### *IPO Benefits*

Upon the closing of an initial public offering, including this offering, each specified executive officer will be entitled to accelerated time-based vesting of the unvested portion of the executive officer's restricted stock unit awards outstanding as of the closing of the offering, in accordance with the percentages set forth in the following table:

EXECUTIVE	IPO VESTING ACCELERATION PERCENTAGE
CEO, CFO and CTO	50%
All other executives	25%

The unvested portion of all restricted stock unit awards that are not subject to acceleration of Time-Based Requirement will remain outstanding and subject to continued time-based vesting.

**Change in Control Benefits**

Under the Executive Change in Control Plan, if any executive officer is either employed at the time of a “change in control” or the executive officer’s employment is terminated by the executive officer with “good reason” or by us without “cause” (as such terms are defined in the Executive Change in Control Plan) within three months prior to, on or within 12 months following a change in control, then the executive officer will be entitled to accelerated time-based vesting of the unvested portion of

the executive officer’s outstanding restricted stock unit awards in accordance with the percentages set forth in the following table, provided that, in each case, the named executive officer delivers a signed release of claims in our favor that becomes effective and irrevocable within 60 days following such executive officer’s termination of employment:

EXECUTIVE	SEVERANCE VESTING ACCELERATION PERCENTAGE
CEO, CFO and CTO	100%
All other executives	50%

If an executive officer’s employment is terminated in any circumstance other than those addressed above, then such executive officer will not be entitled to any benefits under the Executive Change in Control Plan.

**Health, Welfare and Retirement Benefits**

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, and vision insurance plans and 401(k) plan (as described below), in each case on the same basis as all of our other employees. We currently do not contribute to a retirement plan on behalf of employees other than our 401(k) plan.

**Nonqualified Deferred Compensation**

None of our named executive officers participates in or has account balances in nonqualified defined contribution plans or other nonqualified deferred compensation plans maintained by us. Our board of directors may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

**401(k) Plan**

We sponsor a qualified retirement plan that is intended to qualify for favorable tax treatment under Section 401(a) of the Internal Revenue Code of 1986, as amended, or the Code, and contains a cash or deferred feature that is intended to meet the requirements of Section 401(k) of the Code. Participants may make pre-tax and certain after-tax (Roth) salary deferral contributions to the plan from their eligible earnings up to the statutorily prescribed annual limit under the Code. Participants who are 50 years of age or older may contribute additional amounts based on the statutory limits for catch-up contributions. Participant contributions are held in trust as required by law. No minimum benefit is provided under the plan. An employee’s interest in his or her salary deferral contributions is 100% vested when contributed. We have the ability to make discretionary matching contributions under the plan.

**2014 Stock Incentive Plan**

The 2014 Plan was initially adopted by our board of directors on January 23, 2014 and approved by our stockholders on January 24, 2014. The purpose of the 2014 Plan is to offer selected persons an opportunity to acquire a proprietary interest in our success by acquiring shares of our common stock.

The 2014 Plan permits the direct award or sale of shares and for the grant of nonstatutory stock options, restricted stock, stock appreciation rights, or SARs, RSUs and other stock awards to our employees, directors and consultants and any of our parents’ or subsidiaries’ employees and consultants. Incentive stock options, within the meaning of Section 422 of the Code, may also be granted but only to our employees and our parents’ or subsidiaries’ employees. We have only granted liquidity contingent RSUs under the 2014 Plan.

*Share reserve.* As of the date of this prospectus, 8,000,000 shares of common stock have been authorized for issuance under the 2014 Plan. As of December 31, 2021 and September 30, 2022, a total of 4,286,919 shares and 5,198,260 shares of common stock were subject to outstanding RSUs under the 2014 Plan. Shares subject to awards that are cancelled, forfeited, settled in cash or expire by their terms, and shares subject to awards that are used to pay withholding obligations or the exercise price of an option will become available for future awards under the 2014 Plan. Shares of common stock that have previously been issued under the 2014 Plan that are reacquired by us pursuant to a forfeiture provision will again become available for future issuance under the 2014 Plan.

*Administration.* Our board of directors or a committee appointed thereby administers the 2014 Plan. All actions of the board will be final and binding on all persons.

*Stock options.* The board may grant incentive and/or nonstatutory stock options under the 2014 Plan; provided that incentive stock options are only granted to employees. The exercise price of options granted under the plan must be equal to or greater than 100% of the fair market value of our common stock on the date of grant. The term of an option may not exceed 10 years; provided, however, that an incentive stock option held by an optionee who owns more than 10% of the total combined voting power of all classes of our stock, any parent or any of our subsidiary corporations, may not have a term in excess of five years and must have an exercise price of at least 110% of the fair market value of our common stock on the grant date. The exercise price for an option may be paid in cash or check. In addition, the board may permit other forms of payment such as surrender of shares, services rendered, promissory note, cashless exercise, or pledge of shares. Subject to the provisions of the 2014 Plan, the board determines the remaining terms of the options (e.g., exercisability and vesting). The board may permit an optionee to exercise his or her option as to shares that have not vested. The optionee may exercise his or her option, to the extent vested, following termination of the optionee's service for the period specified in the award agreement, such period to be at least 30 days if termination is due to any reason other than cause, death or disability (or six months in the case of termination due to death or disability). However, in no event may an option be exercised later than the expiration of its term.

*Restricted shares.* Restricted shares may be offered under the 2014 Plan. The board will advise the offeree in writing of the terms, conditions and restrictions related to the offer, including the number of shares that such person will be entitled to purchase, the price to be paid (if any), and the time within which such person must accept such offer.

*Restricted Stock Unit Awards.* Under the 2014 Plan, RSUs give recipients the right to acquire a specified number of shares of stock (or cash amount) at a future date upon the satisfaction of certain conditions, including any performance conditions or other vesting arrangements, established by the board of directors and as set forth in a RSU award agreement. An RSU award may be settled by cash, delivery of stock, or a combination of cash and stock as deemed appropriate by the board of directors. Recipients of RSUs generally will have no voting or dividend rights prior to the time the vesting conditions are satisfied and the award is settled. At the board of directors' discretion and as set forth in the RSU award agreement, RSUs may provide for the right to dividend equivalents.

We granted RSUs to certain employees that will vest on the first date upon which both the "time-based requirement" and the "liquidity event requirement" (as such terms are defined in the applicable award agreement) are satisfied with respect to that particular RSU; provided, that such vesting conditions are satisfied within 10 years of the grant date. The liquidity event requirement will be satisfied as to any then-outstanding RSUs on the first to occur of: (1) a "change in control" (as defined in the award agreement) pursuant to which the RSUs (or the shares subject to the RSUs) will be settled for cash and/or readily tradeable securities or (2) an underwritten initial public offering, including the consummation of this offering.

The time-based requirement may be satisfied in one of three ways, depending on the form of award agreement under which the RSUs have been issued. Under our standard form of award agreement, the time-based requirement will be satisfied in installments as follows: 25% of the RSUs will have the time-based requirement satisfied on the one-year anniversary of the vesting start date and 1/16th of the RSUs will have the time-based requirement satisfied in equal quarterly installments during the next 12 quarters thereafter, subject to the participant's continuous service through each such vesting date. Certain RSUs have been granted to executives on a second form of award agreement with the same time-based requirement described in the preceding sentence, provided that time-based vesting is subject to acceleration in accordance with the terms of the Executive Change in Control Plan as described above under the heading "—Executive Change in Control Plan." Certain other RSUs have been granted on a third form of award agreement, pursuant to which the RSUs are deemed to have satisfied the time-based requirement as of the grant date.

Upon termination of employment, RSUs terminate to the extent the time-based requirement has not been satisfied. Even if the time-based requirement has been satisfied, if the liquidity event requirement is not satisfied before the expiration date of the RSUs, the RSUs will automatically terminate on such date.

*Unrestricted Stock Awards and SARs.* We may also grant SARs and other forms of award that are based in whole or in part on shares or the value thereof. SARs generally provide for payments to the recipient based upon increases in the price of our common stock over the exercise price of the SAR. Our board determines the exercise prices of SARs, which cannot be less than 100% of the fair market value of our common stock on the date of grant. A SAR granted under the 2014 Plan vests at the rate specified in the SAR agreement as determined by the board and may have a maximum term of 10 years. Upon the exercise of a SAR, we will pay the participant an amount in stock, cash, or a combination of stock and cash as determined by the board, equal to the product of (1) the excess of the per share fair

market value of our common stock on the date of exercise over the exercise price, multiplied by (2) the number of shares of common stock with respect to which the SAR is exercised. We have not granted any SARs or other forms of share-based awards under the 2014 Plan.

*Transferability/forfeiture.* Unless determined otherwise by the board, the 2014 Plan generally does not allow for awards to be transferred in any manner other than by will or the laws of descent and distribution. Notwithstanding the foregoing, to the extent permitted by the board, a nonqualified option may be transferred to a revocable trust or as permitted by California securities law and Rule 701 of the Securities Act. Shares awarded or sold under the 2014 Plan or received upon the exercise of options may be subject to certain forfeiture conditions, rights to repurchase, rights of first refusal, market stand-off or other transfer restrictions as the board may determine and as set forth in the applicable award agreement.

*Adjustments.* In the event that any dividend or other distribution (whether in the form of cash, shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of our shares or other securities, or other change in our corporate structure affecting the shares occurs, the board will adjust the number of shares that may be delivered under the 2014 Plan and/or the number and price of shares covered by each outstanding award.

*Corporate transaction.* If we are a party to a merger or consolidation, or in the event of a sale of all or substantially all of our stock or assets, outstanding awards under the 2014 Plan will be subject to the agreement governing the transaction. The terms of such agreement may provide that (a) outstanding awards continue if we are the surviving entity, (b) the 2014 Plan and outstanding awards are assumed by the surviving entity, (c) awards are substituted for awards of the surviving entity or its parent, (d) acceleration of vesting followed by cancellation of the awards, or (e) settlement of the intrinsic value of awards followed by cancellation of the awards, in each case without the award holder's consent.

*Plan amendments and termination.* Our board may at any time amend, alter, suspend or terminate the 2014 Plan. However, the board will obtain stockholder approval of any 2014 Plan amendment to the extent necessary and desirable to comply with applicable law. A termination or amendment of the 2014 Plan will not impair the rights of any participant under the 2014 Plan, unless mutually agreed to otherwise by such participant and us.

Upon the completion of this offering, the 2014 Plan will be terminated and no shares of our common stock will remain available for future issuance under the 2014 Plan. Shares originally reserved for issuance under the 2014 Plan but which are not issued or subject to outstanding awards on the effective date of the 2023 Plan, and shares subject to outstanding awards under the 2014 Plan on the effective date of the 2023 Plan that are subsequently forfeited or terminated for any reason before being exercised or settled, including shares subject to vesting restrictions that are subsequently forfeited, will become available for awards under the 2023 Plan.

### **2023 Stock Incentive Plan**

On \_\_\_\_\_, 2022, our board of directors approved and adopted, subject to stockholder approval, the 2023 Plan, and our stockholders approved the 2023 Plan on \_\_\_\_\_, 2023. The 2023 Plan will become effective upon the effectiveness of the registration statement of which this prospectus forms a part. This summary is not a complete description of all provisions of the 2023 Plan and is qualified in its entirety by reference to the 2023 Plan, which will be filed as an exhibit to the registration statement of which this prospectus is a part.

*Stock Awards.* The 2023 Plan provides for incentive stock options, or ISOs, non-qualified stock options, or NSOs, restricted share awards, stock unit awards, SARs, other stock-based awards, performance-based stock awards, (collectively, "stock awards") and cash-based awards (stock awards and cash-based awards are collectively referred to as "awards"). ISOs may be granted only to our employees, including officers, and the employees of our parent or subsidiaries. All other awards may be granted to our employees, officers, our non-employee directors, and consultants and the employees and consultants of our subsidiaries, and affiliates.

*Share Reserve.* The aggregate number shares that may be issued pursuant to stock awards under the 2023 Plan will not exceed the sum of (w) \_\_\_\_\_ shares, plus (x) any shares underlying outstanding awards under the 2014 Plan that are subsequently forfeited or terminated for any reason before being exercised or becoming vested, not issued because an award is settled in cash, or withheld or reacquired to satisfy the applicable exercise, or purchase price, or a tax withholding obligation, plus (y) the number of reserved shares not issued or subject to outstanding grants under the 2014 Plan, on the effective date of the 2023 Plan, plus (z) an annual increase on the first day of each calendar year, for a period of not more than 10 years, beginning on January 1, 2024 and ending on (and including) January 1, 2033, in an amount equal to the lesser of (i) \_\_\_\_\_ of our outstanding shares on the last day of the immediately preceding calendar year or (ii) such lesser amount (including zero) that the Compensation Committee determines for purposes of the annual increase for that calendar year.



If restricted shares or shares issued upon the exercise of options are forfeited, then such shares will again become available for awards under the 2023 Plan. If stock units, options, or SARs are forfeited or terminate for any reason before being exercised or settled, or an award is settled in cash without the delivery of shares to the holder, then the corresponding shares will again become available for awards under the 2023 Plan.

Any shares withheld to satisfy the exercise price or tax withholding obligation pursuant to any award of options or SARs will again become available for awards under the 2023 Plan. If stock units or SARs are settled, then only the number of shares (if any) actually issued in settlement of such stock units or SARs will reduce the number of shares available under the 2023 Plan, and the balance (including any shares withheld to cover taxes) will again become available for awards under the 2023 Plan.

Shares issued under the 2023 Plan will be authorized but unissued shares, treasury shares, or previously issued shares. As of the date hereof, no awards have been granted and no shares have been issued under the 2023 Plan.

*Incentive Stock Option Limit.* The maximum number of shares that may be issued upon the exercise of ISOs under the 2023 Plan is equal to five times the number of shares specified in subpart (w) of the 2023 Plan's share reserve formula as described above under the heading "—Share Reserve", plus, to the extent allowable under Section 422 of the Code, any shares that become available for issuance under the 2023 Plan on account of (i) an award being forfeited before all underlying shares have been issued or settled, or (ii) a portion of the shares underlying an award being withheld to satisfy the exercise price or tax withholding of such award.

*Grants to Outside Directors.* The sum of (i) the grant date fair value for financial reporting purposes of any awards granted during any calendar year under the 2023 Plan to an outside director as compensation for services as an outside director and (ii) any cash fees paid by us to such outside director during such calendar year for service on our board of directors, may not exceed \$ \_\_\_\_\_, or, in the calendar year in which the outside director is first appointed or elect to our board, \$ \_\_\_\_\_.

*Administration.* The 2023 Plan will be administered by the Compensation Committee as appointed by our board of directors, or by the board of directors acting as the Compensation Committee. Subject to the limitations set forth in the 2023 Plan, the Compensation Committee will have the authority to determine, among other things, to whom awards will be granted, the number of shares subject to awards, the term during which an option or SAR may be exercised and the rate at which the awards may vest or be earned, including any performance criteria to which they may be subject. The Compensation Committee also will have the authority to determine the consideration and methodology of payment for awards. To the extent permitted by applicable law, the board of directors or Compensation Committee may also authorize one or more of our officers to designate employees, other than officers under Section 16 of the Exchange Act, to receive awards and/or to determine the number of such awards to be received by such persons subject to a maximum total number of awards.

*Repricing; Cancellation and Re-Grant of Stock Awards.* The Compensation Committee will have the authority to modify outstanding awards under the 2023 Plan. Subject to the terms of the 2023 Plan, the Compensation Committee will have the authority to cancel any outstanding stock award in exchange for new stock awards, including awards having the same or a different exercise price cash, or other consideration, without stockholder approval but with the consent of any adversely affected participant.

*Stock Options.* A stock option is the right to purchase a certain number of shares, at a certain exercise price, in the future. Under the 2023 Plan, ISOs and NSOs are granted pursuant to stock option agreements adopted by the Compensation Committee. The Compensation Committee determines the exercise price for a stock option, within the terms and conditions of the 2023 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our shares on the date of grant. Options granted under the 2023 Plan vest at the rate specified by the Compensation Committee.

Stock options granted under the 2023 Plan generally must be exercised by the optionee before the earlier of the expiration of such option or the expiration of a specified period following the optionee's termination of employment. The Compensation Committee determines the term of the stock options up to a maximum of 10 years. Each stock option agreement will also set forth the extent to which the option recipient will have the right to exercise the option following the termination of the recipient's service with us, and the right to exercise the option of any executors or administrators of the award recipient's estate or any person who has acquired such options directly from the award recipient by bequest or inheritance.

Payment of the exercise price may be made in cash or, if provided for in the stock option agreement evidencing the award, (1) by surrendering, or attesting to the ownership of, shares which have already been owned by the optionee, (2) future services or services rendered to the company or its affiliates prior to the award, (3) by delivery of an irrevocable direction to a securities broker to sell shares and to deliver all or part of the sale proceeds to us in

payment of the aggregate exercise price, (4) by delivery of an irrevocable direction to a securities broker or lender to pledge shares and to deliver all or part of the loan proceeds to us in payment of the aggregate exercise price, (5) by a “net exercise” arrangement, (6) by delivering a full-recourse promissory note, or (7) by any other form that is consistent with applicable laws, regulations, and rules.

*Tax Limitations on Incentive Stock Options.* The aggregate fair market value, determined at the time of grant, of our shares with respect to ISOs that are exercisable for the first time by an option holder during any calendar year under all of our stock plans may not exceed \$100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the term of the ISO does not exceed five years from the date of grant.

*Restricted Share Awards.* The terms of any awards of restricted shares under the 2023 Plan will be set forth in a restricted share agreement to be entered into between us and the recipient. The Compensation Committee will determine the terms and conditions of such restricted share agreements, which need not be identical. A restricted share award may be subject to vesting requirements or transfer restrictions or both. Restricted shares may be issued for such consideration as the Compensation Committee may determine, including cash, cash equivalents, full recourse promissory notes, past services and future services. Award recipients who are granted restricted shares generally have all of the rights of a stockholder with respect to those shares, provided that dividends and other distributions will not be paid in respect of unvested shares unless otherwise determined by the Compensation Committee and, in such case, only once such unvested shares vest.

*Stock Unit Awards.* Stock unit awards give recipients the right to acquire a specified number of shares (or cash amount) at a future date upon the satisfaction of certain conditions, including any vesting arrangement, established by the Compensation Committee and as set forth in a stock unit award agreement. A stock unit award may be settled by cash, delivery of shares, a combination of cash and stock as deemed appropriate by the Compensation Committee. Recipients of stock unit awards generally will have no voting or dividend rights prior to the time the vesting conditions are satisfied and the award is settled. At the Compensation Committee’s discretion and as set forth in the stock unit award agreement, stock units may provide for the right to dividend equivalents. Dividend equivalents may not be distributed prior to settlement of the stock unit to which the dividend equivalents pertain and the value of any dividend equivalents payable or distributable with respect to any unvested stock units that do not vest will be forfeited.

*Stock Appreciation Rights.* SARs generally provide for payments to the recipient based upon increases in the price of shares over the exercise price of the SAR. The Compensation Committee determines the exercise price for a SAR, which generally cannot be less than 100% of the fair market value of shares on the date of grant. A SAR granted under the 2023 Plan vests at the rate specified in the SAR agreement as determined by the Compensation Committee. The Compensation Committee determines the term of SARs granted under the 2023 Plan. Upon the exercise of a SAR, we will pay the participant an amount in stock, cash, or a combination of shares and cash as determined by the Compensation Committee, equal to the product of (1) the excess of the per share fair market value of shares on the date of exercise over the exercise price, multiplied by (2) the number of shares with respect to which the SAR is exercised.

*Other Stock Awards.* The Compensation Committee may grant other awards based in whole or in part by reference to our shares. The Compensation Committee will set the number of shares under the stock award and all other terms and conditions of such awards.

*Cash-Based Awards.* A cash-based award is denominated in cash. The Compensation Committee may grant cash-based awards in such number and upon such terms as it will determine. Payment, if any, will be made in accordance with the terms of the award, and may be made in cash or in shares, as determined by the Compensation Committee.

*Performance-Based Awards.* The number of shares or other benefits granted, issued, retainable and/or vested under a stock or stock unit award may be made subject to the attainment of performance goals. The Compensation Committee may utilize any performance criteria selected by it in its sole discretion to establish performance goals.

*Changes to Capital Structure.* In the event of a recapitalization, stock split, or similar capital transaction, the Compensation Committee will make appropriate and equitable adjustments to the number of shares reserved for issuance under the 2023 Plan, the number of shares that can be issued as incentive stock options, the number of shares subject to outstanding awards and the exercise price under each outstanding option or SAR.

*Transactions.* If we are involved in a merger or other reorganization, outstanding awards will be subject to the agreement of merger or reorganization. Subject to compliance with applicable tax laws, such agreement may provide, without limitation, for (1) the continuation of the outstanding awards by us, if we are a surviving corporation, (2) the

assumption or substitution of the outstanding awards by the surviving corporation or its parent or subsidiary, (3) the immediate vesting, exercisability, and settlement of the outstanding awards followed by their cancellation, (4) cancellation of the award, to the extent not vested or not exercised prior to the effective time of the merger or reorganization, in exchange for such cash or equity consideration (including no consideration) as the Compensation Committee, in its sole discretion, may consider appropriate, or (5) the settlement of the intrinsic value of the outstanding awards (whether or not vested or exercisable) in cash, cash equivalents, or equity (including cash or equity subject to deferred vesting and delivery consistent with the vesting restrictions applicable to such award or the underlying shares) followed by cancellation of such awards, provided that any such amount may be delayed to the same extent that payment of consideration to the holders of shares in connection with the merger or reorganization is delayed as a result of escrows, earnouts, holdbacks or other contingencies.

*Change of Control.* The Compensation Committee may provide, in an individual award agreement or in any other written agreement between a participant and us, that the stock award will be subject to acceleration of vesting and exercisability in the event of a change of control.

*Transferability.* Unless the Compensation Committee provides otherwise, no award granted under the 2023 Plan may be transferred in any manner (prior to the vesting and lapse of any and all restrictions applicable to shares issued under such award), except by will, the laws of descent and distribution, or pursuant to a domestic relations order, provided that all ISOs may only be transferred or assigned only to the extent consistent with Section 422 of the Code.

*Amendment and Termination.* Our board of directors will have the authority to amend, suspend, or terminate the 2023 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent.

No ISOs may be granted more than 10 years after years after the later of (i) the approval of the Plan by the board (or if earlier, the stockholders) and (ii) the approval by the board (or if earlier, the stockholders) of any amendment to the Plan that constitutes the adoption of a new plan for purposes of Section 422 of the Code.

*Recoupment.* To the extent permitted by applicable law, the Compensation Committee will have the authority to require that, in the event that we are required to prepare restated financial results owing to an executive officer's intentional misconduct or grossly negligent conduct, such executive officer will reimburse or forfeit to us the amount of any bonus or incentive compensation (whether cash-based or equity-based) such executive officer received during a fixed period, as determined by the Compensation Committee, preceding the year the restatement is determined to be required. That executive officer will forfeit or reimburse to us any bonus or incentive compensation to the extent that such bonus or incentive compensation exceeds what the officer would have received in that period based on an applicable restated performance measure or target. We will recoup incentive-based compensation from executive officers to the extent required under the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules, regulations and listing standards that may be issued under that act.

### **2023 Employee Stock Purchase Plan**

On \_\_\_\_\_, 2023, our board of directors approved and adopted, subject to stockholder approval, the ESPP, and our stockholders approved the ESPP on \_\_\_\_\_, 2023. The ESPP will become effective upon the effectiveness of the registration statement of which this prospectus forms a part. This summary is not a complete description of all provisions of the ESPP and is qualified in its entirety by reference to the ESPP, which will be filed as an exhibit to the registration statement of which this prospectus is a part.

*General.* The ESPP is intended to qualify as an "employee stock purchase plan" under Code Section 423, except as explained below under heading "—International Participation." During regularly scheduled "offerings" under the ESPP, participants will be able to request payroll deductions and then expend the accumulated deduction to purchase a number of our shares at a discount and in an amount determined in accordance with the ESPP's terms.

*Shares Available for Issuance.* The ESPP will have \_\_\_\_\_ authorized but unissued shares reserved for issuance upon becoming effective, plus an additional number of shares to be reserved annually on the first day of each calendar year for a period of not more than 10 years, beginning on January 1, 2024, in an amount equal to the least of (i) \_\_\_\_\_ % of our outstanding shares on such date (ii) \_\_\_\_\_ shares, or (iii) a lesser amount (including zero) that the Compensation Committee determines for purposes of the annual increase for that calendar year.

*Administration.* The ESPP will be administered by the Compensation Committee, or by our board of directors acting as the Compensation Committee. The Compensation Committee has the authority to construe, interpret and apply the terms of the ESPP to determine eligibility, to establish such limitations and procedures as it determines are consistent with the ESPP and to adjudicate any disputed claims under the ESPP.

**Eligibility.** Each full-time and part-time employee, including officers, employee directors, and employees of participating subsidiaries, who is employed on the day preceding the start of any offering period will be eligible to participate in the ESPP. The ESPP will permit an eligible employee to purchase shares through payroll deductions, which may not be less than 1% nor more than 15% of the employee's compensation, or such lower

limit as may be determined by the Compensation Committee from time to time. However, no employee is eligible to participate in the ESPP if, immediately after electing to participate, the employee would own shares (including shares such employee may purchase under this plan or other outstanding options) representing 5% or more of the total combined voting power or value of all classes of shares. No employee will be able to purchase more than ( ) shares or such number of shares as may be determined by the Compensation Committee with respect to a single offering period, or purchase period, if applicable.

In addition, under applicable tax rules, no employee is permitted to accrue, under the ESPP and all of our or our subsidiaries' similar purchase plans, a right to purchase shares having a fair market value in excess of \$25,000 (determined at the time the right is granted) for each calendar year. Employees will be able to withdraw their accumulated payroll deductions prior to the end of the offering period in accordance with the terms of the offering. Participation in the ESPP will end automatically on termination of employment.

**Offering Periods and Purchase Price.** The ESPP will be implemented through a series of offerings of purchase rights to eligible employees. Under the ESPP, the Compensation Committee may specify offerings with a duration of not more than 27 months and may specify shorter purchase periods within each offering. During each purchase period, payroll deductions will accumulate, without interest. On the last day of the purchase period, accumulated payroll deductions will be used to purchase shares for employees participating in the offering.

The purchase price will be specified pursuant to the offering, but cannot, under the terms of the ESPP, be less than 85% of the fair market value per share on either the offering date or on the purchase date, whichever is less. The fair market value of shares for this purpose will generally be the closing price on the Nasdaq Market (or such other exchange as the shares may be traded at the relevant time) for the date in question, or if such date is not a trading day, for the last trading day before the date in question.

**Reset Feature.** The Compensation Committee may specify that, if the fair market value of a share on any purchase date within a particular offering period is less than or equal to the fair market value on the start date of that offering period, then the offering period will automatically terminate and the employee in that offering period will automatically be transferred and enrolled in a new offering period which will begin on the next day following such purchase date.

**Changes to Capital Structure.** In the event that there is a specified type of change in our capital structure, such as a stock split, appropriate adjustments will be made to (1) the number of shares reserved under the ESPP, (2) the individual and aggregate participant share limitations described in the plan and (3) the price of shares that any participant has elected to purchase.

**International Participation.** To provide greater flexibility in structuring our equity compensation programs for our non-U.S. employees, the ESPP also permits us to grant employees of non-U.S. subsidiary entities rights to purchase shares pursuant to other offering rules or sub-plans adopted by the Compensation Committee in order to achieve tax, securities law or other compliance objectives. While the ESPP is intended to be a qualified "employee stock purchase plan" within the meaning of Code Section 423, any such international sub-plans or offerings are not required to satisfy those U.S. tax code requirements and therefore may have terms that differ from the ESPP terms applicable in the United States. However, the international sub-plans or offerings are subject to the ESPP terms limiting the overall shares available for issuance, the maximum payroll deduction rate, maximum purchase price discount and maximum offering period length.

**Corporate Reorganization.** Immediately before a corporate reorganization, the offering period and purchase period then in progress will terminate and either shares will be purchased with the accumulated payroll deductions or the accumulated payroll deductions will be refunded without occurrence of any shares purchase, unless the surviving corporation (or its parent corporation) assumes the ESPP under the plan of merger or consolidation.

**Amendment and Termination.** Our board of directors and the Compensation Committee will each have the right to amend, suspend or terminate the ESPP at any time. Any increase in the aggregate number of shares to be issued under the ESPP is subject to stockholder approval. Any other amendment is subject to stockholder approval only to the extent required under applicable law or regulation, including Section 423 of the Code.

#### **Rule 10b5-1 Sales Plans**

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell our common shares on a periodic basis. Under a Rule 10b5-1 plan, a broker executes

trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to the expiration of the period ending 180 days after the date of this prospectus, or the Restricted Period, subject to early termination, the sale of any shares under such plan would be prohibited by the lock-up agreement that the director or officer has entered into with the underwriters.

### Outstanding Equity Awards at Fiscal Year-End

The following table presents information regarding outstanding equity awards for each of our named executive officers for the year ended December 31, 2021.

Name	Grant Date	Stock Awards		
		Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested (\$)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (\$)
Dr. Babak A. Taheri	10/1/2018 <sup>(1)</sup>	100,000	406,000	
	8/1/2019 <sup>(2)</sup>	20,000	81,200	
	8/12/2020 <sup>(1)</sup>	50,000	203,000	
	8/18/2020 <sup>(2)</sup>	20,000	81,200	
	5/24/2021 <sup>(1)</sup>	80,000	324,800	
	1/8/2021 <sup>(2)</sup>	15,000	60,900	
	2/3/2021 <sup>(2)</sup>	15,000	60,900	
Gregory F. Swyt	6/14/2021 <sup>(1)</sup>	60,000	243,600	
	11/24/2021 <sup>(2)</sup>	5,000	20,300	
Dr. Eric Guichard	11/11/2014 <sup>(1)</sup>	60,360	245,062	
	9/1/2015 <sup>(1)</sup>	7,000	28,420	
	10/17/2016 <sup>(1)</sup>	10,000	40,600	
	8/12/2020 <sup>(1)</sup>	10,000	40,600	
	5/24/2021 <sup>(1)</sup>	15,000	60,900	
	11/24/2021 <sup>(2)</sup>	5,000	20,300	

(1) Award vests on the first date upon which both the Time-Based Requirement and the Liquidity Event Requirement are satisfied with respect to the award. The liquidity event requirement will be satisfied as to any then-outstanding RSUs on the first to occur of: (1) an RSU change in control (as defined in the award agreement) or (2) an IPO (as defined in the award agreement), in each case, within 10 years of the grant date (the "Liquidity Event Requirement"). For the avoidance of doubt, failure to satisfy the Liquidity Event Requirement within 10 years of the grant date results in the cancellation of the RSUs. The Time-Based Requirement will be satisfied in installments as follows: 25% of the RSUs will have the Time-Based Requirement satisfied on the one-year anniversary of the vesting commencement date (as defined in the RSU award agreement), with the remaining 75% of the RSUs vesting with respect to the Time-Based Requirement in equal quarterly installments during the next 12 quarters thereafter, subject to the recipient's continuous service through each such date. If applicable, vesting accelerates as provided in, and subject to the terms and conditions of, the Executive Change in Control Plan.

(2) Award vests on the first date upon which both the Time-Based Requirement and the Liquidity Event Requirement are satisfied with respect to the award. For the avoidance of doubt, failure to satisfy the Liquidity Event Requirement within 10 years of the grant date results in the cancellation of the RSUs. The Time-Based Requirement is deemed to have been satisfied on the grant date.

## CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2019 to which we have been a party, in which the amount involved in the transaction exceeded the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change of control, and other arrangements, which are described under "Executive Compensation."

### Related Party Loans and Line of Credit

On May 1, 2019, we received a \$0.5 million loan from Kipee, a real estate entity owned by Ms. Ngai-Pesic, at an interest rate of 3.0% per annum, pursuant to a promissory note. We received a \$0.5 million loan from Kipee on each of July 1, 2019, August 14, 2019, October 10, 2019, or the October 2019 Loan, and February 14, 2020, or the February 2020 Loan, each of which bore an interest rate of 4.0% per annum, pursuant to promissory notes. On December 8, 2021, we received the \$0.5 million December 2021 Loan from Ms. Ngai-Pesic at an interest rate of 3.25% per annum, pursuant to a promissory note. These loans have all been paid in full.

On March 30, 2022, we received the \$0.5 million March 2022 Loan from Ms. Ngai-Pesic at an interest rate of 3.25% per annum, pursuant to a promissory note. The total outstanding balance of the March 2022 Loan is due in full on March 30, 2023. From January 1, 2019 through September 30, 2022, the largest aggregate amount of principal outstanding under our loans with Kipee and Ms. Ngai-Pesic, including the outstanding March 2022 Loan, was \$2.5 million, and during that period, we repaid \$3.0 million in principal and \$0.1 million in interest on such loans.

In 2010, we loaned NHC and NHF, real estate entities owned by Ms. Ngai-Pesic, or the NH Entities, \$0.9 million and \$1.5 million, respectively, to construct an office building in Grenoble, France. Since then, the NH Entities have made payments to us based on cash generated from the leasing of the Grenoble, France, office, at which Silvaco France SA is a tenant. Our Director of Global Sales Operations serves as director of NHC. As of September 2, 2021, \$1.3 remained outstanding on the notes receivable from the NH Entities. These notes receivable were settled on September 13, 2021, with Ms. Ngai-Pesic paying us \$0.2 million on behalf of the NH Entities (the net balance remaining after settlement of the notes receivable from the NH Entities and the October 2019 Loan and February 2020 Loan payable to Kipee).

On June 13, 2022, we entered into the \$4.0 million 2022 Credit Line with Ms. Ngai-Pesic at an interest rate of prime plus 1.0% per annum, pursuant to a promissory note and line of credit agreement. From June 13, 2022 through September 30, 2022, the largest aggregate amount outstanding under the 2022 Credit Line was \$2.0 million, and during that period, we paid \$16,000 in interest. As of September 30, 2022, \$2.0 million remained outstanding under the 2022 Credit Line. The total outstanding balance of the 2022 Credit Line is due in full upon the earlier of (i) June 13, 2023 and (ii) 10 days following the date that we secure financing in an amount equal to or greater than the 2022 Credit Line.

### Rental Properties Leased from Ms. Ngai-Pesic

We lease our principal executive offices located in Santa Clara, California, from Ms. Ngai-Pesic, for \$18,000 per month. In connection with this lease arrangement, we recorded rent expense of \$0.1 million during the nine months ended September 30, 2022. Our future minimum lease commitment under this three-year arrangement, which commenced on May 1, 2022 and expires on March 31, 2025, is \$0.5 million. We also lease from NHF an office facility located in Grenoble, France, for €3,597 per month. We lease from NHC an office facility located in the Cambridgeshire, United Kingdom, for £12,833 per month plus value-added tax. We also leased from Kipee an office facility located in Austin, Texas through July 2021. In connection with these lease arrangements, we recorded rent expense of \$0.3 million and \$0.2 million during the nine months ended September 30, 2021 and 2022, respectively.

### Distributions by SMIK Trust to Ms. Ngai-Pesic

On May 28, 2021, Ms. Ngai-Pesic transferred 26,400,000 shares of our common stock held in her name to SMIK Trust. The SMIK Trust transferred 3,927,004 shares of our common stock to Ms. Ngai-Pesic on August 29, 2022, and anticipates transferring additional shares to Ms. Ngai-Pesic in 2023 and 2024, respectively. Any shares held by SMIK Trust thereafter will be transferred to the Pesic Family 2016 Irrevocable Trust and to Ms. Ngai-Pesic's children, Iliya Pesic and Yelena Pesic.

As of September 30, 2022, Ms. Ngai-Pesic owned 15,127,004 shares of our common stock, representing approximately 38% of our total outstanding shares of common stock. While a beneficiary of the SMIK Trust, Ms. Ngai-Pesic holds no voting and dispositive power over the 22,472,996 shares of our common stock held by the SMIK Trust, which represents approximately 57% of our total outstanding shares of common stock.

## **Consulting and Employment Arrangements**

During the year ended December 31, 2021, Ms. Ngai-Pesic earned \$96,144 of cash compensation for services rendered as an employee of the company. Ms. Ngai-Pesic's service to us as an employee ceased on January 11, 2022, and on January 12, 2022, we entered into a consulting advisory agreement with Ms. Ngai-Pesic, under which she receives \$15,000 annually for general consulting and management services and reimbursement for certain expenses. Ms. Ngai-Pesic's consulting advisory agreement will terminate on the completion of this offering.

During the year ended December 31, 2021, Mr. Pesic earned \$189,596 of cash compensation for services rendered as an employee of the company. Mr. Pesic's service to us as an employee ceased on January 11, 2022, and on January 12, 2022, we entered into a consulting advisory agreement with Mr. Pesic, under which he receives \$50,000 annually for strategic advisory services and reimbursement for certain expenses. We also reimburse Mr. Pesic for his monthly car payments of approximately \$600 per month. Mr. Pesic's consulting advisory agreement will terminate on the completion of this offering.

During the year ended December 31, 2021, neither Ms. Ngai-Pesic nor Ms. Pesic earned annual cash retainers for their service on our board of directors and committees thereof as we reserve such retainers for our non-employee directors. We entered into employment agreements and offer letter agreements with certain of our executive officers prior to the completion of this offering. See "Executive Compensation—Agreements with our Named Executive Officers and Potential Payments Upon Termination or Change of Control."

## **Indemnification Agreements**

Upon completion of this offering, we intend to enter into separate indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated certificate of incorporation and amended and restated bylaws. These agreements, among other things, will require us to indemnify our directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. In addition, our amended and restated certificate of incorporation and amended and restated bylaws will provide indemnification and advancement of expenses for our directors and executive officers to the fullest extent permitted by the DGCL, subject to certain limited exceptions. We have also purchased directors' and officers' liability insurance for each of our directors and executive officers. For more information regarding these indemnification arrangements, see "Management—Limitation on Liability and Indemnification of Directors and Officers." We believe that these charter provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may decline in value to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

## **Policies and Procedures for Transactions with Related Persons**

We intend to adopt a written Related Person Transactions Policy prior to the completion of this offering that sets forth our policies and procedures regarding the identification, review, consideration, and oversight of "related person transactions." For purposes of our policy only, a "related person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we or any of our subsidiaries are participants involving an amount that exceeds \$120,000, in which any "related person" has a material interest.

Transactions involving compensation for services provided to us as an employee, consultant, or director are not considered related person transactions under this policy. A related person is any executive officer, director, nominee to become a director or a holder of more than 5% of any class of our voting securities (including our common stock), including any of their immediate family members and affiliates, including entities owned or controlled by such persons.

Under the policy, the related person in question or, in the case of transactions with a holder of more than 5% of any class of our voting securities, an officer with knowledge of the proposed transaction, must present information regarding the proposed related person transaction to our audit committee (or, where review by our audit committee would be inappropriate, to another independent body of our board of directors) for review. To identify related person transactions in advance, we rely on information supplied by our executive officers, directors and certain significant stockholders.

In considering related person transactions, our audit committee considers the relevant available facts and circumstances, which may include, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties.

Our audit committee will approve only those transactions that it determines are fair to us and in our best interests. All of the transactions described above were entered into prior to the adoption of such policy.



## PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our common stock as of \_\_\_\_\_, 2023 by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers and directors; and
- all of our current executive officers and directors as a group.

The percentage ownership information under the column “Percentage of shares beneficially owned prior to this offering” is based on \_\_\_\_\_ shares of common stock outstanding as of \_\_\_\_\_, 2023. The percentage ownership information under the column “Percentage of shares beneficially owned after offering” is based on \_\_\_\_\_ shares of common stock to be outstanding immediately after the closing of this offering, assuming no exercise by the underwriters of their option to purchase additional shares of common stock from us and excluding any potential purchases in this offering by the persons and entity named in the table below.

Information with respect to beneficial ownership has been furnished by each director, officer, or beneficial owner of more than 5% of our common stock. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of our common stock subject to RSUs that vest within 60 days of \_\_\_\_\_, 2023. These shares are deemed to be outstanding and beneficially owned by the person holding those RSUs for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Silvaco Group, Inc., 4701 Patrick Henry Drive, Building #23, Santa Clara, CA 95054.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Prior to this Offering	After this Offering
<b>Greater than 5% Stockholder:</b>			
SMIK Trust <sup>(1)</sup>		%	%
<b>Named Executive Officers and Directors:</b>			
Katherine S. Ngai-Pesic <sup>(2)</sup>			
Dr. Babak A. Taheri <sup>(3)</sup>			
Dr. Eric Guichard <sup>(4)</sup>			
Gregory F. Swyt <sup>(5)</sup>			
John W. Cleveland <sup>(6)</sup>			
Dr. Hau L. Lee <sup>(7)</sup>			
William H. Molloie, Jr. <sup>(8)</sup>			
Anthony K. K. Ngai <sup>(9)</sup>			
Iliya I. Pesic <sup>(10)</sup>			
Dr. Walden C. Rhines <sup>(11)</sup>			
Jodi L. Shelton <sup>(12)</sup>			
<b>All current executive officers and directors as a group ( _____ persons)<sup>(13)</sup></b>			

\* Represents beneficial ownership of less than 1% of the outstanding shares of our common stock.

(1) Consists of \_\_\_\_\_ shares of common stock held of record by Mark Hancock, acting solely and exclusively in his capacity as trustee of the SMIK Trust, of which Ms. Ngai-Pesic is a beneficiary. Mr. Hancock has sole voting and dispositive power over the shares held by SMIK Trust.

(2) Consists of shares of common stock held of record by Ms. Ngai-Pesic. Ms. Ngai-Pesic is a beneficiary of the shares held by SMIK Trust. Ms. Ngai-Pesic does not have voting or dispositive power over the shares held by SMIK Trust.

(3) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(4) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(5) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(6) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(7) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(8) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(9) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(10) Represents \_\_\_\_\_ shares of common stock held of record by Mr. Pesic and \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

(11) Consists of \_\_\_\_\_ RSUs that vest within 60 days of \_\_\_\_\_, 2023.

- (12) Consists of RSUs that vest within 60 days of , 2023.  
(13) Represents shares of common stock and RSUs beneficially owned by our current directors and executive officers and our former chief financial officer that vest within 60 days of , 2023.

## DESCRIPTION OF CAPITAL STOCK

The following is a summary of the material rights of our common and preferred stock and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective as of immediately prior to the completion of this offering, and of the DGCL. This summary is not complete. For more detailed information, please see our amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the DGCL.

### **General**

Upon completion of this offering and upon the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of \_\_\_\_\_ shares of common stock, \$0.0001 par value per share, and \_\_\_\_\_ shares of preferred stock, \$0.0001 par value per share. All of our authorized preferred stock upon completion of this offering will be undesignated. The information below gives effect to a \_\_\_\_\_ -for- \_\_\_\_\_ split of our common stock expected to be completed prior to the completion of this offering.

### **Common Stock**

#### ***Outstanding Shares***

As of September 30, 2022, 40,000,000 shares of our common stock were outstanding. Upon completion of this offering and assuming no exercise by the underwriters of their option to purchase additional shares, \_\_\_\_\_ shares of common stock will be outstanding.

#### ***Voting***

Holders of shares of our common stock will be entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election.

#### ***Dividends***

Subject to statutory or contractual restrictions on the payment of dividends and to any preferences that may be applicable to any then outstanding preferred stock, the holders of common stock will be entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

#### ***Liquidation***

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

#### ***Rights and Preferences***

Holders of our common stock will have no preemptive, conversion or subscription rights, and there will be no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

#### ***Fully Paid and Nonassessable***

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

### **Preferred Stock**

Under our amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to \_\_\_\_\_ shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other

things, have the effect of delaying, deferring, or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

### **Restricted Stock Units**

As of September 30, 2022, 5,198,260 RSUs were outstanding. As of September 30, 2022, there were \_\_\_\_\_ shares of common stock available for future issuance under the 2014 Plan. For additional information regarding terms of the 2014 Plan, see “Executive Compensation—2014 Stock Incentive Plan.”

### **Anti-Takeover Effects of Provisions of Our Certificate of Incorporation, Our Bylaws and Delaware Law**

Our amended and restated certificate of incorporation and our amended and restated bylaws, as they will be in effect immediately prior to the closing of this offering, will contain provisions that may delay, defer or discourage another party from acquiring control of us. We expect that these provisions, which are summarized below, will discourage coercive takeover practices or inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors, which we believe may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our board of directors the power to discourage acquisitions that some stockholders may favor.

#### ***Delaware Anti-Takeover Law***

We will be subject to Section 203 of the DGCL, or Section 203. Section 203 generally prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (but not the outstanding voting stock owned by the interested stockholder) shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- upon or subsequent to the consummation of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation owned by the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

#### ***Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws***

Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the voting power of our shares of common stock outstanding will be able to elect all of our directors. Our amended and restated certificate of incorporation and amended and restated bylaws to be effective upon completion of this offering will provide that all stockholder actions must be effected at a duly called meeting of stockholders and not by written consent. A special meeting of stockholders may be called by the majority of our board of directors, chair of our board of directors, our President, or our Chief Executive Officer.

As described above in “Management—Board Composition,” in accordance with our amended and restated certificate of incorporation effective immediately prior to the completion of this offering, our board of directors will be divided into

three classes, with the number of directors in each class being as nearly equal in number as possible. The directors in each class will serve for staggered three-year terms, one class being elected each year by our stockholders. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control of us or our management.

In addition, our amended and restated certificate of incorporation and amended and restated bylaws will provide that the number of directors constituting our board of directors will be permitted to be set only by a resolution adopted by a majority vote of the members of our board of directors then in office, and that our directors may be removed only for cause. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide that vacancies occurring on our board of directors and newly created directorships resulting from an increase in the authorized number of directors may be filled only by vote of a majority of the remaining members of our board of directors, even though less than a quorum. Our amended and restated certificate of incorporation and amended and restated bylaws will provide that our board of directors is expressly authorized to adopt, amend or repeal our bylaws, and require a 66 2/3% stockholder vote to amend our bylaws and certain provisions of our certificate of incorporation.

Our amended and restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our amended and restated bylaws will also specify certain requirements regarding the form and content of a stockholder notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

The foregoing provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of us. These provisions are also designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in our control or management. As a consequence, these provisions also may inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

#### **Choice of Forum**

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that the Court of Chancery of the State of Delaware (or, if that court lacks subject matter jurisdiction, another federal or state court situated in the State of Delaware) will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the DGCL, our amended and restated certificate of incorporation, or our bylaws, or any issue, in one or more series, of all or any of the remaining shares of preferred stock, and, in the resolution or resolutions providing for such issue; any action to interpret, apply, enforce, or determine the validity of our certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. If any such action is filed in a court other than a court located within the State of Delaware, or a Foreign Action, in the name of any stockholder, that stockholder shall be deemed to have consented to: (x) the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce our choice of forum, or an Enforcement Action, and (y) having service of process made upon such stockholder in any such Enforcement Action by service upon such stockholder's counsel in the Foreign Action as agent for such stockholder, in each case, to the fullest extent permitted by law. In addition, our amended and restated certificate of incorporation and our amended and restated bylaws will provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Such provision is intended to benefit and may be enforced by us, our officers and directors, employees and agents, including the underwriters and any other professional or entity who has prepared or certified any part of this prospectus. Although our amended and restated certificate of incorporation and amended and restated bylaws will contain the choice of forum provisions described above, it is possible that a court could find one or more of these provisions inapplicable for a particular claim or action or that such provision is unenforceable. Further, Section 27 of the Exchange Act creates exclusive federal jurisdiction

over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

Nothing in our amended and restated certificate of incorporation or amended and restated bylaws preclude stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law. Any person or entity purchasing or otherwise acquiring any interest in any of our securities will be deemed to have notice of and consented to the provisions of amended and restated certificate of incorporation or amended and restated bylaws described above. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. See "Risk Factors—Risks Related to This Offering and Ownership of Our Common Stock—Our amended and restated charter and bylaws that will be in effect upon the closing of this offering will designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, and provides that federal district courts will be the sole and exclusive forum for Securities Act claims, which could limit our stockholders' ability to obtain what they believe to be a favorable judicial forum for disputes with us or our directors, officers or other employees."

### **Listing**

We intend to apply to list our common stock on the Nasdaq Market under the symbol "SIVC."

### **Transfer Agent and Registrar**

Upon the closing of this offering, the transfer agent and registrar for our common stock will be . The transfer agent and registrar's address is and the telephone number is .

## SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of our common stock in the public market, or the perception that such sales may occur, could adversely affect prevailing market prices. Furthermore, since only a limited number of shares will be available for sale shortly after this offering because of contractual and legal restrictions on resale described below, sales of substantial amounts of common stock in the public market after the restrictions lapse could adversely affect the prevailing market price for our common stock as well as our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of September 30, 2022, upon completion of this offering, \_\_\_\_\_ shares of common stock will be outstanding (after giving effect to a \_\_\_\_\_-for-\_\_\_\_\_ split of our common stock expected to be completed prior to the completion of this offering), assuming no exercise of the underwriters' option to purchase additional shares. All of the shares sold in this offering will be freely tradable unless purchased by our "affiliates" as that term is defined in Rule 144 under the Securities Act. The 40,000,000 \_\_\_\_\_ shares of common stock outstanding prior to this offering are restricted as a result of securities laws or lock-up agreements. These shares will generally become eligible for sale under Rule 144, subject to the volume limitations, manner-of-sale, and notice provisions described below under "Rule 144," upon expiration of lock-up agreements at least six months after the date of this offering.

### Rule 144

In general, under Rule 144 as currently in effect, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, any person who is not an affiliate of ours and has held their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, may sell shares without restriction, provided current public information about us is available. In addition, under Rule 144, any person who is not an affiliate of ours and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares immediately upon completion of this offering without regard to whether current public information about us is available.

Beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell a number of restricted shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately \_\_\_\_\_ shares immediately after this offering; or
- the average weekly trading volume of our common stock on during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales of restricted shares under Rule 144 held by our affiliates are also subject to requirements regarding the manner-of-sale, notice, and the availability of current public information about us. Rule 144 also provides that affiliates relying on Rule 144 to sell shares of our common stock that are not restricted shares must nonetheless comply with the same restrictions applicable to restricted shares, other than the holding period requirement.

Notwithstanding the availability of Rule 144, substantially all of our stockholders, as well as our directors and executive officers, have entered into lock-up agreements as described below and any restricted shares held by them will become eligible for sale at the expiration of the restrictions set forth in those agreements. After these contractual resale restrictions lapse, such stockholders and our directors and executive officers will be able to sell some or all of their shares of our common stock, subject only to applicable restrictions under federal and state securities laws.

### Rule 701

Under Rule 701, shares of common stock acquired rights granted under compensatory stock plans may be resold by:

- persons other than affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject only to the manner-of-sale provisions of Rule 144; and
- our affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject to the manner-of-sale and volume limitations, current public information, and filing requirements of Rule 144, in each case, without compliance with the six-month holding period requirement of Rule 144.

### **Lock-Up Agreements**

We, our executive officers, directors and the holders of substantially all of our outstanding stock and RSUs have entered into or will enter into lock-up agreements with the underwriters agreeing not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of common stock during the Restricted Period, subject to certain exceptions. Jefferies LLC may, in its sole discretion, permit early release of shares subject to the lock-up agreements.

Upon the expiration of the lock-up period, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above. For a further description of these lock-up agreements, please see "Underwriting."

### **Form S-8 Registration Statements**

As soon as practicable after the completion of this offering, we intend to file with the SEC one or more registration statements on Form S-8 under the Securities Act to register the offer and sale of shares of our common stock that are issuable pursuant to the 2023 Plan and the ESPP. These registration statements will become effective immediately upon filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described above and Rule 144 limitations applicable to affiliates.



## **MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK**

The following is a summary of the material U.S. federal income tax considerations relating to the acquisition, ownership, and disposition of common stock acquired pursuant to this offering by non-U.S. holders (as defined below). This summary assumes that the shares of our common stock are held as capital assets (within the meaning of Section 1221 of the Code, which generally means property held for investment). This summary does not discuss all of the U.S. federal income tax considerations applicable to a non-U.S. holder that is subject to special treatment under U.S. federal income tax laws, including, but not limited to: a dealer in securities or currencies; a broker-dealer; a financial institution; a qualified retirement plan, an individual retirement plan, or other tax-deferred account; a regulated investment company; a real estate investment trust; a tax-exempt organization; an insurance company; a person holding common stock as part of a hedging, integrated, conversion, or straddle transaction or a person deemed to sell common stock under the constructive sale provisions of the Code; a trader in securities that has elected the mark-to-market method of tax accounting; an accrual method taxpayer subject to special tax accounting rules under Section 451(b) of the Code; an entity that is treated as a partnership or other pass-through entity for U.S. federal income tax purposes (and partners or beneficial owners therein); a person that received such common stock in connection with services provided; a corporation that accumulates earnings to avoid U.S. federal income tax; a corporation organized outside the United States, any state thereof or the District of Columbia that is nonetheless treated as a U.S. corporation for U.S. federal income tax purposes; a person that is not a non-U.S. holder; a "controlled foreign corporation;" a "passive foreign investment company;" or a U.S. expatriate.

This summary is based upon provisions of the Code, its legislative history, applicable U.S. Treasury Regulations promulgated thereunder, published rulings, and judicial decisions, all as in effect as of the date hereof. Those authorities may be repealed, revoked, or modified, perhaps retroactively, or may be subject to differing interpretations, which could result in U.S. federal income tax consequences different from those discussed below. We have not sought, and will not seek, any ruling from the Internal Revenue Service, or the IRS, with respect to the tax consequences discussed herein, and there can be no assurance that the IRS will not take a position contrary to the tax consequences discussed below or that any position taken by the IRS would not be sustained. This summary does not address all aspects of U.S. federal income tax, does not deal with all tax considerations that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's circumstances, and does not address the Medicare tax imposed on certain investment income or any state, local, foreign, gift, estate (except to the limited extent set forth herein), or alternative minimum tax considerations.

For purposes of this discussion, a "U.S. holder" is a beneficial holder of common stock that is for U.S. federal income tax purposes: (i) an individual citizen or resident of the United States; (ii) a corporation (or any other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia; (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source; or (iv) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (2) was in existence on August 20, 1996 and has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

For purposes of this discussion, a "non-U.S. holder" is a beneficial owner of our common stock that is neither a U.S. holder nor a partnership (or any other entity or arrangement that is treated as a partnership) for U.S. federal income tax purposes regardless of its place of organization or formation. If a partnership (or other entity or arrangement that is treated as a partnership for U.S. federal income tax purposes) holds our common stock, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. A partner of a partnership holding our common stock is urged to consult its tax advisors as to the particular U.S. federal income tax consequences applicable to it.

**PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR TAX ADVISORS CONCERNING THE U.S. FEDERAL INCOME, ESTATE, AND OTHER TAX CONSEQUENCES OF ACQUIRING, OWNING, AND DISPOSING OF OUR COMMON STOCK IN LIGHT OF THEIR SPECIFIC SITUATIONS, AS WELL AS THE TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, OR NON-U.S. TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS (INCLUDING THE U.S. FEDERAL ESTATE AND GIFT TAX LAWS).**

### **Distributions on Our Common Stock**

Distributions with respect to common stock, if any, generally will constitute dividends for U.S. federal income tax purposes to the extent paid out of our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Any portion of a distribution in excess of our current or accumulated earnings and profits will be treated as a tax-free return of capital and will first be applied to reduce the non-U.S. holder's tax basis in its common

stock, but not below zero. Any remaining amount will then be treated as gain from the sale or exchange of the common stock and will be treated as described under “Disposition of Our Common Stock” below.

Distributions treated as dividends that are paid to a non-U.S. holder, if any, with respect to shares of our common stock will be subject to U.S. federal withholding tax at a rate of 30% (or such lower rate as may be specified in an applicable income tax treaty between the United States and such holder’s country of residence) of the gross amount of the dividends unless the dividends are effectively connected with the non-U.S. holder’s conduct of a trade or business in the United States subject to the discussion below regarding foreign accounts. If a non-U.S. holder is engaged in a trade or business in the United States and dividends with respect to the common stock are effectively connected with the conduct of that trade or business and, if required by an applicable income tax treaty, are attributable to a U.S. permanent establishment, then although the non-U.S. holder will generally be exempt from the 30% U.S. federal withholding tax, provided certain certification requirements are satisfied, the non-U.S. holder will be subject to U.S. federal income tax on those dividends on a net income basis at regular U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. Any such effectively connected income received by a foreign corporation may, under certain circumstances, be subject to an additional branch profits tax equal to 30% (or lower applicable income tax treaty rate between the United States and such holder’s country of residence) of its effectively connected earnings and profits for the taxable year, as adjusted under the Code. To claim the exemption from withholding with respect to any such effectively connected income, the non-U.S. holder must generally furnish to us or our paying agent a properly executed IRS Form W-8ECI (or applicable successor form). In the case of a non-U.S. holder that is an entity, U.S. Treasury Regulations and the applicable income tax treaty provide rules to determine whether, for purposes of determining the applicability of an income tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a non-U.S. holder holds stock through a financial institution or other agent acting on the holder’s behalf, the holder will be required to provide appropriate documentation to such agent. Such holder’s agent will then be required to provide certification to us or our paying agent.

A non-U.S. holder of our common stock that wishes to claim the benefit of a reduced rate of withholding tax under an applicable income tax treaty between the United States and such holder’s country of residence generally will be required to furnish to us or our paying agent a properly executed valid IRS Form W-8BEN or IRS Form W-8BEN-E (or applicable successor form) certifying such holder’s qualification for the exemption or reduced rate. If a non-U.S. holder is eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty and does not timely file the required certification, it may obtain a refund or credit of any excess amounts withheld by timely filing a U.S. tax return with the IRS. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

### **Disposition of Our Common Stock**

Subject to the discussion below regarding backup withholding, a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain from a sale, exchange or other disposition of our common stock unless: (a) that gain is effectively connected with the non-U.S. holder’s conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a U.S. permanent establishment or a fixed-base maintained by the non-U.S. holder); (b) the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of that disposition, and certain other conditions are met; or (c) we are or have been a “United States real property holding corporation” within the meaning of Code Section 897(c)(2) for U.S. federal income tax purposes at any time during the shorter of the five-year period preceding the date of disposition or the holder’s holding period for our common stock, and certain other requirements are met. Although there can be no assurance, we believe that we are not, and we do not anticipate becoming, a United States real property holding corporation for U.S. federal income tax purposes. Even if we are treated as a United States real property holding corporation, gain realized by a non-U.S. holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the non-U.S. holder owned, directly, indirectly, actually or constructively, no more than 5% of our common stock at all times within the shorter of (x) the five-year period preceding the disposition, or (y) the non-U.S. holder’s holding period, and (2) our common stock is regularly traded on an established securities market. Although Nasdaq qualifies as an established securities market, there can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market. If any gain on your disposition is taxable because we are a United States real property holding corporation and your ownership of our common stock exceeds 5%, you will be taxed on such disposition generally in the manner applicable to U.S. persons and in addition, a purchaser of your common stock may be required to withhold tax with respect to that obligation.

If a non-U.S. holder is described in clause (a) of the preceding paragraph, the non-U.S. holder will generally be subject to tax on the net gain derived from the disposition at the regular U.S. federal income tax rates in the same manner as if such non-U.S. holder were a U.S. person, unless an applicable income tax treaty provides otherwise. In addition, a non-U.S. holder that is a corporation may be subject to the branch profits tax at a rate equal to 30% (or lower applicable income tax treaty rate) of its effectively connected earnings and profits. If the non-U.S. holder is an

individual described in clause (b) of the preceding paragraph, the non-U.S. holder will generally be subject to a flat 30% tax on the gain derived from the disposition, which may be offset by U.S. source capital losses even though the non-U.S. holder is not considered a resident of the United States, provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

### **U.S. Federal Estate Tax**

The estate of a nonresident alien individual is generally subject to U.S. federal estate tax on property he or she is treated as the owner of, or has made certain life transfers of, having a U.S. situs. Because we are a U.S. corporation, our common stock will be U.S. situs property and therefore will be included in the taxable estate of a nonresident alien decedent for U.S. federal estate tax purposes, unless an applicable estate tax treaty between the United States and the decedent's country of residence provides otherwise. Non-U.S. holders are urged to consult their own tax advisors regarding the U.S. federal estate tax consequences of the ownership or disposition of our common stock.

### **Information Reporting and Backup Withholding Tax**

We report to our non-U.S. holders and the IRS certain information with respect to any distribution we make on our common stock, including the gross amount of the distribution paid during each fiscal year, the name and address of the recipient, and the amount, if any, of tax withheld. All distributions to holders of common stock are subject to any applicable withholding. Information reporting requirements generally apply even if no withholding was required because the distributions were effectively connected with the non-U.S. holder's conduct of a U.S. trade or business or withholding was reduced by an applicable income tax treaty. This information also may be made available under a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Under U.S. federal income tax law, interest, dividends, and other reportable payments may, under certain circumstances, be subject to "backup withholding" at the then applicable rate (currently, 24%). Backup withholding, however, generally will not apply to distributions on our common stock to a non-U.S. holder, provided the non-U.S. holder furnishes to us or our paying agent the required certification as to its non-U.S. status, such as by providing a valid IRS Form W-8BEN, IRS Form W-8BEN-E or IRS Form W-8ECI, or certain other requirements are met. Notwithstanding the foregoing, backup withholding may apply if either we or our paying agent has actual knowledge, or reason to know, that the holder is a U.S. person that is not an exempt recipient. Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, if any, provided the required information is timely furnished to the IRS.

### **Foreign Accounts**

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, generally impose certain withholding taxes on certain types of payments made to "foreign financial institutions" (as specially defined under these rules) and certain other non-U.S. entities if certification, information reporting and other specified requirements are not met. A 30% withholding tax may apply to certain "withholdable payments" made to a "foreign financial institution" or to a "non-financial foreign entity," (as defined under FATCA) unless (a) the "foreign financial institution" undertakes certain diligence and reporting obligations and other specified requirements are satisfied, (b) the non-financial foreign entity either certifies it does not have any substantial U.S. owners or furnishes identifying information regarding each substantial U.S. owner and other specified requirements are satisfied, or (c) the foreign entity is otherwise exempt under FATCA. If the payee is a foreign financial institution, it must enter into an agreement with the U.S. Treasury requiring, among other things, that it undertake to identify accounts held by certain U.S. persons or U.S.-owned foreign entities, annually report certain information about such accounts and withhold 30% on payments to account holders whose actions prevent it from complying with these reporting and other requirements, or comply with comparable requirements under an applicable inter-governmental agreement between the United States and the foreign financial institution's home jurisdiction. "Withholdable payments" under FATCA generally include dividends on our common stock. Under proposed U.S. Treasury Regulations, on which taxpayers (including withholding agents) generally are permitted to rely pending finalization, FATCA withholding will not apply to gross proceeds from the sale or other disposition of our common stock. If an investor does not provide the information necessary to comply with these rules, it is possible that distributions to such investor will be subject to the 30% withholding tax. Holders should consult their own tax advisors regarding the implications of these rules on their investment in our common stock and the entities through which they hold our common stock, including without limitation, the process and deadlines for meeting the applicable requirements to avoid the imposition of the 30% withholding tax under FATCA.

## UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated \_\_\_\_\_, among us, Jefferies LLC and Cowen and Company, LLC, as the representatives of the underwriters named below and the joint book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us the respective number of shares of common stock shown opposite its name below:

Underwriter	Number of Shares
Jefferies LLC	
Cowen and Company, LLC	
Total	

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. In addition, the underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority except sales to accounts over which they have discretionary authority to exceed 5% of the common stock being offered.

### Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of \$ \_\_\_\_\_ per share of common stock. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of \$ \_\_\_\_\_ per share of common stock to certain brokers and dealers. After the offering, the initial public offering price, concession and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Per Share		Total	
	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares
Public offering price	\$	\$	\$	\$
Underwriting discounts and commissions paid by us	\$	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$	\$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$ . We have also agreed to reimburse the underwriters for their expenses related to clearance of this offering with the Financial Industry Regulatory Authority, Inc., or FINRA, including the related fees and expenses of counsel for the underwriters up to \$ . In accordance with FINRA Rule 5110, this reimbursed fee is deemed underwriting compensation for this offering.

### **Determination of Offering Price**

Prior to this offering, there has not been a public market for our common stock. Consequently, the initial public offering price for our common stock will be determined by negotiations between us and the representatives. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

### **Listing**

We intend to apply to have our common stock listed on the Nasdaq Market under the trading symbol "SIVC".

### **Option to Purchase Additional Shares**

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

### **No Sales of Similar Securities**

We, our officers, directors and holders of all or substantially all our outstanding capital stock and other securities have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Exchange Act of 1934; or
- sell or offer to sell any shares of common stock, options, warrants or other rights to acquire shares of common stock of any securities exchangeable or exercisable for or convertible into shares of common stock, or to acquire other securities or rights ultimately exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either or record or beneficially (as defined in Rule 13d-3 under the Exchange Act) by such individual or their family member;
- enter into any swap;
- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any shares of common stock, options, warrants or other rights to acquire shares of common stock or any securities exchangeable or exercisable for or convertible into shares of common stock, or to acquire other securities or rights ultimately exchangeable or exercisable for or convertible into shares of common stock, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration; or
- publicly announce an intention to do any of the foregoing for a period of 180 days after the date of this prospectus without the prior written consent of Jefferies LLC.

The restrictions on our directors, officers, and the holders of all of our outstanding equity securities described in the immediately preceding paragraph are subject to certain exceptions, including:

- transfers of common stock or securities convertible into or exercisable or exchangeable for shares of common stock by gift, including to a bona fide charitable organization, or by will or intestate succession to the legal representative, heir or beneficiary of the undersigned or any family member (as defined in the lock-up agreement) or to a trust whose beneficiaries consist exclusively of one or more of the undersigned and/or a family member;
- transfers of common stock or securities convertible into or exercisable or exchangeable for shares of common stock pursuant to a domestic order or negotiated divorce settlement; provided that any filing under

Section 16(a) of the Exchange Act shall clearly indicate in the footnotes thereto that the transfer is pursuant to a domestic order or negotiated divorce settlement, that no shares were sold by the reporting person and no other public announcement shall be required or shall be made voluntarily in connection with such exercise;

- if the signatory is a corporation, partnership, limited liability company, trust or other business entity, distributions or transfers of shares of common stock or securities convertible into or exercisable or exchangeable for shares of common stock to (x) another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate (as defined in Rule 405 promulgated under the Securities Act) of the signatory, (y) any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the signatory or affiliates of the signatory, or (z) limited partners, general partners, members, managers, managing members, stockholders, beneficiaries or other equity holders of the signatory or of the entities described in the preceding clauses (x) and (y); provided that such transfer shall not involve a disposition for value and provided further that, if required, any public report or filing under Section 16(a) of the Exchange Act with regards to such transfer shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this clause, that no shares were sold by the reporting person and no other public announcement shall be required or shall be made voluntarily in connection with such transfer;
- transfers or dispositions of shares to the Company as forfeitures or the withholding of shares (x) to satisfy tax withholding and remittance obligations of the signatory in connection with the vesting or exercise of equity awards granted pursuant to our equity incentive plans described herein or (y) pursuant to a net exercise or cashless exercise by the undersigned of outstanding equity awards pursuant to our equity incentive plans described herein; provided that the shares issued upon such exercise or vesting shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement; and provided further, that, if required, any public report or filing under Section 16 of the Exchange Act shall clearly indicate in the footnotes thereto that the filing relates to the net settlement of an equity award or the withholding of shares is to satisfy tax withholding, as applicable, that no shares were sold by the reporting person and that shares received upon exercise or vesting are subject to the lock-up agreement;
- transfers of shares or securities convertible into or exercisable or exchangeable for shares of common stock pursuant to a change of control of us (meaning the consummation of any bona fide third party tender offer, merger, consolidation or other similar transaction made to all holders of shares the result of which is that any "person" (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of more than 50% of the voting capital stock of us) after this offering that has been approved by the independent members of our board of directors, provided that in the event that such change of control is not completed, the shares or securities convertible into or exercisable or exchangeable for shares of common stock owned by the signatory shall remain subject to the restrictions in the lock-up agreement; and
- transfers of shares or securities convertible into or exercisable or exchangeable for shares of common stock to us as a result of the termination of employment of the signatory pursuant to agreements that are in effect as of the date of the underwriting agreement for this offering and disclosed herein, under which we have the option to repurchase such shares or securities convertible into or exercisable or exchangeable for shares of common stock or a right of first refusal with respect to transfers of such shares or securities convertible into or exercisable or exchangeable for shares of common stock; provided that no filing under the Exchange Act or other public disclosure shall be voluntarily made during the Restricted Period and any filing under the Exchange Act or other public disclosure required to be made during the Restricted Period shall include a statement to the effect that such transfer relates to the circumstances described herein.

The restrictions on us described above are subject to certain exceptions, including:

- the sale of the shares to the underwriters in connection with this offering;
- the issuance by us of shares of common stock upon the vesting and settlement of an RSU, or the conversion of any other security outstanding on the date of this prospectus; or
- the issuance of shares of common stock or options to purchase shares common stock granted pursuant to our existing employee benefit plans, stock incentive plans and any employee stock purchase plan referred to in the registration statement of which this prospectus forms a part.

### **Stabilization**

The underwriters have advised us that they, pursuant to Regulation M under the Exchange Act, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

“Naked” short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter’s purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we, nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on Nasdaq in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker’s bid, that bid must then be lowered when specified purchase limits are exceeded.

### **Electronic Distribution**

A prospectus in electronic format may be made available by e-mail or on the websites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters’ websites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

### **Other Activities and Relationships**

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered

hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

## **Disclaimers About Non-U.S. Jurisdictions**

### **Canada**

#### *(A) Resale Restrictions*

The distribution of shares of common stock in Canada is being made only in the provinces of Ontario, Quebec, Alberta, British Columbia, Manitoba, New Brunswick and Nova Scotia on a private placement basis exempt from the requirement that we prepare and file a prospectus with the securities regulatory authorities in each province where trades of these securities are made. Any resale of the shares of common stock in Canada must be made under applicable securities laws which may vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of the securities.

#### *(B) Representations of Canadian Purchasers*

By purchasing shares of common stock in Canada and accepting delivery of a purchase confirmation, a purchaser is representing to us and the dealer from whom the purchase confirmation is received that:

- the purchaser is entitled under applicable provincial securities laws to purchase the shares of common stock without the benefit of a prospectus qualified under those securities laws as it is an “accredited investor” as defined under National Instrument 45-106 – Prospectus Exemptions or Section 73.3(1) of the Securities Act (Ontario), as applicable,
- the purchaser is a “permitted client” as defined in National Instrument 31-103 – Registration Requirements, Exemptions and Ongoing Registrant Obligations,
- where required by law, the purchaser is purchasing as principal and not as agent, and
- the purchaser has reviewed the text above under Resale Restrictions.

#### *(C) Conflicts of Interest*

Canadian purchasers are hereby notified that each of the underwriters are relying on the exemption set out in section 3A.3 or 3A.4, if applicable, of National Instrument 33-105 – Underwriting Conflicts from having to provide certain conflict of interest disclosure in this document.

#### *(D) Statutory Rights of Action*

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if the prospectus (including any amendment thereto) such as this document contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser of these shares of common stock in Canada should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

#### *(E) Enforcement of Legal Rights*

All of our directors and officers as well as the experts named herein may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon us or those persons. All or a substantial portion of our assets and the assets of those persons may be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against us or those persons in Canada or to enforce a judgment obtained in Canadian courts against us or those persons outside of Canada.

#### *(F) Taxation and Eligibility for Investment*

Canadian purchasers of shares of common stock should consult their own legal and tax advisors with respect to the tax consequences of an investment in the shares of common stock in their particular circumstances and about the eligibility of the shares of common stock for investment by the purchaser under relevant Canadian legislation.



### **Australia**

This prospectus is not a disclosure document for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

- a) You confirm and warrant that you are either:
  - i. a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;
  - ii. a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made;
  - iii. a person associated with the company under Section 708(12) of the Corporations Act; or
  - iv. a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

- b) You warrant and agree that you will not offer any of the shares of common stock issued to you pursuant to this prospectus for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

### **European Economic Area**

In relation to each Member State of the European Economic Area, each, a Relevant State, no shares of common stock have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares of common stock which have been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that the shares of common stock may be offered to the public in that Relevant State at any time:

- a) to any legal entity which is a "qualified investor" as defined under Article 2 of the Prospectus Regulation;
- b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation), subject to obtaining the prior consent of representatives for any such offer; or
- c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation, provided that no such offer of the shares of common stock shall require us or any of the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression "offer to the public" in relation to the shares of common stock in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of common stock, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

### **Hong Kong**

No shares of common stock have been offered or sold, and no shares of common stock may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong, or the SFO, and any rules made under that Ordinance; or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong, or the CO, or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO. No document, invitation or advertisement relating to the shares of common stock has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the shares of common stock may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the shares of common stock will be required, and is deemed by the acquisition of the shares of common stock, to confirm that he is aware of the

restriction on offers of the shares of common stock described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any shares of common stock in circumstances that contravene any such restrictions.

### **Israel**

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, and any offer of the shares of common stock is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law and (ii) investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv

Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and “qualified individuals,” each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

### **Japan**

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the underwriters will not offer or sell any shares of common stock, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

### **Singapore**

This prospectus has not been and will not be lodged or registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the common stock may not be circulated or distributed, nor may the common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- b) trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except:
  - i. to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
  - ii. where no consideration is or will be given for the transfer;
  - iii. where the transfer is by operation of law;
  - iv. as specified in Section 276(7) of the SFA; or
  - v. as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

### **Switzerland**

The shares of common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or the SIX, or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing

Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, the company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or the CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

### ***United Kingdom***

No shares of common stock have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the Financial Conduct Authority, except that the shares of common stock may be offered to the public in the United Kingdom at any time:

- a) to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation;
- b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- c) in any other circumstances falling within Section 86 of the Financial Services and Markets Act 2000, or FSMA,

provided that no such offer of the shares of common stock shall require the Issuer or any Manager to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the shares of common stock in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of common stock and the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

## LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP, Palo Alto, California. Cooley LLP, Palo Alto, California is acting as counsel for the underwriters.

## EXPERTS

The consolidated financial statements of Silvaco Group, Inc. as of December 31, 2020 and 2021, and for the years then ended, included in this prospectus have been audited by Moss Adams LLP, an independent registered public accounting firm, as stated in their report included herein. Such consolidated financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov). You may also request a copy of these filings, at no cost, by writing us at 4701 Patrick Henry Drive, Building #23, Santa Clara, CA 95054.

Upon completion of this offering, we will be subject to the information reporting requirements of the Exchange Act and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available at the web site of the SEC referred to above. We also maintain a website at [www.silvaco.com](http://www.silvaco.com), at which, following the completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

**SILVACO GROUP, INC.****INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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## Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of  
Silvaco Group, Inc.

### ***Opinion on the Financial Statements***

We have audited the accompanying consolidated balance sheets of Silvaco Group, Inc. (the "Company") as of December 31, 2020 and 2021, and the related consolidated statements of income (loss), comprehensive income (loss), stockholders' equity, and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2020 and 2021, and the consolidated results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

### ***Basis for Opinion***

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Moss Adams LLP

San Francisco, California  
September 23, 2022

We have served as the Company's auditor since 2021.

**SILVACO GROUP, INC.**  
**CONSOLIDATED BALANCE SHEETS**  
*(in thousands except share and par value amounts)*

	As of December 31,	
	2020	2021
<b>ASSETS</b>		
Current assets:		
Cash	\$ 9,720	\$ 6,704
Accounts receivable, net	7,104	4,466
Contract assets	6,716	6,977
Prepaid expenses and other current assets	2,066	2,221
Total current assets	<b>25,606</b>	<b>20,368</b>
Property and equipment, net	881	637
Intangible assets, net	1,730	1,644
Goodwill	7,671	9,026
Long-term portion of contract assets	1,839	2,465
Notes receivable from related party	2,384	—
Other assets	1,802	1,587
Total assets	<b>\$ 41,913</b>	<b>\$ 35,727</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 2,367	\$ 2,078
Accrued expenses	8,536	8,169
Accrued income taxes	431	714
Deferred revenue	6,806	5,415
Related party notes payable	1,241	501
Other current liabilities	126	48
Total current liabilities	<b>19,507</b>	<b>16,925</b>
Long-term portion of deferred revenue	2,913	3,541
Long-term note payable	2,251	—
Other long-term liabilities	—	891
Total liabilities	<b>24,671</b>	<b>21,357</b>
Commitments and contingencies (Note 14)		
Stockholders' equity:		
Common stock, \$0.0001 par value; 50,000,000 shares authorized; 40,000,000 shares issued and outstanding	4	4
Retained earnings	17,699	15,854
Accumulated other comprehensive loss	(461)	(1,488)
Total stockholders' equity	<b>17,242</b>	<b>14,370</b>
Total liabilities and stockholders' equity	<b>\$ 41,913</b>	<b>\$ 35,727</b>

*The accompanying notes are an integral part of these consolidated financial statements.*

**SILVACO GROUP, INC.**  
**CONSOLIDATED STATEMENTS OF INCOME (LOSS)**  
*(in thousands except share and per share amounts)*

	Year Ended December 31,	
	2020	2021
Revenue:		
Software license revenue	\$ 27,826	\$ 29,687
Maintenance and service	12,454	12,276
Total revenue	<b>40,280</b>	<b>41,963</b>
Cost of revenue	<b>8,674</b>	<b>8,653</b>
Gross profit	<b>31,606</b>	<b>33,310</b>
Operating expenses:		
Research and development	11,159	13,539
Selling and marketing	9,197	10,331
General and administrative	7,610	12,976
Total operating expenses	<b>27,966</b>	<b>36,846</b>
Operating income (loss)	<b>3,640</b>	<b>(3,536)</b>
Gain on debt extinguishment	—	2,278
Interest and other expense, net	(784)	(317)
Income (loss) before income tax provision	<b>2,856</b>	<b>(1,575)</b>
Income tax provision	306	270
Net income (loss)	<b>\$ 2,550</b>	<b>\$ (1,845)</b>
Net income (loss) per share attributable to common stockholders:		
Basic and diluted	\$ 0.06	\$ (0.05)
Weighted average shares used in computing per share amounts:		
Basic and diluted	40,000,000	40,000,000

*The accompanying notes are an integral part of these consolidated financial statements.*



**SILVACO GROUP, INC.**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**  
*(in thousands)*

	Year Ended December 31,	
	2020	2021
Net income (loss)	\$ 2,550	\$ (1,845)
Other comprehensive income (loss):		
Foreign currency translation adjustments	1,060	(1,027)
Comprehensive income (loss)	<u>\$ 3,610</u>	<u>\$ (2,872)</u>

*The accompanying notes are an integral part of these consolidated financial statements.*

**SILVACO GROUP, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
*(in thousands except share amounts)*

	Common Stock		Retained Earnings	Accumulated Other Comprehensive (Loss)/Income	Total Stockholders' Equity
	Shares	Amount			
<b>Balance, January 1, 2020</b>	<b>40,000,000</b>	<b>\$ 4</b>	<b>\$ 15,149</b>	<b>\$ (1,521)</b>	<b>\$ 13,632</b>
Other comprehensive income	—	—	—	1,060	1,060
Net income for the year	—	—	2,550	—	2,550
<b>Balance, December 31, 2020</b>	<b>40,000,000</b>	<b>\$ 4</b>	<b>\$ 17,699</b>	<b>\$ (461)</b>	<b>\$ 17,242</b>
Other comprehensive loss	—	—	—	(1,027)	(1,027)
Net loss for the year	—	—	(1,845)	—	(1,845)
<b>Balance, December 31, 2021</b>	<b>40,000,000</b>	<b>\$ 4</b>	<b>\$ 15,854</b>	<b>\$ (1,488)</b>	<b>\$ 14,370</b>

*The accompanying notes are an integral part of these consolidated financial statements.*

**SILVACO GROUP, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
*(in thousands)*

	Year Ended December 31,	
	2020	2021
<b>Cash flows from operating activities:</b>		
Net income (loss)	\$ 2,550	\$ (1,845)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities (excluding assets acquired and liabilities assumed at acquisition):		
Depreciation and amortization	820	1,162
Gain on debt extinguishment	—	(2,278)
Provision for doubtful accounts	25	195
Change in fair value of contingent consideration	—	295
Changes in operating assets and liabilities:		
Accounts receivable	(969)	2,243
Contract assets	(1,102)	(1,312)
Prepaid and other current assets	(1,000)	232
Accounts payable	1,512	(204)
Accrued expenses	2,749	39
Income tax payable	169	207
Deferred revenue	1,316	(849)
Other liabilities	318	417
Other assets	(611)	(938)
Net cash provided by (used in) operating activities	<b>5,777</b>	<b>(2,636)</b>
<b>Cash flows from investing activities:</b>		
Acquisitions	(1,175)	(1,000)
Purchases of property and equipment	(490)	(99)
Proceeds from related party loan receivable	68	1,333
Net cash provided by (used in) investing activities	<b>(1,597)</b>	<b>234</b>
<b>Cash flows from financing activities:</b>		
Proceeds from long-term debt	2,351	—
Contingent consideration	—	(440)
Proceeds (payments) from related party loan payable	(23)	500
Net cash provided by (used in) financing activities	<b>2,328</b>	<b>60</b>
Effect of exchange rate fluctuations on cash	<b>370</b>	<b>(674)</b>
Net increase (decrease) in cash	<b>6,878</b>	<b>(3,016)</b>
Cash, beginning of year	<b>2,842</b>	<b>9,720</b>
Cash, end of year	<b>\$ 9,720</b>	<b>\$ 6,704</b>
<b>Supplemental disclosures of cash flow information:</b>		
Income taxes paid	\$ 61	\$ 113
Interest paid	\$ 21	\$ 9
<b>Noncash investing and financing activities:</b>		
Property and equipment acquired but not paid	\$ 169	\$ —
Related party loan payable net settled in exchange for related party loan receivable	\$ —	\$ 1,070
Contingent and deferred consideration for business acquisition during the year	\$ —	\$ 974

*The accompanying notes are an integral part of these consolidated financial statements.*

**SILVACO GROUP, INC.**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**For the Years Ended December 31, 2020 and 2021**

## **1. Description of Business**

Silvaco Group, Inc. ("Silvaco," and together with its subsidiaries, the "Company") was incorporated as a Delaware corporation on November 18, 2009. The Company is a provider of technology computer aided design ("TCAD") software, electronic data automation ("EDA") software and semiconductor intellectual property ("SIP"). TCAD, EDA and SIP solutions enable semiconductor and photonics companies to increase productivity, accelerate their products' time-to-market and reduce their development and manufacturing costs. The Company has decades of expertise developing the "technology behind the chip" and providing solutions that span from atoms to systems, starting with providing software for the atomic level simulation of semiconductor and photonics material for devices, to providing software and SIP for the design and analysis of circuits and system level solutions. The Company provides SIP for system-on-a-chip ("SoC"), integrated circuits ("ICs") and SIP management tools to enable team collaborations on complex SoC designs. The Company's customers include semiconductor manufacturers, original equipment manufacturers ("OEMs") and design teams who deploy the Company's solutions in production flows across the Company's target markets, including display, power devices, automotive, memory, high performance computing ("HPC"), internet of things ("IoT") and 5G/6G mobile markets.

Given the multi-discipline problem-solving needs of the Company's customers, a single license of software may require components from multiple product lines and include combined technologies. The Company also has a multi-year product and integration strategy that often results in new, combined products or changes to historical product offerings. As they are similar in the nature of services, production process, and distribution of services, the Company's solution offerings have been aggregated into one reportable segment.

## **2. Summary of Significant Accounting Policies**

### ***Basis of Presentation and Consolidation***

The accompanying consolidated financial statements have been prepared in accordance with U.S. Generally Accepted Accounting Principles ("GAAP") and include the accounts of Silvaco and all of the Company's wholly-owned 17 subsidiaries, which consist of one domestic and 16 international subsidiaries with operations in North America, Europe, Asia and South America. All intercompany transactions and balances have been eliminated upon consolidation.

### ***Coronavirus Outbreak***

The Company is continuing to monitor the impact of COVID-19 on all aspects of its business. The COVID-19 pandemic has caused and may continue to cause travel bans or disruptions, and in some cases, prohibition of non-essential activities, disruption and shutdown of businesses and greater uncertainty in global financial markets. The impact of COVID-19 is fluid and uncertain, but it has caused and may continue to cause various negative effects, including an inability to meet with actual or potential customers, customers deciding to delay or abandon their planned purchases or failing to make payments, and delays or disruptions in supply chains. As a result, the Company's ability to close transactions with new and existing customers may be negatively impacted, the Company's demand generation activities, and the efficiency and effect of those activities, may be negatively affected, and it has been and, until the COVID-19 pandemic is contained, will continue to, be more difficult for the Company to forecast its operating results. These uncertainties have, and may continue to, put pressure on global economic conditions. Overall research and development spending has and may continue to cause the Company's customers to modify spending priorities or delay or abandon purchasing decisions, thereby lengthening bookings cycles for the Company's software solutions and making it difficult to forecast bookings and operating results and make decisions about future investments, any of which could materially harm the Company's business, operating results and financial condition.

Further, Silvaco's management team is focused on addressing the impacts of COVID-19 on the Company's business, which has required and will continue to require, a large investment of their time and resources and may distract Silvaco's management team or disrupt the Company's operating plans. The extent to which COVID-19 ultimately impacts the Company's results of operations, cash flow and financial position will depend on future developments, which are uncertain and cannot be predicted, including but not limited to, the duration and spread of the pandemic, its severity, the actions taken by governments and authorities to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume.

### ***Paycheck Protection Program Loan ("PPP Loan")***

The Company accounted for its PPP Loan as debt pursuant to Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 470, Debt. As of December 31, 2020, the outstanding balance was reflected as a note payable on the consolidated balance sheet, the proceeds were reflected under financing activities

in the consolidated statement of cash flows and interest expense was accrued and recognized in the consolidated statements of income (loss). The forgiveness of the PPP Loan amount during 2021 is reflected as a gain on debt extinguishment in the consolidated statements of income (loss) and cash flows.

### **Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the amounts of revenue and expenses during the reported periods. The Company's significant estimates include those related to revenue recognition, accounts receivable allowances, share-based payment compensation, valuation of goodwill and other intangible assets, uncertain tax positions and income taxes. Actual results could differ from those estimates.

### **Revenue Recognition**

The Company's revenue is derived principally from software licensing and related maintenance and service. Silvaco enters into agreements that include combinations of software solutions and maintenance and services which are accounted for as separate performance obligations with differing revenue recognition patterns. The Company recognizes revenue pursuant to ASC Topic 606, *Revenue from Contracts with Customers*. The core principle of this guidance is that an entity should recognize revenue to depict the delivery of software to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for such software or services. To achieve this objective the Company applies a five-step approach: (1) identify the contract(s) with a customer, (2) identify the performance obligations within the contract, (3) determine the transaction price, (4) allocate the transaction price to the separate performance obligations and (5) recognize revenue when, or as, each performance obligation is satisfied. We also recognize revenue from a range of device characterization, modeling and SIP integration services. Revenue for modeling and SIP integration services may be recognized as the related services are performed or deferred until the services are completed subject to the terms of the particular customer arrangement. Such revenue is classified as maintenance and service revenue.

Revenue from software licenses is classified as software license revenue. Software license revenue is recognized upfront upon delivery of the licensed software. Typically, the Company's software solutions are licensed with post-contract support ("PCS"), which includes unspecified technical enhancements and customer support. The PCS is classified as maintenance and service revenue and is recognized ratably over the term of the contract, as the Company satisfies the PCS performance obligation over time.

The Company also offers standard SIP licenses, developed both in house and in partnership with industry-recognized companies. The Company's SIP licenses provide customers with access to SoC design intellectual property ("IP") which meet established industry standards, thus saving customers the time and resources required to re-invent similar design methodology. Off the shelf SIP licenses offered by the Company are generally ready to use upon delivery. No modification is required in order for the customer to obtain value for use in their integrated circuit designs. Silvaco does not license SIP without support.

Revenue associated with the license of the Company's SIP is classified as software license revenue and recognized as revenue upon delivery of the licensed SIP. The PCS is classified as maintenance and service revenue and is recognized ratably over the term of the contract, as we satisfy the PCS performance obligation over time.

In connection with the Company's SIP, which is developed in partnership with third parties, Silvaco has entered into various renewable license agreements under which the Company has the right to sell the technology it licenses from third parties. When the Company licenses these particular SIP to a customer, the Company generally acts as a principal to the transaction because it controls the promised SIP that is delivered to the customer. Consistent with its role as the principal, the Company recognizes SIP revenue on a gross basis.

Under certain SIP license agreements, the Company also derives revenue through royalties from customers who agree to pay usage-based fees to embed the Company's licensed software into their own software offerings.

Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 days. Invoicing may vary from timing of revenue recognition. When timing of invoicing or collections precedes revenue recognition, the Company records deferred revenue. When timing of revenue recognition precedes invoicing or collections, the Company records a contract asset. In instances where the timing of revenue recognition differs from the timing of invoicing, the Company has determined its contracts generally do not include a significant financing component.

Non-income related taxes collected from customers and remitted to governmental authorities are recorded on the consolidated balance sheets as accounts receivable and accrued expenses. The collection and payment of these amounts are reported on a net basis in the consolidated statements of income (loss).

Silvaco does not offer a right of return. The Company warrants to its customers that its software will perform substantially as specified in its current user manuals. Silvaco has not experienced significant claims related to software warranties beyond the scope of maintenance support, which the Company is already obligated to provide. The warranty is not sold, and cannot be purchased, separately. The warranty does not provide any type of additional service to the customer or performance obligation for Silvaco.

The Company's agreements with customers generally require Silvaco to indemnify the customer against claims that the Company's software infringes third-party patent, copyright, trademark or other proprietary rights. Such indemnification obligations are generally limited in a variety of industry-standard respects, including by affirming Silvaco's right to replace an infringing product.

#### *Significant Judgments*

Silvaco's contracts typically include promises to transfer licenses, which enables customers to use the Company's software, and services. Judgment is required to determine if the promises are separate performance obligations, and if so, to allocate the transaction price to each performance obligation. The Company uses the estimated standalone selling price method to allocate the transaction price for each performance obligation. The estimated standalone selling price is determined using all information reasonably available to the Company, including market conditions and other observable inputs, historical pricing and the value relationship between Silvaco's various product and service offerings. The corresponding revenues are recognized as the related performance obligations are satisfied.

#### *Contract Assets and Liabilities*

The timing of revenue recognition may differ from the timing of invoicing to customers, and these timing differences result in receivables (billed), contract assets (unbilled), or contract liabilities (deferred revenue) on the Company's consolidated balance sheets. The Company records a contract asset when revenue is recognized prior to the right to invoice, or deferred revenue when revenue is recognized subsequent to invoicing. For time-based software agreements, customers are generally invoiced in equal, quarterly amounts, although some customers are invoiced in single or annual amounts. The Company records an unbilled receivable when revenue is recognized and it has an unconditional right to invoice and receive payment.

#### *Financing*

Silvaco is required to adjust promised amounts of consideration for the effects of the time value of money if the timing of the payments provides the customer or the Company with a significant financing benefit. Silvaco considers various factors in assessing whether a financing component exists, including the duration of the contract, market interest rates and the timing of payments. The Company's contracts do not include a significant financing component requiring adjustment to the transaction price.

#### *Sales Commissions*

Sales commissions associated with multi-year contracts for new term-based licenses are deferred, capitalized and amortized over an estimated customer life of five years. Capitalized sales commissions are included in prepaid and other current assets and other assets on the Company's consolidated balance sheets. Amortization of sales commissions is included in selling and marketing expenses on the Company's consolidated statements of income (loss). The Company applies a practical expedient to expense sales commissions as incurred when the amortization period would have been one year or less. During the 12 months ended December 31, 2020 and 2021, the Company capitalized sales commissions of \$1.9 million and \$0.7 million, respectively. Amortization of sales commissions during the 12 months ended December 31, 2020 and 2021 was \$0.6 million and \$0.9 million, respectively.

#### *Cash*

Cash consists of cash held in checking and savings accounts.

**Property and Equipment**

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the various classes of assets, as follows:

Leasehold improvements	<i>Shorter of remaining life of lease, including option to renew that is expected to be exercised, or useful life of improvement.</i>
Computers and software	5 years
Servers and networking equipment	4 years
Vehicles	5 years

Repairs and maintenance are charged to expense as incurred. Gains or losses from the sale or retirement of property and equipment are included in income from continuing operations before income taxes

**Impairment of Long-Lived Assets**

The Company continually monitors events and changes in circumstances that could indicate the carrying amounts of long-lived assets, including property and equipment, may not be recoverable. Accordingly, when indicators of impairment are present, the Company evaluates the carrying value of such assets in relation to the future undiscounted cash flows of the underlying assets. The Company's policy is to record an impairment loss when it is determined that the carrying amount of the asset may not be recoverable. No impairment charge was recorded for the years ended December 31, 2020 and 2021.

**Research and Development**

Research and development costs consist primarily of personnel costs for product development, engineering, quality assessment and other related costs associated with the development of new products, enhancements to existing products, quality assurance and testing. Research and development costs are expensed as incurred. Internally developed software costs required to be capitalized as defined by ASC 350-40, Internal-Use Software are not material to the Company's consolidated financial statements.

**Business Combinations**

When a business combination is consummated, the assets acquired and the liabilities assumed are recognized separately from goodwill at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of the fair value of consideration transferred over the acquisition date fair value of the net identifiable assets acquired. While best estimates and assumptions are used to accurately value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, Silvaco's estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company records adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill as new information is obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date. Upon the earlier of the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, any subsequent adjustments are recorded in the consolidated statements of income (loss).

**Goodwill and Other Intangible Assets**

Goodwill represents the excess of the fair value of consideration transferred over the fair value of net identifiable assets acquired. Other intangible assets consist of customer relationships, developed technology and noncompete agreements which are amortized over their useful lives, which range from two to six years. Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable.

Goodwill and intangible assets with indefinite useful lives are not amortized but are tested annually for impairment and more often if there is an indicator of impairment.

The Company performs testing for impairment of goodwill on an annual basis, or as events occur or circumstances change that would more likely than not reduce the fair value of the Company's single reporting unit below its carrying amount. Goodwill is considered impaired if the carrying value of the reporting unit exceeds its fair value.

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable.

No indicators of impairment or impairments charges were identified or recorded to goodwill or intangible assets during the years ended December 31, 2020 and 2021.

### **Concentrations of Credit Risk**

As of December 31, 2020 and 2021, one customer represented 18% of the Company's accounts receivable.

In addition to the concentration of credit risk with respect to trade receivables, the Company's cash on deposit with financial institutions is also exposed to concentration risk. The Company's cash on deposit with financial institutions are insured through various public and private bank deposit insurance programs, foreign and domestic; however, a significant portion of cash balances held as of December 31, 2021 exceed insured limits.

### **Allowance for Doubtful Accounts**

The Company makes judgments as to its ability to collect outstanding receivables and provides allowances for a portion of receivables when collection becomes doubtful. Provisions are made based upon a specific review of all significant outstanding invoices from both value and delinquency perspectives. For those invoices not specifically reviewed, provisions are estimated at differing rates based upon the age of the receivable. In determining these percentages, the Company considers its historical collection experience and current economic trends in the customer's industry and geographic region. Silvaco's allowance for doubtful accounts was \$0.2 million and \$0.3 million as of December 31, 2020 and 2021, respectively. For the years ended December 31, 2020 and 2021, the Company's provision for bad debt expense was \$24.9 thousand and \$195.0 thousand, respectively.

### **Income Taxes**

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statements and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period of the enactment date.

The Company records net deferred tax assets to the extent it believes these assets will more likely than not be realized. In making such determinations, the Company considers all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies and recent financial operations. In the event the Company determines that Silvaco will be able to realize deferred tax assets for which a valuation allowance was used to reduce their carrying value, the adjustment to the valuation allowance will be recorded as a reduction to the provision for income taxes.

Tax benefits related to uncertain tax positions taken or expected to be taken on a tax return are recorded when such benefits meet a more-likely-than-not threshold. Otherwise, these tax benefits are recorded when a tax position has been effectively settled, which means that the statute of limitations has expired, or the appropriate taxing authority has completed its examination even though the statute of limitations remains open.

The Company recognizes interest and penalties related to income taxes within the income tax expense line in the consolidated statements of income (loss). Accrued interest and penalties are included within accrued income taxes in the consolidated balance sheets.

### **Foreign Currencies**

The financial statements of Silvaco's international subsidiaries with local functional currencies are translated to U.S. dollars upon consolidation. Assets and liabilities are translated at the effective exchange rate on the balance sheet date. Results of operations are translated at average exchange rates, which approximate rates in effect when the underlying transactions occurred. For the years ended December 31, 2020 and 2021, the Company recorded foreign currency translation adjustments of \$1.1 million and \$(1.0) million, respectively, within accumulated other comprehensive income (loss).

Certain sales and intercompany transactions are denominated in foreign currencies. These transactions are recorded in functional currency at the appropriate exchange rate on the transaction date. Monetary assets and liabilities denominated in a currency other than the Company's functional currency or its subsidiaries' functional currencies are remeasured at the effective exchange rate on the balance sheet date. Gains and losses resulting from foreign exchange transactions are included in interest and other expense, net. The Company recorded a net foreign exchange loss of \$0.6 million and a net foreign exchange gain of \$0.1 million for the years ended December 31, 2020 and 2021, respectively.

### **Accumulated Other Comprehensive Loss**

Accumulated other comprehensive loss is composed entirely of foreign currency translation adjustments.



### **Share-Based compensation**

The Company accounts for share-based payments in accordance with the authoritative guidance issued by the FASB on share-based compensation, which establishes the accounting for transactions in which an entity exchanges its equity instruments for goods or services. Under the provisions of the authoritative guidance, share-based compensation expense is measured at the grant date, based on the fair value of the award, and is recognized as an expense over the requisite employee service period (generally the vesting period), net of actual forfeitures. For share-based payment awards that contain performance criteria, share-based compensation expense is recorded when the achievement of the performance condition is considered probable of achievement and is recorded on a straight-line basis over the requisite service period. If such performance criteria are not met, no compensation expense is recognized and any recognized compensation expense is reversed.

Historically, the Company has not recorded share-based compensation expense, as restricted stock units ("RSUs") granted under the Company's 2014 Stock Incentive Plan (the "2014 Plan") carry a "double-trigger" requirement which includes a "Liquidity Event," which is not deemed probable as of December 31, 2020 and 2021, until such qualifying Liquidity Event is consummated. See [Note 11](#), Restricted Stock Units for additional information.

### **Fair Value of Financial Instruments**

The Company defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company uses valuation approaches that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The Company determines fair value based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

- Level 1 Inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the reporting entity at the measurement date.
- Level 2 Inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e. derived from prices), for substantially the full term of the asset or liability.
- Level 3 Inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at measurement date.

As of December 31, 2020 and 2021, the carrying amount of the Company's cash, accounts receivable, accounts payable and accrued expenses approximated their fair values due to their short maturities. See [Note 16](#), Fair Value of Financial Instruments for additional information. The Company's note payable is carried at net carrying value.

### **Research and Development Tax Credits**

Silvaco is a recipient of research and development ("R&D") tax credits associated with the Company's French subsidiary. Pursuant to French law, the tax credit is determined on the basis of the eligible R&D expenses incurred during the calendar year. Eligible expenditures include tax deductible depreciation expenses relating to fixed assets, created or acquired newly, assigned to eligible R&D projects, including patents acquired; costs relating to staff qualifying as scientists or engineers; expenses resulting from outsourced R&D projects; expenses incurred for patent registration or in connection with the defense of patents; and expenses relating to the monitoring of technical developments. The tax credits, which are recorded as a reduction of R&D expense, can be offset against corporate income tax liabilities payable with respect to the calendar year during which the eligible R&D expenditures were incurred. Any excess credit can be carried forward and offset against the tax liability of the taxpayer during the next three years. Credits unused after three years will be refunded to the taxpayer. Research and development tax credits are included in prepaid expenses and other current assets in the Company's consolidated balance sheets.

### **Advertising**

Advertising costs are expensed as incurred and were \$26.9 thousand and \$17.4 thousand for the years ended December 31, 2020 and 2021, respectively.

### **Earnings (Loss) Per Share (EPS)**

Basic EPS is computed based on the weighted average number of shares of common stock outstanding. Diluted EPS is computed based on the weighted average number of common shares outstanding increased by dilutive common stock equivalents, attributable to RSU grants.

The following potentially dilutive outstanding securities for the years ended December 31, 2020 and 2021 were excluded from the computation of diluted net income (loss) per share because the issuance of such shares is contingent upon the satisfaction of certain conditions which were not satisfied. See [Note 11](#), Restricted Stock Units for additional information.

	December 31,	
	2020	2021
RSU Grants	3,254,729	4,276,919

### **Subsequent Events**

Subsequent events are events or transactions that occur after the balance sheet date but before consolidated financial statements are issued or are available to be issued. The Company recognizes in the consolidated financial statements the effects of all subsequent events that provide additional evidence about conditions that existed at the date of the balance sheet, including the estimates inherent in the process of preparing the consolidated financial statements. The Company's consolidated financial statements do not recognize subsequent events that provide evidence about conditions that did not exist at the date of the balance sheet but arose after the balance sheet date and before consolidated financial statements are available to be issued.

The Company has evaluated subsequent events through September 23, 2022, which is the date the consolidated financial statements were available to be issued.

### **Recently Adopted Accounting Pronouncements**

**Income Taxes:** In December 2019, the FASB issued Accounting Standards Update ("ASU") 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes, as part of its initiative to reduce complexity in the accounting standards. The amendments in ASU 2019-12 eliminate certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. ASU 2019-12 also clarifies and simplifies other aspects of the accounting for income taxes. ASU 2019-12 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. The Company adopted this standard as of January 1, 2021, with no material impact on the Company's consolidated financial statements.

### **Accounting Guidance Issued and Not Yet Adopted**

**Financial Instruments - Credit Losses:** In June 2016, the FASB issued ASU 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, which provides guidance regarding the measurement of credit losses on financial instruments. The guidance replaces the incurred loss impairment methodology in the current guidance with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to determine credit loss estimates. This ASU will be effective for the Company for fiscal periods commencing after December 15, 2022. The Company is in the process of assessing the impact of this ASU on its consolidated financial statements.

**Leases:** In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). The amendments supersede current lease requirements in Topic 840 which require lessees to recognize most leases on their balance sheets as lease liabilities with corresponding right-of-use assets. The objective of Topic 842 is to establish the principles that lessees and lessors shall apply to report useful information to users of financial statements about the amount, timing, and uncertainty of cash flows arising from a lease.

The FASB subsequently issued ASU 2018-10, ASU 2018-11, ASU 2019-01, ASU 2019-10, ASU 2020-05, and ASU 2021-05, which clarified the implementation guidance and effective date of Topic 842. The standard is effective for the Company beginning in fiscal year 2022 and early adoption is permitted. The Company is currently evaluating the impact on its consolidated financial statements.

### 3. Revenue

The Company's revenue is derived principally from contracts which promise to deliver combinations of software licensing and related maintenance and services, which are accounted for as separate performance obligations with differing revenue recognition patterns. The transaction price is allocated to each distinct performance obligation based on the relative standalone selling price. Software license revenue consists of the Company's software sold under a software license. Revenue related to stand-alone software applications are generally recognized upon shipment and delivery of license keys. For certain arrangements revenue is recognized based on usage or ratably over the term of the arrangement. Maintenance and service revenue consists of both maintenance revenues and professional services revenues which is recognized based on usage or ratably over the term of the arrangement. Timing of revenue recognition may differ from the timing of invoicing to customers. The Company records a contract asset when revenue is recognized prior to invoicing, an accounts receivable on invoicing or deferred revenue when invoicing precedes revenue recognition.

The Company accounts for a contract with a customer when both parties have approved the contract and are committed to perform their respective obligations, each party's rights and payment terms can be identified, the contract has commercial substance, and it is probable the Company will collect substantially all of the consideration it is entitled to. Revenue is recognized when, or as, performance obligations are satisfied by transferring control of a promised software or providing service to a customer.

For multi-year software licenses, the Company generally invoices customers annually at the beginning of each annual coverage period.

#### **Accounts Receivable and Contract Assets**

As of December 31, 2020 and 2021, accounts receivable, net of allowance for doubtful accounts, was \$7.1 million and \$4.5 million, respectively. The Company's allowance for doubtful accounts on accounts receivable was \$0.2 million and \$0.3 million as of December 31, 2020 and 2021, respectively.

As of December 31, 2020 and 2021, contract assets were as follows:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
Short-term portion of contract assets	\$ 6,716	\$ 6,977
Long-term portion of contract assets	1,839	2,465
<b>Total contract assets</b>	<b>\$ 8,555</b>	<b>\$ 9,442</b>

The Company does not maintain an allowance for doubtful accounts for estimated losses with respect to its contract asset portfolio as there is not any historical evidence or current indicators of impairments or write-offs on contract assets. The Company does not have any off-balance-sheet credit exposure related to its customers, and there have not been any write-offs against the Company's contract asset portfolio for the periods presented.

The allowances for doubtful accounts reflect the Company's best estimates of probable losses inherent in the accounts receivable and contract assets' balances. The Company determines the allowances based on known troubled accounts, historical experience, and other currently available evidence.

#### **Transaction Price Allocated to the Remaining Performance Obligations**

As of December 31, 2021, approximately \$21.2 million of revenue is expected to be recognized from remaining performance obligations. Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes both deferred revenue and backlog. The Company's backlog represents installment billings for periods beyond the current billing cycle. The Company expects to recognize revenue on approximately 53% of these remaining performance obligations over the next 12 months, with the balance recognized thereafter.

#### **Deferred Revenue**

Deferred revenue is comprised mainly of unearned revenue related to maintenance and service on software licenses and pending software license deliveries. Maintenance and technical support revenue is recognized ratably over the coverage period. Software license revenue is recognized upfront upon delivery of the licensed software. Deferred revenue also includes contracts for professional services to be performed in the future which are recognized as revenue when the Company delivers the related service pursuant to the terms of the customer arrangement.

The Company's deferred revenue as of December 31, 2020 and 2021 was as follows:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
Short-term portion of deferred revenue	\$ 6,806	\$ 5,415
Long-term portion of deferred revenue	2,913	3,541
<b>Total deferred revenue</b>	<b>\$ 9,719</b>	<b>\$ 8,956</b>

The Company recognized revenue of \$5.1 million and \$7.5 million that was included in the deferred revenue balance at the beginning of fiscal year 2020 and 2021, respectively. All other activity in deferred revenue is due to the timing of invoices in relation to the timing of revenue during fiscal year 2021 as described above. Approximately 60% of the Company's deferred revenue as of December 31, 2021 is expected to be recognized over the next 12 months with the remainder recognized thereafter.

#### 4. Acquisitions

##### ***Coupling Wave Solutions S.A.***

On September 9, 2020, the Company acquired certain assets of Coupling Wave Solutions S.A. ("CWS") for cash consideration of \$42.5 thousand. The Company accounted for the acquisition as an asset purchase. Acquired assets included computer equipment, intellectual property, patents and analysis technologies.

##### ***Compiler Technology, Memory Titles and Cell Titles Division of Dolphin Design SAS***

On November 6, 2020, the Company acquired the memory compiler technology, memory titles and standard cell titles division of Dolphin Design SAS ("Dolphin") for net consideration of \$1.2 million consisting of \$0.4 million in cash at closing and a closing commitment of \$0.8 million to be paid within 12 months of the acquisition. Through December 2021, Silvaco has remitted approximately \$0.8 million pursuant to the Company's closing commitment for the acquisition. As of the date the consolidated financial statements were available to be issued, the Company's final installment under this closing obligation remains outstanding. Silvaco accounted for the acquisition as a business combination. Goodwill resulted from the acquisition as the purchase price exceeded the net fair value of acquired assets and assumed liabilities.

The following table summarizes the fair value of the assets acquired in the Dolphin technology acquisition:

Asset Type	Weighted Average Amortization Period (Years)	Fair Value <i>(in thousands)</i>
Property and equipment		\$ 7
Developed technology	5	800
Customer relationships	4	90
Non-compete agreement	5	20
Goodwill		263
<b>Net assets acquired</b>		<b>\$ 1,180</b>

During the year ended December 31, 2020, the Company incurred \$16.9 thousand in acquisition-related expenses, recognized as selling, general and administrative expense on the consolidated statements of income.

On August 19, 2021, a European investment firm, Aldini AG ("Aldini") sued the Company in connection with the Company's interactions with Dolphin. Aldini's allegations center around the bankruptcy and reorganization of Dolphin in 2018 and Silvaco's acquisition of certain memory assets of Dolphin, which Aldini alleges was done in violation of its rights as a shareholder of Dolphin. Aldini further alleges that the Company, along with the other defendants, was involved in a conspiracy to defraud Dolphin shareholders such as Aldini. The Company considers these allegations to be baseless and is vigorously defending itself in this litigation. The Company accordingly has not recorded a charge for this contingency. See [Note 14](#), Commitments and Contingencies.

**PolytEDA Cloud LLC**

On January 15, 2021 the Company completed the acquisition of physical verification solution and cloud enablement provider PolytEDA Cloud LLC (“PolytEDA”). The acquisition of PolytEDA, a Ukraine-based company, expands Silvaco’s capabilities for rapid physical verification of IC designs prior to mask creation and manufacturing and for cloud enablement of EDA tools.

The total consideration transferred was \$1.9 million, which consisted of \$1.0 million in cash at closing and the estimated fair value of \$1.0 million in contingent consideration to be paid out over four years based on PolytEDA’s technical achievement and projected operating income through January 2025.

Pursuant to the stock purchase agreement for the acquisition of PolytEDA, the selling shareholders are entitled to milestone consideration of up to an aggregate total of \$1.0 million based upon PolytEDA’s technical achievement during 2021 and 2022 in addition to earn-out consideration over a three-year period beginning on the second year following the closing of the acquisition through January 2025. The earn-out does not have a minimum and is based on 20% of the operating income generated by PolytEDA on a quarterly basis, subject to an initial hold-back or payout from a working capital adjustment from the close of the acquisition.

The milestone consideration and earn-out are liabilities classified as contingent consideration as the obligations are due in cash. As such the obligations are recorded at their fair value and re-valued period to period with any changes recorded to operating income (expense). See also, [Note 9](#), Accrued Expenses, and [Note 16](#), Fair Value of Financial Instruments.

The following table summarizes the fair value of the assets acquired and liabilities assumed in the PolytEDA acquisition:

Asset Type	Weighted Average Amortization Period (Years)	Fair Value <i>(in thousands)</i>
Current assets		\$ 5
Developed Technology	5	370
Customer Relationships	4	360
Goodwill		1,386
Current liabilities		(2)
Deferred tax liability		(145)
<b>Net assets acquired and liabilities assumed</b>		<b>\$ 1,974</b>

The fair value of developed technology was determined under a discounted cash flow model through application of the Income Approach, using the Multi-Period Earnings Method. The fair value of customer relationships was derived through a discounted cash flow model under two scenarios. The first scenario relied on a forecast which assumed commercial customers are in place. The second scenario drew from a forecast which assumed that customer relationships would need to be developed over a four year period.

The Company believes that significant synergies are expected to arise from the acquisition of PolytEDA which resulted in goodwill, as the purchase price exceeded the net fair value of the acquired assets and assumed liabilities as part of the stock purchase agreement. The fair value of goodwill associated with the PolytEDA acquisition is not tax deductible for income tax purposes.

During the year ended December 31, 2021, the Company incurred \$23.5 thousand in acquisition-related expenses, recognized as selling, general and administrative expense on the consolidated statements of income.

The operating results of PolytEDA have been included in the Company’s consolidated financial statements since the date of acquisition, and the effects of the business combination were not material to the Company’s consolidated results of operations during 2021.

On February 24, 2022, Russia launched a war on Ukraine. In connection with this event, management is actively assessing the Company’s remediation plans and evaluating the anticipated financial consequence of this event on the Company’s consolidated financial statements. See [Note 15](#), Subsequent Events.

## 5. Property and Equipment, Net

The Company's property and equipment at December 31, 2020 and 2021 consisted of the following:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
Computer software	\$ 4,478	\$ 5,581
Equipment	1,786	751
Buildings and improvements	188	181
Leasehold improvements	151	146
Furniture and fixtures	350	352
<b>Total property and equipment</b>	<b>6,953</b>	<b>7,011</b>
Less accumulated depreciation	(6,072)	(6,374)
<b>Total property and equipment, net</b>	<b>\$ 881</b>	<b>\$ 637</b>

Depreciation expense was \$0.2 million and \$0.3 million for the years ended December 31, 2020 and 2021, respectively.

## 6. Goodwill and Intangible Assets

Goodwill represents the excess of the fair value of consideration transferred over the fair value of net identifiable assets acquired. Identifiable intangible assets acquired in business combinations and asset acquisitions are recorded based on their fair values on the date of acquisition.

Changes in goodwill during the years ended December 31, 2020 and 2021 were as follows:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
<b>Goodwill on January 1st</b>	<b>\$ 7,342</b>	<b>\$ 7,672</b>
Acquisitions	264	1,386
Foreign exchange	66	(32)
<b>Goodwill on December 31st</b>	<b>\$ 7,672</b>	<b>\$ 9,026</b>

For the years ended December 31, 2020 and 2021, intangible assets were classified as follows:

Intangible assets:	Weighted Average Amortization Period	December 31, 2020		
		Gross Carrying Value	Accumulated Amortization	Net Carrying Value
		<i>(in thousands)</i>		
Developed technology	5	\$ 2,885	\$ (1,868)	\$ 1,017
Customer relationships	6	2,446	(1,753)	693
Non-compete agreements	5	180	(160)	20
<b>Total intangible assets</b>		<b>\$ 5,511</b>	<b>\$ (3,781)</b>	<b>\$ 1,730</b>

Intangible assets:	Weighted Average Amortization Period	December 31, 2021		
		Gross Carrying Value	Accumulated Amortization	Net Carrying Value
			(in thousands)	
Developed technology	5	\$ 3,029	\$ (2,037)	\$ 992
Customer relationships	5	2,776	(2,139)	637
Non-compete agreements	5	179	(164)	15
<b>Total intangible assets</b>		<b>\$ 5,984</b>	<b>\$ (4,340)</b>	<b>\$ 1,644</b>

Amortization expense for the intangible assets reflected above was \$0.6 million and \$0.8 million for the years ended December 31, 2020 and 2021, respectively.

As of December 31, 2021, estimated future amortization expense for the intangible assets reflected above was as follows:

For Years Ending December 31,	(in thousands)
2022	\$ 589
2023	544
2024	365
2025	146
2026	—
<b>Total net carrying value of intangible assets</b>	<b>\$ 1,644</b>

## 7. Significant Balance Sheet Components

Prepaid expenses and other current assets consisted of the following:

	December 31,	
	2020	2021
	(in thousands)	
Research and development tax credits	\$ 737	\$ 1,149
Deferred sales commissions <sup>(a)</sup>	547	616
Prepaid taxes	351	—
Short-term lease deposits	—	95
Prepaid expenses	431	361
<b>Total prepaid expenses and other current assets</b>	<b>\$ 2,066</b>	<b>\$ 2,221</b>

Other assets consisted of the following:

	December 31,	
	2020	2021
	(in thousands)	
Deferred sales commissions <sup>(a)</sup>	\$ 1,334	\$ 1,168
Prepaid expenses	—	44
Long-term lease deposits	468	375
<b>Total other assets</b>	<b>\$ 1,802</b>	<b>\$ 1,587</b>

(a) Balance reflects commissions paid for new contracts, primarily new multi-year term license arrangements to be amortized over the anticipated customer life of five years.

## 8. Related Parties

As of December 31, 2020, Silvaco had notes payable to Kipee International, Inc. (“Kipee”) with a total balance owed of \$1.2 million and notes receivable from New Horizons (Cambridge) LTD (“NHC”) of GBP \$0.7 million, or \$0.9 million, and New Horizons France (“NHF”) of \$1.5 million. Each of Kipee, NHC and NHF are real estate entities owned and controlled by the Company’s sole stockholder as of December 31, 2020. The Company’s Director of Global Sales

Operations also serves as director of NHC. The notes payable to Kipee and the notes receivable from NHC and NHF were settled in September 2021, with the Company's sole stockholder paying Silvaco \$0.2 million, which is the net balance remaining after settlement of both the Kipee notes and the NHC and NHF notes.

In addition to its notes receivable the Company has two international office leases with NHC and NHF in Cambridgeshire, England and Grenoble, France, respectively, and through September of 2021, the Company leased office space from Kipee in Austin, Texas. In connection with these lease arrangements, the Company recorded rent expense in the aggregate amount of \$0.4 million during the years ended December 31, 2020 and 2021.

On December 8, 2021, Silvaco entered into a promissory note with the Company's founding principal stockholder for \$0.5 million ("Promissory Note") bearing an interest rate of 3.25% payable on July 1, 2022. As of December 31, 2021, the balance of Promissory Note, including accrued interest, was \$0.5 million. The Promissory Note was repaid in full in July 2022. See also [Note 17](#), Subsequent Events.

## 9. Accrued Expenses and Other Long-Term Liabilities

Accrued expenses consisted of the following:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
Accrued employee expenses	\$ 3,947	\$ 3,475
Accrued taxes payable	1,512	1,718
Accrued royalties payable <sup>(a)</sup>	1,456	1,149
Contingent consideration <sup>(b), (c)</sup>	1,088	979
Accrued operating expense	380	769
Accrued interest payable	53	—
Other	100	79
<b>Total accrued expenses</b>	<b>\$ 8,536</b>	<b>\$ 8,169</b>

Other long-term liabilities consisted of the following:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
Contingent consideration <sup>(b), (c)</sup>	—	891
<b>Total other long-term liabilities</b>	<b>\$ —</b>	<b>\$ 891</b>

(a) Silvaco has entered into various renewable license agreements under which the Company has been granted access to the licensor's technology and the right to sell the technology in its product line. Royalties are payable to developers of the software at various rates and amounts, which generally are based upon unit sales, revenue or flat fees. Royalty fees are reported in cost of revenue upon delivery pursuant to the terms and conditions of the Company's contractual obligations.

(b) On March 2, 2018, Silvaco, Nangate Inc, Nangate Denmark APS (together with Nangate, Inc. referred to as "Nangate") and Nangate's shareholder representative, Ole Christian Andersen, entered into a stock purchase agreement, pursuant to which Silvaco agreed to purchase all the outstanding capital stock of Nangate. Pursuant to the stock purchase agreement, the selling shareholders of Nangate are entitled to an earn-out over a five-year period between the closing date of the acquisition and March 3, 2023. The earn-out does not have a minimum and is based on 20% of net revenues generated by Nangate on a quarterly basis, subject to an initial hold-back or payout from a working capital adjustment from the close of the acquisition. This earn-out is a liability classified as contingent consideration as the obligation is due in cash. As such the obligation is recorded at its fair value and re-valued period to period with any changes recorded to operating income (expense). In an effort to clarify its obligations with respect to the earnout payment due to the selling shareholders of Nangate, the Company sought declaratory relief in the California Superior Court in December 2020. See also, [Note 14](#), Commitments and Contingencies, and [Note 16](#), Fair Value of Financial Instruments.

(c) Pursuant to the January 2021 stock purchase agreement for the acquisition of PolytEDA, the selling shareholders are entitled to milestone consideration of up to \$1.0 million based upon PolytEDA's technical achievement during 2021 and 2022 in addition to earn-out consideration over a three-year period beginning on the second year following the closing of the acquisition through January 2025. The earn-out does not have a minimum and is based on 20% of the operating income generated by PolytEDA on a quarterly basis, subject to an initial hold-back or payout from a working capital adjustment from the close of the acquisition. The milestone consideration and earn-out are liabilities classified as contingent consideration as the obligations are due in cash. As such the obligations are recorded at their fair value and re-valued period to period with any changes recorded to operating income (expense). See also, [Note 4](#), Acquisitions and [Note 16](#), Fair Value of Financial Instruments.



## 10. Note Payable

On April 30, 2020, the Company entered into a loan with Bank of the West in an aggregate principal amount of \$2.3 million pursuant to the PPP Loan under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). The PPP Loan was evidenced by a promissory note, dated May 7, 2020, maturing two years from the disbursement date, bearing interest at a rate of 1.0% per annum, with the first six months of interest deferred. The PPP Loan was subject to forgiveness to the extent proceeds were used pursuant to the terms and limitations of the PPP Loan. On June 29, 2021, the PPP Loan was forgiven. The forgiveness of the PPP Loan amount during 2021 is reflected as a gain on debt extinguishment in the consolidated statements of income (loss) and cash flows.

## 11. Restricted Stock Units

Silvaco has 8 million shares of common stock reserved for RSU grants. Since 2014, the Company has issued RSUs to employees, directors, and advisors, pursuant to its 2014 Plan. As of December 31, 2020 and 2021, 3,254,729 and 4,276,919 RSUs were outstanding under the 2014 Plan, including 1,259,790 and 1,432,000 RSUs granted during the years ended December 31, 2020 and 2021, respectively. The RSUs generally have two vesting requirements, a time and service-based requirement (the "Time-Based Requirement") and a "Liquidity Event Requirement." The Time-Based Requirement generally requires four years for full vesting of the grants, with 25% vesting after one year and quarterly vesting over the subsequent three years. Certain grants have had modified time-based vesting requirements, including certain grants that have been issued with the time-based service requirement satisfied on the grant date. The Liquidity Event Requirement requires the completion of an underwritten initial public offering or a change of control, as defined in the Company's 2014 Plan documents.

The following table summarizes the Company's RSU activity for 2020 and 2021:

	Weighted Average		Restricted Stock Units		
	Fair Value	Remaining Contract Term	Granted	Time Vested	Time Unvested
<b>Balance as of January 1, 2020</b>	<b>\$ 1.48</b>	<b>5.73</b>	<b>2,120,278</b>	<b>1,843,712</b>	<b>276,566</b>
Granted in 2020	3.53	9.19	1,259,790	—	1,259,790
Vested	2.72	8.30	—	151,289	(151,289)
Forfeited / canceled	2.87	7.95	(125,339)	—	(125,339)
<b>Balance as of December 31, 2020</b>	<b>\$ 2.22</b>	<b>6.33</b>	<b>3,254,729</b>	<b>1,995,001</b>	<b>1,259,728</b>
Granted in 2021	3.65	9.20	1,432,000	—	1,432,000
Vested	3.63	8.60	—	463,418	(463,418)
Forfeited / canceled	3.16	7.80	(399,810)	—	(399,810)
<b>Balance as of December 31, 2021</b>	<b>\$ 2.61</b>	<b>6.40</b>	<b>4,286,919</b>	<b>2,458,419</b>	<b>1,828,500</b>

The grant date fair value of the RSU awards was based on the Probability-Weighted Expected Return Method, which assessed the value of the Company's equity based on an analysis of future enterprise values under various scenarios.

The equity value of Silvaco was determined by applying certain probability weightings to the estimated values in two Liquidity Event scenarios as well as a "Stay Private" scenario. For the year ended December 31, 2020, the analysis gave consideration to a Special Purpose Acquisition Company (SPAC) transaction and a traditional initial public offering ("IPO"). For the year ended December 31, 2021, the analysis gave consideration to two IPO scenarios, one "Early" and one "Late." For the Stay Private scenario, the Company's value was estimated using an Income Approach, based on earnings power through application of the Discounted Cash Flow Method, and the Market Approach, specifically the Guideline Comparable Company Method and Guideline Transaction Method. The estimated value of the common stock in each scenario was then probability-weighted based on inputs provided by management regarding the likelihood of each scenario as of the valuation date.

Consistent with the relevant accounting guidance, the Company has not recorded share-based compensation expense for the RSUs, due to the Liquidity Event Requirement. The Company has valued the unrecorded share-based compensation expense using historical estimates of the fair value of the Company's common stock.

As of December 31, 2020, the Company had 3,254,729 RSUs and \$7.2 million in deferred share-based compensation expense, of which 1,995,001 RSUs and \$2.9 million represent awards that have met the Time-Based Requirement, and the remaining 1,259,728 RSUs and \$4.3 million represent awards that have not met this requirement.

As of December 31, 2021 the Company had 4,286,919 RSUs and \$11.4 million in deferred share-based compensation expense, of which \$5.2 million deferred share-based compensation expense relates to 2,458,419 RSUs that have met the Time-Based Requirement, and the remaining \$6.2 million deferred share-based compensation expense relates to 1,828,500 RSUs awards that have not met this requirement.

## 12. Income Taxes

The domestic and foreign components of the Company's income (loss) before tax provision for the years ended December 31, 2020 and 2021, were as follows:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
Domestic	48	(1,527)
Foreign	2,808	(48)
<b>Income (loss) before income tax provision</b>	<b>\$ 2,856</b>	<b>\$ (1,575)</b>

The components of the Company's income tax provision for the years ended December 31, 2020 and 2021, were as follows:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
<b>Current:</b>		
Federal	40	40
State	4	7
Foreign	362	312
<b>Deferred:</b>		
Foreign	(100)	(89)
<b>Income tax provision</b>	<b>\$ 306</b>	<b>\$ 270</b>

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities as of December 31, 2020 and 2021 were as follows:

	December 31,	
	2020	2021
	<i>(in thousands)</i>	
<b>Deferred tax assets:</b>		
Accruals and reserves	256	233
Depreciable and amortizable assets	147	94
Net operating loss carryforward	1,254	2,145
Tax Credits	7,276	7,806
<b>Total deferred tax asset</b>	<b>\$ 8,933</b>	<b>\$ 10,278</b>
<b>Valuation allowance</b>	<b>(7,397)</b>	<b>(9,255)</b>
<b>Net deferred tax asset</b>	<b>\$ 1,536</b>	<b>\$ 1,023</b>
<b>Deferred tax liabilities</b>		
Revenue recognition	(1,536)	(1,023)
Foreign intangibles	(56)	(112)
<b>Net deferred tax liability</b>	<b>\$ (56)</b>	<b>\$ (112)</b>

The following is a reconciliation of the federal statutory income tax rate to the Company's effective tax rate for the years ended December 31, 2020 and 2021:

	December 31,	
	2020	2021
<b>Tax at federal statutory rate</b>	<b>21 %</b>	<b>21 %</b>
Tax credits	20 %	20 %
Other	16 %	12 %
Valuation allowance	(74)%	(70)%
<b>Effective tax rate</b>	<b>(17)%</b>	<b>(17)%</b>

Management establishes a valuation allowance for those deductible temporary differences when it is more likely than not that the benefit of such deferred tax assets will not be recognized. The ultimate realization of deferred tax assets is dependent upon the Company's ability to generate taxable income during periods in which the temporary differences become deductible. Management regularly reviews the deferred tax assets for recoverability and establishes a valuation allowance based on historical taxable income, projected future taxable income, and the expected timing of the reversals of existing temporary differences. Through the year ended December 31, 2021, management believes that it is more likely than not that the deferred tax assets will not be realized, such that a full valuation allowance has been recorded.

During the year ended December 31, 2021, the valuation allowance increased by \$1.9 million.

As of December 31, 2021, the Company had net operating loss carryforwards for federal income tax purposes of \$10.5 million, of which \$6.6 million have no expiration date and the remaining begin expiring in 2036. As of December 31, 2021, the Company had federal research and development tax credits of \$6.2 million which begin expiring in 2024.

As of December 31, 2021 the Company had net operating loss carryforwards for state income tax purposes of \$3.1 million which begin expiring in 2034 and state research and development credits of \$7.3 million which begin expiring in 2022.

The Company has not recorded a provision for deferred U.S. tax expense that could result from the remittance of foreign undistributed earnings since the Company intends to reinvest the earnings in its foreign subsidiaries indefinitely.

The following table summarizes the activity related to the Company's gross unrecognized tax benefits:

	December 31,	
	2020	2021
	(in thousands)	
<b>Balance as of January 1,</b>	<b>\$ —</b>	<b>\$ 9,115</b>
Increases related to prior years' tax positions	8,702	139
Increases related to current year's tax positions	413	816
Decreases related to prior years' tax positions	—	(16)
<b>Balance as of December 31,</b>	<b>\$ 9,115</b>	<b>\$ 10,054</b>

The Company records the tax benefits of uncertain income tax positions where recognition is not more likely than not. As of December 31, 2021, the Company has unrecognized tax benefits of \$10.1 million, of which \$0.4 million would impact the effective tax rate, if recognized, and the remainder would result in the establishment of a deferred tax asset and a corresponding valuation allowance.

The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. During the tax year 2021, interest and penalties recorded in the statements of income(loss) were \$14 thousand. The Company does not believe there will be material changes in its unrecognized tax positions over the next 12 months.

The Company files income tax returns in the U.S. federal jurisdiction, various state jurisdictions and certain foreign jurisdictions. The Company is not currently under audit by the Internal Revenue Service or other similar state, local, and foreign authorities. All tax years remain open to examination by major taxing jurisdictions to which the Company

is subject for a period of 3 years for federal and 4 years for states, after the utilization of net operating loss carryforwards and credits.

### 13. Segment Reporting and Geographical Concentration

The Company manages its operations through an evaluation of a consolidated business segment that solves semiconductor design challenges by offering affordable and competitive TCAD software, EDA software and design IP to support engineers and researchers across the globe. The chief operating decision maker reviews revenues of the Company's operating segments for performance evaluation and resource allocation among these three solution offerings. The Company's operating segments have been aggregated into one reportable segment, as they are similar in the nature of services, production process, and distribution of services.

The Company's single reportable segment recorded customer revenue from the following geographical areas for the years ended December 31, 2020 and 2021:

Region	December 31,	
	2020	2021
	<i>(in thousands)</i>	
Asia	\$ 24,695	\$ 24,839
North America	12,195	13,174
Europe	3,390	3,950
<b>Total revenue</b>	<b>\$ 40,280</b>	<b>\$ 41,963</b>

The Company manages its assets on a total company basis, not by operating segment. Therefore, the chief operating decision maker does not regularly review any asset information by operating segment and, accordingly, asset information is not reported by operating segment.

The following table presents a summary of property and equipment by region as of December 31, 2020 and 2021:

Region	December 31,	
	2020	2021
	<i>(in thousands)</i>	
North America	\$ 374	\$ 319
Asia	409	289
Europe	98	29
<b>Total property and equipment</b>	<b>\$ 881</b>	<b>\$ 637</b>

### 14. Commitments and Contingencies

The Company's headquarters are located in Santa Clara, California, where the Company has an operating lease covering its corporate office expiring in June 2022. The Company also has operating leases in the United States in Georgia, Texas and Massachusetts, and abroad, in Japan, France, China, the United Kingdom, and South Korea, among other countries. The expiration dates for these leases range from 2022 through 2029. Total rent expense for operating leases was \$1.2 million and \$1.4 million for the years ended December 31, 2020 and 2021, respectively.

The following is a schedule of future minimum lease payments for all operating leases as of December 31, 2021:

Year Ending December 31,	Amount
	<i>(in thousands)</i>
2022	\$ 1,447
2023	1,170
2024	1,095
2025	470
2026	339
Thereafter	881
<b>Total future minimum lease payments</b>	<b>\$ 5,402</b>

### **Warranties**

The Company typically provides its customers a warranty on its software licenses for a period of no more than 90 days and on its other tools for a period of no more than one year. Such warranties are accounted for in accordance with the authoritative guidance issued by the FASB on contingencies. For the years ended December 31, 2020 and 2021, the Company has not incurred any costs related to warranty obligations.

### **Indemnification**

Under the terms of substantially all of its license agreements, the Company has agreed to indemnify its customers for costs and damages arising from claims against such customers based on, among other things, allegations that the Company's software infringes the intellectual property rights of a third party. In most cases, in the event of an infringement claim, the Company retains the right to (i) procure for the customer the right to continue using the software; (ii) replace or modify the software to eliminate the infringement while providing substantially equivalent functionality; or (iii) if neither (i) nor (ii) can be reasonably achieved, the Company may terminate the license agreement and refund to the customer a pro-rata portion of the license fee paid to the Company.

Such indemnification provisions are accounted for in accordance with the authoritative guidance issued by the FASB on guarantees. From time to time, in the ordinary course of business, the Company receives claims for indemnification, typically from original equipment manufacturers.

### **Contingencies**

The Company is involved in routine legal proceedings in the ordinary course of business. The outcome of such matters is not expected to have a material adverse effect on the Company's consolidated financial position, results of operations, or liquidity. However, each of these matters is subject to various uncertainties and it is possible that an unfavorable resolution of one or more of these proceedings could materially affect the Company's results of operations, cash flows or financial position.

In an effort to clarify its obligations with respect to the earnout payment due to the selling shareholders of Nangate, the Company sought declaratory relief in the California Superior Court in December 2020. In February 2021, two of the selling shareholders of Nangate (together with a third cross-complainant who joined later, the "Nangate Parties") filed a cross-complaint against the Company and two members of the Company's board of directors, alleging, among other causes of action, breach of contract, fraud and negligent misrepresentation. In January 2022, Andersen filed a third amended cross-complaint against Silvaco, Inc. and certain of its board members alleging breach of contract, fraud, and unfair business practices and is seeking \$20 million in damages, along with punitive damages. In the intervening period, the Company and the Nangate Parties have engaged in motion practice related to, among other items, the removal of certain of the Company's board members from the proceedings. Each party has also responded to requests for production and begun performing depositions. No trial date has been set. The Company considers these allegations to be baseless and is vigorously defending itself in this litigation. The Company accordingly has not recorded a charge for this contingency.

On August 19, 2021, Aldini sued the Company, the Company's French affiliate, a member of the Company's board of directors and the Company's CEO, among numerous other noncompany defendants, in connection with the Company's interactions with Dolphin. Aldini's allegations center around the bankruptcy and reorganization of Dolphin in 2018 and Silvaco's acquisition of certain memory assets of Dolphin, which Aldini alleges was done in violation of its rights as a shareholder of Dolphin. Aldini further alleges that the Company, along with the other defendants, was involved in a conspiracy to defraud Dolphin shareholders such as Aldini. The Company considers these allegations to be baseless and is vigorously defending itself in this litigation. The Company accordingly has not recorded a charge for this contingency. See [Note 4](#), Acquisitions.

### **15. Defined Contribution Plan**

The Company maintains a defined contribution or 401(k) Plan for its qualified U.S. employees. Participants may contribute a percentage of their compensation on a pre-tax basis, subject to a maximum annual contribution imposed by the Internal Revenue Code. During each of the years ended December 31, 2020 and 2021, the Company contributed \$0.1 million to the 401(k) Plan.

## 16. Fair Value of Financial Instruments

### Financial Instruments Measured at Fair Value on a Recurring Basis

The following tables present the Company's liabilities that are measured on a recurring basis as of December 31, 2020 and 2021:

	Fair value measurements as of December 31, 2020			
	<i>(in thousands)</i>			
	Carrying value	Level 1	Level 2	Level 3
<b>Liabilities:</b>				
Contingent consideration	1,088	—	—	1,088
<b>Total</b>	<b>\$ 1,088</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 1,088</b>
	Fair value measurements as of December 31, 2021			
	<i>(in thousands)</i>			
	Carrying value	Level 1	Level 2	Level 3
<b>Liabilities:</b>				
Contingent consideration	1,870	—	—	1,870
<b>Total</b>	<b>\$ 1,870</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 1,870</b>

Pursuant to the stock purchase agreements for the acquisition of Nangate and PolytEDA, the selling shareholders are entitled to additional milestone and earn out consideration based on net revenues, operating income and technical achievement. The milestone consideration and earn-out liabilities are classified as contingent consideration as the obligations are due in cash. As such the obligations are recorded at their fair value and re-valued period to period with any changes recorded to operating income (expense).

The Company's contingent consideration is valued using a discounted cash flow model, and the assumptions used in preparing the discounted cash flow model include estimates for interest rates and the amount of cash flows, in addition to the expected net revenue, operating income and technical achievement of the acquired technology. See also, [Note 4](#), Acquisitions, [Note 9](#), Accrued Liabilities and [Note 14](#), Commitments and Contingencies.

The following is a reconciliation of changes in the liability related to contingent consideration during the years ended December 31, 2020 and 2021:

	<i>(in thousands)</i>
<b>Fair value as of January 1, 2020</b>	<b>\$ 1,578</b>
Change in fair value	(36)
Earn-out payments	(454)
<b>Fair value as of December 31, 2020</b>	<b>1,088</b>
PolytEDA acquisition	974
Change in fair value	295
Earn-out payments	(440)
Foreign exchange	(47)
<b>Fair value as of December 31, 2021</b>	<b>\$ 1,870</b>

Nonfinancial assets such as property and equipment, intangibles assets, and goodwill are evaluated for impairment and adjusted to fair value using Level 3 inputs only when impairment is recognized.

### 17. Subsequent Events

On February 24, 2022, Russia launched a war with Ukraine. In connection with this event, management is currently assessing the recoverability of \$1.8 million in intangible and other assets associated with the Ukrainian-based operations of PolytEDA on the Company's balance sheet as of December 31, 2021.

On March 30, 2022, Silvaco entered a second related party note payable with the Company's founding principal stockholder for \$0.5 million bearing interest at 3.25% payable on March 30, 2023.

On May 1, 2022, the Company entered into a commercial lease agreement with Kipee, a related party, for Silvaco's new corporate office at 4701 Patrick Henry Drive in Santa Clara, California. The Company's future minimum lease commitment under this three year arrangement, which commenced on May 1, 2022 and expires on March 31, 2025, is \$0.6 million.

On June 13, 2022, Silvaco entered into a \$4.0 million line of credit with the Company's founding principal stockholder bearing interest at a rate of prime plus 1% per annum. The Company has drawn \$2.0 million on this line of credit as of September 23, 2022.

In July 2022, Silvaco's \$0.5 million Promissory Note was repaid in full.

On August 23, 2022, Aldini AG filed a Second Amended Complaint against Silvaco, Inc., Silvaco France, and certain of its board members that included claims of trade secret theft, conspiracy, and intentional interference with a prospective economic advantage in relation to Silvaco's acquisition of certain assets of Dolphin Design SAS. Aldini AG seeks \$703 million and punitive damages. Silvaco, Inc. filed a motion to dismiss the suit and intends to contest the matter vigorously.

**SILVACO GROUP, INC.**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**  
*(in thousands except share and par value amounts)*

	December 31, 2021	September 30, 2022 <i>(unaudited)</i>
<b>ASSETS</b>		
Current assets:		
Cash	\$ 6,704	\$ 3,971
Accounts receivable, net	4,466	9,113
Contract assets	6,977	7,777
Prepaid expenses and other current assets	2,221	1,899
Total current assets	20,368	22,760
Property and equipment, net	637	588
Operating lease right-of-use assets, net	—	2,413
Intangible assets, net	1,644	752
Goodwill	9,026	9,026
Long-term portion of contract assets	2,465	2,295
Other assets	1,587	1,272
Total assets	\$ 35,727	\$ 39,106
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 2,078	\$ 684
Accrued expenses	8,169	9,592
Accrued income taxes	714	1,009
Operating lease liabilities, current	—	933
Deferred revenue	5,415	7,025
Related party notes payable	501	500
Related party line of credit	—	2,000
Other current liabilities	48	—
Total current liabilities	16,925	21,743
Long-term portion of deferred revenue	3,541	3,509
Operating lease liabilities, non-current	—	1,481
Other long-term liabilities	891	222
Total liabilities	21,357	26,955
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Common stock, \$0.0001 par value; 50,000,000 shares authorized; 40,000,000 shares issued and outstanding	4	4
Retained earnings	15,854	14,953
Accumulated other comprehensive loss	(1,488)	(2,806)
Total stockholders' equity	14,370	12,151
Total liabilities and stockholders' equity	\$ 35,727	\$ 39,106

*The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.*



**SILVACO GROUP, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF LOSS**  
(Unaudited, in thousands except share and per share amounts)

	Nine Months Ended September 30,	
	2021	2022
<b>Revenue:</b>		
Software license revenue	\$ 21,563	\$ 27,946
Maintenance and service	9,541	8,727
Total revenue	31,104	36,673
Cost of revenue	6,571	6,767
Gross profit	24,533	29,906
<b>Operating expenses:</b>		
Research and development	10,062	9,851
Selling and marketing	7,984	7,935
General and administrative	9,072	11,607
Impairment charges	—	560
Total operating expenses	27,118	29,953
Operating loss	(2,585)	(47)
Gain on debt extinguishment	2,278	—
Interest and other expense, net	(58)	(237)
Loss before income tax provision	(365)	(284)
Income tax provision	301	617
Net loss	\$ (666)	\$ (901)
<b>Net loss per share attributable to common stockholders:</b>		
Basic and diluted	\$ (0.02)	\$ (0.02)
<b>Weighted average shares used in computing per share amounts:</b>		
Basic and diluted	40,000,000	40,000,000

*The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.*

**SILVACO GROUP, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS**  
*(Unaudited, in thousands)*

	<b>Nine Months Ended September 30,</b>	
	<b>2021</b>	<b>2022</b>
Net loss	\$ (666)	\$ (901)
Other comprehensive loss:		
Foreign currency translation adjustments	(696)	(1,318)
Comprehensive loss	<u>\$ (1,362)</u>	<u>\$ (2,219)</u>

*The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.*

**SILVACO GROUP, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
*(Unaudited, in thousands except share amounts)*

	Nine Months Ended September 30, 2021				
	Common Stock		Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount			
Balance, December 31, 2020	40,000,000	\$ 4	\$ 17,699	\$ (461)	\$ 17,242
Other comprehensive loss	—	—	—	(696)	(696)
Net loss	—	—	(666)	—	(666)
Balance, September 30, 2021	40,000,000	\$ 4	\$ 17,033	\$ (1,157)	\$ 15,880

	Nine Months Ended September 30, 2022				
	Common Stock		Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount			
Balance, December 31, 2021	40,000,000	\$ 4	\$ 15,854	\$ (1,488)	\$ 14,370
Other comprehensive loss	—	—	—	(1,318)	(1,318)
Net loss	—	—	(901)	—	(901)
Balance, September 30, 2022	40,000,000	\$ 4	\$ 14,953	\$ (2,806)	\$ 12,151

*The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.*

**SILVACO GROUP, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
*(Unaudited, in thousands)*

	Nine Months Ended September 30,	
	2021	2022
<b>Cash flows from operating activities:</b>		
Net loss	\$ (666)	\$ (901)
Adjustments to reconcile net loss to net cash used in operating activities (excluding assets acquired and liabilities assumed at acquisition):		
Depreciation and amortization	917	391
Gain on debt extinguishment	(2,278)	—
Impairment charges	—	560
Change in fair value of contingent consideration	—	17
Changes in operating assets and liabilities:		
Accounts receivable	3,122	(5,048)
Contract assets	(2,037)	(1,863)
Prepaid and other current assets	(290)	(391)
Accounts payable	(863)	(1,318)
Accrued expenses	235	2,458
Income tax payable	172	339
Deferred revenue	(832)	2,227
Other current liabilities	400	738
Other assets	(98)	(606)
Net cash used in operating activities	(2,218)	(3,397)
<b>Cash flows from investing activities:</b>		
Acquisitions	(1,000)	—
Purchases of property and equipment	(191)	(64)
Proceeds from related party loan receivable	1,200	—
Net cash provided used in investing activities	9	(64)
<b>Cash flows from financing activities:</b>		
Repayment of related party note	—	(500)
Contingent consideration	(314)	(822)
Proceeds from related party financing	—	2,500
Net cash provided by financing activities	(314)	1,178
Effect of exchange rate fluctuations on cash	(389)	(450)
Net decrease in cash	(2,912)	(2,733)
Cash, beginning of year	9,720	6,704
Cash, end of year	\$ 6,808	\$ 3,971
<b>Supplemental disclosures of cash flow information:</b>		
Income taxes paid	\$ 111	\$ 107
Interest paid	\$ 9	\$ 5
<b>Noncash investing and financing activities:</b>		
Right of use assets obtained in exchange for lease obligations	\$ —	\$ 2,807
Related party loan payable net settled in exchange for related party loan receivable	\$ 1,070	\$ —
Contingent and deferred consideration for business acquisition during the year	\$ 974	\$ —

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

**SILVACO GROUP, INC.**  
**NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**(Unaudited)**

## **1. Description of Business**

Silvaco Group, Inc. (“Silvaco,” and together with its subsidiaries, the “Company”) was incorporated as a Delaware corporation on November 18, 2009. The Company is a provider of technology computer aided design (“TCAD”) software, electronic data automation (“EDA”) software and semiconductor intellectual property (“SIP”). TCAD, EDA and SIP solutions enable semiconductor and photonics companies to increase productivity, accelerate their products’ time-to-market and reduce their development and manufacturing costs. The Company has decades of expertise developing the “technology behind the chip” and providing solutions that span from atoms to systems, starting with providing software for the atomic level simulation of semiconductor and photonics material for devices, to providing software and SIP for the design and analysis of circuits and system level solutions. The Company provides SIP for system-on-a-chip (“SoC”), integrated circuits (“ICs”) and SIP management tools to enable team collaborations on complex SoC designs. The Company’s customers include semiconductor manufacturers, original equipment manufacturers (“OEMs”) and design teams who deploy the Company’s solutions in production flows across the Company’s target markets, including display, power devices, automotive, memory, high performance computing (“HPC”), internet of things (“IoT”) and 5G/6G mobile markets.

Given the multi-discipline problem-solving needs of the Company’s customers, a single license of software may require components from multiple product lines and include combined technologies. The Company also has a multi-year product and integration strategy that often results in new, combined products or changes to historical product offerings. As they are similar in the nature of services, production process, and distribution of services, the Company’s solution offerings have been aggregated into one reportable segment.

## **2. Summary of Significant Accounting and Reporting Policies**

### ***Basis of presentation and consolidation***

The accompanying consolidated financial statements have been prepared in accordance with U.S. Generally Accepted Accounting Principles (“GAAP”) and include the accounts of Silvaco and all of the Company’s wholly-owned 16 subsidiaries with operations in North America, Europe, Asia and South America. All intercompany transactions and balances have been eliminated upon consolidation.

Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with GAAP have been omitted from these condensed consolidated financial statements, as permitted by Securities and Exchange Commission (“SEC”) rules and regulations. Accordingly, these condensed consolidated financial statements should be read in conjunction with its audited consolidated financial statements for the year ended December 31, 2021 and the related notes thereto. The December 31, 2021 condensed consolidated balance sheet was derived from the audited consolidated financial statements as of that date. In management’s opinion, the unaudited interim consolidated financial statements have been prepared on the same basis as the annual financial statements and reflect all adjustments, which include only normal recurring adjustments necessary for the fair statement of the condensed consolidated financial statements.

The results of operations for the nine months ended September 30, 2022 are not necessarily indicative of the Company’s operating results to be expected for the full fiscal year or any other future interim or annual period.

### ***Coronavirus pandemic***

The Company is continuing to monitor the impact of COVID-19 on all aspects of its business. The COVID-19 pandemic has caused and may continue to cause travel bans or disruptions, and in some cases, prohibition of non-essential activities, disruption and shutdown of businesses and greater uncertainty in global financial markets. The impact of COVID-19 is fluid and uncertain, but it has caused and may continue to cause various negative effects, including an inability to meet with actual or potential customers, customers deciding to delay or abandon their planned purchases or failing to make payments to the Company, closures in the Company’s customers’ offices, and delays or disruptions in its customers’ supply chains.

As a result of the COVID-19 pandemic, the Company’s average sales cycles were extended due to closures of certain of its customers’ offices. The Company also experienced delayed payments from many of its customers in China and Europe. Additionally, the Company expended resources to enable its employees to work from home. For example, the Company used resources to strengthen its cybersecurity measures and provide employees with work

from home stipends, computers and related equipment, and enhanced internet bandwidth connections. In some locations the Company incurred costs associated with the transition from work from home back to its offices, including sanitization costs and cost related to creating workstations and work schedule that permit social distancing. In other locations, the Company closed, and has not reopened, its offices. Extended sales cycles, delayed payments, and costs associated with the work from home and back to office transitions impacted the Company's business. To help alleviate this impact, the Company received a PPP loan pursuant to the CARES Act on May 7, 2020, in an aggregate principal amount of \$2.3 million. The Company used proceeds of the PPP Loan to fund qualifying payroll and other expenses.

The Company's ability to close transactions with new and existing customers, its demand generation activities, and the efficiency and effect of those activities may be negatively affected, and it has been and, until the COVID-19 pandemic is contained, will continue to, be more difficult for the Company to forecast its operating results. These uncertainties have, and may continue to, put pressure on global economic conditions. Overall research and development spending has caused, and may continue to cause, the Company's customers to modify spending priorities or delay or abandon purchasing decisions, thereby lengthening bookings cycles for the Company's software solutions and making it difficult for management to forecast bookings and operating results and make decisions about future investments, any of which could materially harm the Company's business, operating results and financial condition.

Further, the Company's management team is focused on addressing the impacts of COVID-19 on its business, which has required and will continue to require, a large investment of their time and resources and may distract the Company's management team or disrupt the Company's operating plans. The extent to which COVID-19 ultimately impacts the Company's results of operations, cash flow and financial position will depend on future developments, which are uncertain and cannot be predicted, including but not limited to, the duration and spread of the pandemic, its severity, the actions taken by governments and authorities to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume.

#### ***War in Ukraine***

On February 24, 2022, Russia launched a full scale invasion of Ukraine. As a result of local economic uncertainties and disruption created by the initiation of war, the Company recorded an impairment charge of \$0.6 million to reduce the carrying value of intangible assets associated with Silvaco's Ukrainian subsidiary which management determined would not be recoverable. See also Note 5, Acquisitions, Note 6, Goodwill and Intangible Assets and [Note 13](#), Fair Value of Financial Instruments.

#### ***Paycheck Protection Program Loan ("PPP Loan")***

The Company accounted for its PPP Loan as debt pursuant to Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 470, *Debt*. The forgiveness of the PPP Loan amount during the nine months ended September 30 2021 is reflected as a gain on debt extinguishment in the consolidated statements of income (loss) and cash flows.

#### ***Use of estimates***

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the amounts of revenue and expenses during the reported periods. The Company's significant estimates include those related to revenue recognition, accounts receivable allowances, share-based payment compensation, valuation of goodwill and other intangible assets, uncertain tax positions and income taxes. Actual results could differ from those estimates.

#### ***Concentrations of credit risk***

As of December 31, 2021 and September 30, 2022, one customer represented 18% and 37% of the Company's accounts receivable, respectively.

In addition to the concentration of credit risk with respect to trade receivables, the Company's cash on deposit with financial institutions is also exposed to concentration risk. The Company's cash on deposit with financial institutions are insured through various public and private bank deposit insurance programs, foreign and domestic; however, a significant portion of cash balances held as of September 30, 2022 exceed federally insured limits.

**Foreign currencies**

The financial statements of Silvaco's international subsidiaries with local functional currencies are translated to U.S. dollars upon consolidation. Assets and liabilities are translated at the effective exchange rate on the balance sheet date. Results of operations are translated at average exchange rates, which approximate rates in effect when the underlying transactions occurred. For the nine months ended September 30, 2021 and 2022, the Company recorded foreign currency translation adjustments of \$(0.7) million and \$(1.3) million, respectively, within accumulated other comprehensive income (loss).

Certain sales and intercompany transactions are denominated in foreign currencies. These transactions are recorded in functional currency at the appropriate exchange rate on the transaction date. Monetary assets and liabilities denominated in a currency other than the Company's functional currency or its subsidiaries' functional currencies are remeasured at the effective exchange rate on the balance sheet date. Gains and losses resulting from foreign exchange transactions are included in interest and other expense, net. The Company recorded a net foreign exchange loss of \$0.1 million and a net foreign exchange gain of \$0.7 million for the nine months ended September 30, 2021 and 2022, respectively.

**Accumulated other comprehensive loss**

Accumulated other comprehensive loss is composed entirely of foreign currency translation adjustments.

**Earnings (loss) per Share (EPS)**

Basic EPS is computed based on the weighted average number of shares of common stock outstanding. Diluted EPS is computed based on the weighted average number of common shares outstanding increased by dilutive common stock equivalents, attributable to RSU grants.

The following outstanding securities for the nine months ended September 30, 2021 and 2022 were excluded from the computation of diluted net income (loss) per share because the issuance of such shares is contingent upon the satisfaction of certain conditions which were not satisfied. See [Note 9](#), Restricted Stock Units for additional information.

	September 30,	
	2021	2022
RSU Grants	4,115,135	5,198,260

**Subsequent Events**

Subsequent events are events or transactions that occur after the balance sheet date but before consolidated financial statements are issued or are available to be issued. The Company recognizes in the consolidated financial statements the effects of all subsequent events that provide additional evidence about conditions that existed at the date of the balance sheet, including the estimates inherent in the process of preparing the consolidated financial statements. The Company's consolidated financial statements do not recognize subsequent events that provide evidence about conditions that did not exist at the date of the balance sheet but arose after the balance sheet date and before consolidated financial statements are available to be issued.

The Company has evaluated subsequent events through December 16, 2022, which is the date the consolidated financial statements were available to be issued.

**Recently Adopted Accounting Pronouncements**

**Leases:** On January 1, 2022, the Company adopted ASU 2016-02, *Leases (Topic 842)* on a modified retrospective basis, and elected practical expedients which allowed the Company to account for the lease and non-lease components as a single component for all asset classes. In addition, the Company applied transition elections that allow it to avoid reassessment of whether expired or expiring contracts are or contain leases, the corresponding lease classification, and initial direct costs. Leases with initial terms of 12 months or less are not recognized on the balance sheet, and lease expense is recognized on a straight-line basis. Prior periods have not been restated as a result of the adoption.

The Company determines if an arrangement is a lease at inception. Leases are classified as either operating or finance leases based on certain criteria. This classification determines the timing and presentation of expenses on the income statement, as well as the presentation of the related cash flows and balance sheet. Operating leases

with terms greater than 12 months are recorded on the balance sheet as operating lease right-of-use assets, other accrued expenses and liabilities, and long-term operating lease liabilities. The Company currently has no finance leases. See [Note 4](#), Leases, for further discussion.

### Accounting Guidance Issued and Not Yet Adopted

**Financial Instruments - credit losses:** In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which provides guidance regarding the measurement of credit losses on financial instruments. The guidance replaces the incurred loss impairment methodology in the current guidance with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to determine credit loss estimates. This ASU will be effective for the Company for fiscal periods commencing after December 15, 2022. The Company is in the process of assessing the impact of this ASU on their consolidated financial statements.

### 3. Revenue

The Company's revenue is derived principally from contracts which promise to deliver combinations of software licensing and related maintenance and services, which are accounted for as separate performance obligations with differing revenue recognition patterns. The transaction price is allocated to each distinct performance obligation based on the relative standalone selling price. Software license revenue consists of the Company's software sold under a software license. Revenue related to stand-alone software applications are generally recognized upon shipment and delivery of license keys. For certain arrangements revenue is recognized based on usage or ratably over the term of the arrangement. Maintenance and service revenue consists of both maintenance revenues and professional services revenues which is recognized based on usage or ratably over the term of the arrangement. Timing of revenue recognition may differ from the timing of invoicing to customers. The Company records a contract asset when revenue is recognized prior to invoicing, an accounts receivable on invoicing or deferred revenue when invoicing precedes revenue recognition.

The Company accounts for a contract with a customer when both parties have approved the contract and are committed to perform their respective obligations, each party's rights and payment terms can be identified, the contract has commercial substance, and it is probable the Company will collect substantially all of the consideration it is entitled to. Revenue is recognized when, or as, performance obligations are satisfied by transferring control of a promised software or providing service to a customer.

For multi-year software licenses, the Company generally invoices customers annually at the beginning of each annual coverage period.

#### Accounts Receivable and Contract Assets

As of December 31, 2021 and September 30, 2022, accounts receivable, net of allowance for doubtful accounts, was \$4.5 million and \$9.1 million, respectively. The Company's allowance for doubtful accounts on accounts receivable was \$0.3 million and \$0.3 million as of December 31, 2021 and September 30, 2022, respectively.

As of December 31, 2021 and September 30, 2022, contract assets were as follows:

	December 31, 2021	September 30, 2022
	(in thousands)	
Short-term portion of contract assets	\$ 6,977	\$ 7,777
Long-term portion of contract assets	2,465	2,295
<b>Total contract assets</b>	<b>\$ 9,442</b>	<b>\$ 10,072</b>

The Company does not maintain an allowance for doubtful accounts for estimated losses with respect to its contract asset portfolio as there is not any historical evidence or current indicators of impairments or write-offs on contract assets. The Company does not have any off-balance-sheet credit exposure related to its customers, and there have not been any write-offs against the Company's contract asset portfolio for the periods presented.



The allowances for doubtful accounts reflect the Company's best estimates of probable losses inherent in the accounts receivable and contract assets' balances. The Company determines the allowances based on known troubled accounts, historical experience, and other currently available evidence.

#### **Transaction Price Allocated to the Remaining Performance Obligations**

As of September 30, 2022, approximately \$21.7 million of revenue is expected to be recognized from remaining performance obligations. Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes both deferred revenue and backlog. The Company's backlog represents installment billings for periods beyond the current billing cycle. The Company expects to recognize revenue on approximately 53% of these remaining performance obligations over the next 12 months, with the balance recognized thereafter.

#### **Deferred Revenue**

Deferred revenue is comprised mainly of unearned revenue related to maintenance and service on software licenses and pending software license deliveries. Maintenance and service revenue is recognized ratably over the coverage period. Software license revenue is recognized upfront upon delivery of the licensed software. Deferred revenue also includes contracts for professional services to be performed in the future which are recognized as revenue when the company delivers the related service pursuant to the terms of the customer arrangement.

The Company's deferred revenue as of December 31, 2021 and September 30, 2022 was as follows:

	<u>December 31,</u> <u>2021</u>	<u>September 30,</u> <u>2022</u>
	<i>(in thousands)</i>	
Short-term portion of deferred revenue	\$ 5,415	\$ 7,025
Long-term portion of deferred revenue	3,541	3,509
<b>Total deferred revenue</b>	<u>\$ 8,956</u>	<u>\$ 10,534</u>

The Company recognized revenue of \$6.0 million during the nine month period ended September 30, 2022 that was included in the total deferred revenue balance at December 31, 2021. All other activity in deferred revenue is due to the timing of invoices in relation to the timing of revenue during the nine months ending September 30, 2022 as described above.

#### **4. Leases**

The Company recognizes a right-of-use asset and lease liability for its operating leases at the commencement date equal to the present value of the contractual minimum lease payments over the lease term. The present value is calculated using the Company's incremental secured borrowing rate. The discount rate used for operating leases is primarily determined based on an analysis the Company's incremental secured borrowing rate. The related lease payments are expensed on a straight-line basis over the lease term, including, as applicable, any free-rent period during which the Company has the right to use the asset.

The Company's headquarters are located in Santa Clara, California, where the Company has an operating lease covering its corporate office expiring in March of 2025. The Company also has operating leases throughout the United States in Georgia, Texas and Massachusetts, and abroad, in Japan, France, China, the United Kingdom, and Korea, among other countries. The expiration dates for these operating leases range from 2022 through 2029.

As of September 30, 2022, the Company's operating lease right-of-use assets and operating lease liabilities were as follows:

	<b>As of September 30, 2022</b>
	<i>(in thousands)</i>
Operating lease right-of-use assets, net	\$ 2,413
Operating lease liabilities, current	933
Operating lease liabilities, non-current	\$ 1,481

The components of operating lease cost were as follows:

	<b>Nine Months Ended September 30, 2022</b>
	<i>(in thousands)</i>
Operating lease cost	\$ 765
Variable lease cost <sup>(1)</sup>	329
<b>Total operating lease cost</b>	<b>\$ 1,094</b>

(1) Variable lease cost includes common area maintenance, utilities, security, insurance and property taxes.

Additional information related to the Company's operating leases for the nine months ended September 30, 2022 was as follows:

	<b>Nine Months Ended September 30, 2022</b>
	<i>(in thousands)</i>
Cash paid for operating lease liabilities	\$ 781
Operating lease liability arising from adoption of ASC 842	\$ 2,807
Weighted average remaining lease term (in years)	4.35
Weighted average discount rate	4.21 %

As of September 30, 2022 maturities of operating lease liabilities were as follows:

<b>Year Ending December 31,</b>	<b>Amount</b>
	<i>(in thousands)</i>
Remainder of 2022	\$ 238
2023	940
2024	501
2025	264
2026	182
Thereafter	505
<b>Total lease payments</b>	<b>2,630</b>
Less: imputed interest	(216)
<b>Total operating lease liabilities</b>	<b>\$ 2,414</b>
<b>Current portion of lease liability</b>	<b>933</b>
<b>Non-current portion of lease liability</b>	<b>\$ 1,481</b>

Rent expense for the nine months ended September 30, 2022 was \$1.0 million.

## 5. Acquisitions

### PolytEDA Cloud LLC

On January 15, 2021 the Company completed the acquisition of physical verification solution and cloud enablement provider PolytEDA Cloud LLC ("PolytEDA "). The acquisition of PolytEDA, a Ukraine-based company, expands Silvaco's capabilities for rapid physical verification of IC designs prior to mask creation and manufacturing and for cloud enablement of EDA tools.

The total consideration transferred was of \$1.9 million, which consisted of \$1.0 million in cash at closing and the estimated fair value of \$0.9 million in contingent consideration to be paid out over four years based on PolytEDA's technical achievement and projected operating income through January 2025.

Pursuant to the stock purchase agreement for the acquisition of PolytEDA, the selling shareholders are entitled to milestone consideration of up to an aggregate total of \$1.0 million based upon PolytEDA's technical achievement during 2021 and 2022, in addition to earn-out consideration over a three-year period beginning on the second year following the closing of the acquisition through January 2025. The earn-out does not have a minimum and is based on 20% of the operating income generated by PolytEDA on a quarterly basis, subject to an initial hold-back or payout from a working capital adjustment from the close of the acquisition.

The milestone consideration and earn-out are liabilities classified as contingent consideration as the obligations are due in cash. As such the obligations are recorded at their fair value and re-valued period to period with any changes recorded to operating income (expense). See also, [Note 13](#), Fair Value of Financial Instruments.

The following table summarizes the fair value of the assets acquired and liabilities assumed in the PolytEDA acquisition:

Asset Type	Weighted Average Amortization Period (Years)	Fair Value <i>(in thousands)</i>
Current assets		\$ 5
Developed Technology	5	370
Customer Relationships	4	360
Goodwill		1,386
Current liabilities		(2)
Deferred tax liability		(145)
<b>Net assets acquired and liabilities assumed</b>		<b>\$ 1,974</b>

The fair value of developed technology was determined under a discounted cash flow model through application of the Income Approach, using the Multi-Period Earnings Method. The fair value of customer relationships was derived through a discounted cash flow model under two scenarios. The first scenario relied on a forecast which assumed commercial customers are in place. The second scenario drew from a forecast which assumed that customer relationships would need to be developed over a four year period.

The Company believes that significant synergies are expected to arise from the acquisition of PolytEDA which resulted in goodwill, as the purchase price exceeded the net fair value of the acquired assets and assumed liabilities as part of the stock purchase agreement. The fair value of goodwill associated with the PolytEDA acquisition is not tax deductible for income tax purposes.

During the nine months ended September 30, 2021, the Company incurred \$23.5 thousand in acquisition-related expenses, recognized as selling, general and administrative expense on the consolidated statements of income.

The operating results of PolytEDA have been included in the Company's consolidated financial statements since the date of acquisition, and the effects of the business combination were not material to the Company's consolidated results of operations during 2021.

## 6. Goodwill and Intangible Assets

Goodwill and intangible assets are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable. In connection with Russia's invasion of Ukraine in February 2022, the Company recorded an impairment charge of \$0.6 million to reduce the carrying value of \$0.3 million of developed technology and \$0.3 million of customer relationships associated with the Company's Ukrainian subsidiary which management determined would not be recoverable.

There were no changes in goodwill during the nine months ended September 30, 2022.

As of December 31, 2021 intangible assets were classified as follows:

Intangible assets:	Weighted Average Amortization Period	December 31, 2021		
		Gross Carrying Value	Accumulated Amortization	Net Carrying Value
			<i>(in thousands)</i>	
Developed technology	5	\$ 3,029	\$ (2,037)	\$ 992
Customer relationships	5	2,776	(2,139)	637
Non-compete agreements	5	179	(164)	15
<b>Total intangible assets</b>		<b>\$ 5,984</b>	<b>\$ (4,340)</b>	<b>\$ 1,644</b>

As of September 30, 2022 intangible assets were classified as follows:

Intangible assets:	Weighted Average Amortization Period	September 30, 2022		
		Gross Carrying Value	Accumulated Amortization	Net Carrying Value
			<i>(in thousands)</i>	
Developed technology	5	\$ 2,630	\$ (2,132)	\$ 498
Customer relationships	5	2,416	(2,173)	243
Non-compete agreements	5	179	(168)	11
<b>Total intangible assets</b>		<b>\$ 5,225</b>	<b>\$ (4,473)</b>	<b>\$ 752</b>

Amortization expense for the intangible assets was \$0.6 million and \$0.2 million for the nine months ended September 30, 2021 and 2022, respectively.

As of September 30, 2022, estimated future amortization expense for the intangible assets reflected above was as follows:

Year Ending December 31,	Amount
	<i>(in thousands)</i>
Remainder of 2022	\$ 71
2023	338
2024	206
2025	137
<b>Total net carrying value of intangible assets</b>	<b>\$ 752</b>

## 7. Related Parties

As of December 31, 2020, Silvaco had notes payable to Kipee International ("Kipee") with a total balance owed of \$0.5 million and notes receivable from New Horizons (Cambridge) LTD ("NHC") of GBP \$0.7 million, or \$0.9 million, and New Horizons France ("NHF") of \$1.5 million. Each of Kipee, NHC and NHF are real estate entities owned and controlled by the Company's sole stockholder as of December 31, 2020. The Company's Director of Global Sales Operations also serves as director of NHC. The notes payable to Kipee and the notes receivable from NHC and NHF were settled in September 2021, with the Company's sole stockholder paying Silvaco, \$0.2 million which represents the net balance remaining after settlement of both the Kipee notes and the NHC and NHF notes.

In addition to its notes receivable the Company has two international office leases with NHC and NHF in Cambridgeshire, England and Grenoble, France, respectively, and through September of 2021, the Company leased office space from Kipee in Austin, Texas. In connection with these lease arrangements, the Company recorded rent expense of \$0.3 million and \$0.2 million during the nine months ended September 30, 2021 and 2022, respectively.

On December 8, 2021, Silvaco entered a promissory note with the Company's founding principal stockholder for \$0.5 million ("Promissory Note") bearing an interest rate of 3.25% payable and due on July 1, 2022. As of December 31, 2021, the balance due on the Promissory Note, including accrued interest, was \$0.5 million. The Promissory Note was repaid in full in July 2022.

On March 30, 2022, Silvaco entered a second related party note payable to the Company's founding principal stockholder for \$0.5 million ("March 2022 Note") bearing interest at 3.25% payable and due on March 30, 2023. As of September 30, 2022, the balance due on the March 2022 Note, including accrued interest, was \$0.5 million.

On May 1, 2022, the Company entered into a commercial lease agreement with Kipee, a related party, for Silvaco's new corporate office at 4701 Patrick Henry Drive in Santa Clara, California. In connection with this lease arrangement, the Company recorded rent expense of \$0.1 million during the nine months ended September 30, 2022. The Company's right-of-use asset and operating lease liability under this three year arrangement, which commenced on May 1, 2022 and expires on March 31, 2025, is \$0.5 million as of September 30, 2022. The short term and long term components of the Company's operating lease liability for this commercial office lease are \$0.2 million and \$0.3 million, respectively.

On June 13, 2022, Silvaco entered into a \$4.0 million line of credit with the Company's founding principal stockholder bearing interest at a rate of prime plus 1% per annum. The Company has drawn \$2.0 million on this line of credit as of September 30, 2022. As of September 30, 2022, the balance of this line of credit was \$2.0 million.

## 8. Debt

On April 30, 2020, the Company entered into a loan with Bank of the West in an aggregate principal amount of \$2.3 million pursuant to the PPP Loan under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). The PPP Loan was evidenced by a promissory note, dated May 7, 2020, maturing two years from the disbursement date, bearing interest at a rate of 1.0% per annum, with the first six months of interest deferred. The PPP Loan was subject to forgiveness to the extent proceeds were used pursuant to the terms and limitations of the PPP Loan. On June 29, 2021, the PPP Loan was forgiven. The forgiveness of the PPP Loan amount during 2021 is reflected as a gain on debt extinguishment in the consolidated statements of income (loss) and cash flows.

## 9. Restricted Stock Units

Silvaco has 8 million shares of common stock reserved for RSU grants. Since 2014, the Company has issued RSUs to employees, directors, and advisors, pursuant to its 2014 Plan. The RSUs generally have two vesting requirements, a time and service-based requirement (the "Time-Based Requirement") and a "Liquidity Event Requirement." The Time-Based Requirement generally requires four years for full vesting of the grants, with 25% vesting after one year and quarterly vesting over the subsequent three years. Certain grants have had modified time-based vesting requirements, including certain grants that have been issued with the time-based service requirement satisfied on the grant date. The Liquidity Event Requirement requires the completion of an underwritten initial public offering or a change of control, as defined in the Company's 2014 Plan documents.

The following table summarizes the Company's RSU activity for the nine months ended September 30, 2022:

	Weighted Average		Restricted Stock Units		
	Fair Value	Remaining Contract Term	Granted	Time Vested	Time Unvested
<b>Balance as of December 31, 2021</b>	<b>\$ 2.61</b>	<b>6.40</b>	<b>4,286,919</b>	<b>2,458,419</b>	<b>1,828,500</b>
Granted in 2022	4.06	9.34	1,246,250	—	1,246,250
Vested	3.37	7.66	—	442,297	(442,297)
Forfeited / canceled	3.42	7.65	(334,909)	—	(334,909)
<b>Balance as of September 30, 2022</b>	<b>\$ 2.94</b>	<b>6.49</b>	<b>5,198,260</b>	<b>2,900,716</b>	<b>2,297,544</b>

The grant date fair value of the RSU awards was based on the Probability-Weighted Expected Return Method, which assessed the value of the Company's equity based on an analysis of future enterprise values under two IPO scenarios, one "Early" and one "Late", as well as a "Stay Private" scenario. The estimated value of the common stock in each scenario was then probability-weighted based on inputs provided by management regarding the likelihood of each scenario as of the valuation date.

Consistent with prevailing accounting guidance, the Company has not recorded share-based compensation expense for the RSUs, due to the Liquidity Event Requirement. The Company has valued the unrecorded share-based compensation expense, using historical estimates of the fair value of the Company's common stock.

As of September 30, 2022 the Company had granted 5,198,260 RSUs and had \$15.3 million in deferred share-based compensation expense, of which 2,900,716 RSUs and \$6.5 million represents awards that have met the Time-Based Requirement, and the remaining 2,297,544 RSUs and \$8.8 million represent awards that have not met this requirement.

## 10. Income Taxes

The Company's provision for income taxes consists principally of state and local, and foreign taxes, as applicable, in amounts necessary to align the Company's year-to-date tax provision with the effective rate that it expects to achieve for the full year.

For the nine months ended September 30, 2021 and 2022, the Company recorded an income tax provision of \$0.3 million and \$0.6 million, respectively. The effective tax rate for the nine months ended September 30, 2021 and 2022 was (82)% and (217)%, respectively. The effective tax rate differed from the statutory rate of 21% due to the mix of foreign and domestic earnings, foreign withholding taxes and the application of valuation allowances. As of September 30, 2021 and 2022, the Company's conclusion did not change with respect to the realizability of its domestic deferred tax assets and therefore, the Company had not recorded any income tax assets as such amounts are fully offset with a valuation allowance.

The Company recognizes the financial statement effects of uncertain tax positions when it is more-likely-than-not, based on the technical merits of the position, that it will be sustained upon examination. The Company includes interest and penalties related to unrecognized tax benefits within the provision of income tax. To date, there have been no significant changes in relation to the unrecognized tax benefits.

## 11. Segment Reporting and Geographical Concentration

The Company manages its operations through an evaluation of a consolidated business segment that solves semiconductor design challenges by offering affordable and competitive TCAD software, EDA software and design IP to support engineers and researchers across the globe. The chief operating decision maker reviews revenues of the Company's operating segments for performance evaluation and resource allocation among these three solution offerings. The Company's operating segments have been aggregated into one reportable segment, as they are similar in the nature of services, production process, and distribution of services.

The Company's single reportable segment recorded customer revenue from the following geographical areas for the nine months ended September 30, 2021 and 2022:

Region	September 30,	
	2021	2022
	<i>(in thousands)</i>	
Asia	\$ 19,154	\$ 21,099
North America	9,303	12,899
Europe	2,647	2,675
Total revenue	<u>\$ 31,104</u>	<u>\$ 36,673</u>

The Company manages its assets on a total company basis, not by operating segment. Therefore, the chief operating decision maker does not regularly review any asset information by operating segment and, accordingly, asset information is not reported by operating segment.

The following table presents a summary of property and equipment by region as of December 31, 2021 and September 30, 2022:

Region	December 31,	September 30,
	2021	2022
	<i>(in thousands)</i>	
North America	\$ 319	\$ 237
Asia	289	109
Europe	29	242
Total property and equipment	<u>\$ 637</u>	<u>\$ 588</u>

## 12. Commitments and Contingencies

### **Warranties**

The Company typically provides its customers a warranty on its software licenses for a period of no more than 90 days and on its other tools for a period of no more than one year. Such warranties are accounted for in accordance with the authoritative guidance issued by the FASB on contingencies. For the nine months ended September 30, 2021 and 2022, the Company has not incurred any costs related to warranty obligations.

### **Indemnification**

Under the terms of substantially all of its license agreements, the Company has agreed to indemnify its customers for costs and damages arising from claims against such customers based on, among other things, allegations that the Company's software infringes the intellectual property rights of a third party. In most cases, in the event of an infringement claim, the Company retains the right to (i) procure for the customer the right to continue using the software; (ii) replace or modify the software to eliminate the infringement while providing substantially equivalent functionality; or (iii) if neither (i) nor (ii) can be reasonably achieved, the Company may terminate the license agreement and refund to the customer a pro-rata portion of the license fee paid to the Company. Such indemnification provisions are accounted for in accordance with the authoritative guidance issued by the FASB on guarantees. From time to time, in the ordinary course of business, the Company receives claims for indemnification, typically from original equipment manufacturers.

### **Contingencies**

The Company is involved in routine legal proceedings in the ordinary course of business. The outcome of such matters is not expected to have a material adverse effect on the Company's consolidated financial position, results of operations, or liquidity. However, each of these matters is subject to various uncertainties and it is possible that an unfavorable resolution of one or more of these proceedings could materially affect the Company's results of operations, cash flows or financial position.

In an effort to clarify its obligations with respect to the earnout payment due to the selling shareholders of Nangate, Inc., the Company sought declaratory relief in the California Superior Court in December 2020. In February 2021, two of the selling shareholders of Nangate (together with a third cross-complainant who joined later, the “Nangate Parties”) filed a cross-complaint against the Company and two members of the Company’s board of directors, alleging, among other causes of action, breach of contract, fraud and negligent misrepresentation. In the intervening period, the Company and the Nangate Parties have engaged in motion practice related to, among other items, the removal of certain of the Company’s board members from the proceedings. Each party has also responded to requests for production and begun performing depositions. No trial date has been set. The Company considers these allegations to be baseless and is vigorously defending itself in this litigation. The Company accordingly has not recorded a charge for this contingency.

On August 19, 2021, Aldini sued the Company, the Company’s French affiliate, a member of the Company’s board of directors and the Company’s CEO, among numerous other noncompany defendants, in connection with the Company’s interactions with Dolphin. Aldini’s allegations center around the bankruptcy and reorganization of Dolphin in 2018 and Silvaco’s acquisition of certain memory assets of Dolphin, which Aldini alleges was done in violation of its rights as a shareholder of Dolphin. Aldini AG’s First Amended Complaint asserts various tort claims against Silvaco, Inc. (“Silvaco”), Silvaco France, and officers Iliya Pesic and Babak Taheri, including claims for trade secret theft, conspiracy, and intentional interference with a prospective economic advantage. Silvaco filed a motion to dismiss; the trade secret theft and conspiracy claims were dismissed with prejudice and the intentional tort claims were dismissed with leave to amend. On August 23, 2022, Aldini AG filed a Second Amended Complaint against Silvaco, Silvaco France, and officers Iliya Pesic and Babak Taheri that included claims of trade secret theft, conspiracy, and intentional interference with a prospective economic advantage in relation to Silvaco’s acquisition of certain assets of Dolphin Design SAS. Aldini AG seeks \$703 million and punitive damages. Silvaco filed a motion to dismiss the Second Amended Complaint. The Company considers these allegations to be baseless and is vigorously defending itself in this litigation.

The Company’s software solutions and technology are subject to export control and import laws and regulations of applicable jurisdictions. Certain of the Company’s software solutions are subject to U.S. export controls and sanctions, including the Export Administration Regulations, U.S. Customs regulations, and the economic and trade sanctions regulations administered by the U.S. Treasury Department’s Office of Foreign Assets Control (“OFAC”). Between August 2019 and June 2022, the Company filed various voluntary disclosures with United States Department of Commerce Bureau of Industry and Security (“BIS”) regarding potential violations of U.S. export control laws and regulations, specifically, the deemed export of the Company’s licenses to certain parties designated on BIS’s Entity List and Unverified List, and the deemed export of certain software modules without a license which was required at the time of the transaction. Such software modules were declassified by BIS in October 2020 to a lesser controlled export classification, meaning that such software generally no longer requires an export license. In July and October 2022, the Company also filed voluntary disclosures with OFAC regarding potential violations of OFAC sanctions programs, specifically the download of certain Company software modules by users in U.S. embargoed countries. The matters described in these voluntary disclosures remain pending before BIS and OFAC. The Company cannot estimate any reasonable possible loss at this time. However if either organization chose to bring an enforcement action against the Company, such actions could result in significant penalties. The Company considers that the potential loss is not probable, and therefore has not recorded a charge for this contingency.



### 13. Fair Value of Financial Instruments

#### Financial Instruments Measured at Fair Value on a Recurring Basis

The following tables present the Company's liabilities that are measured on a recurring basis as of December 31, 2021 and September 30, 2022:

Fair value measurements as of December 31, 2021				
<i>(in thousands)</i>				
	Carrying value	Level 1	Level 2	Level 3
<b>Liabilities:</b>				
Contingent consideration	1,870	—	—	1,870
<b>Total</b>	<b>\$ 1,870</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 1,870</b>

Fair value measurements as of September 30, 2022				
<i>(in thousands)</i>				
	Carrying value	Level 1	Level 2	Level 3
<b>Liabilities:</b>				
Contingent consideration	1,073	—	—	1,073
<b>Total</b>	<b>\$ 1,073</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 1,073</b>

Pursuant to the stock purchase agreements for the acquisition of Nangate and PolyEDA, the selling shareholders are entitled to additional milestone and earn out consideration based on net revenues, operating income and technical achievement. The milestone consideration and earn-out liabilities are classified as contingent consideration as the obligations are due in cash. As such the obligations are recorded at their fair value and re-valued period to period with any changes recorded to operating income (expense).

The Company's contingent consideration is valued using a discounted cash flow model, and the assumptions used in preparing the discounted cash flow model include estimates for interest rates and the amount of cash flows, in addition to the expected net revenue, operating income and technical achievement of the acquired technology. See also, [Note 5](#), Acquisitions.

The following is a reconciliation of changes in the liability related to contingent consideration as of December 31, 2021 and September 30, 2022:

<i>(in thousands)</i>	
<b>Fair value as of January 1, 2021</b>	<b>\$ 1,088</b>
PolyEDA acquisition	974
Change in fair value	295
Earn-out payments	(440)
Foreign exchange	(47)
<b>Fair value as of December 31, 2021</b>	<b>\$ 1,870</b>
Change in fair value	16
Earn-out payments	(321)
Milestone achievement	(500)
Foreign exchange	8
<b>Fair value as of September 30, 2022</b>	<b>\$ 1,073</b>

Nonfinancial assets such as property and equipment, intangibles assets, and goodwill are evaluated for impairment and adjusted to fair value using Level 3 inputs only when impairment is recognized.

In connection with Russia's invasion of Ukraine in February 2022, the Company recorded an impairment charge of \$0.6 million to reduce the carrying value of \$0.3 million of developed technology and \$0.3 million of customer relationships associated with the Company's Ukrainian subsidiary which management determined would not be recoverable.

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**Shares**

**SILVACO**

**Common Stock**

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**PRELIMINARY PROSPECTUS**

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**Jefferies**

**Cowen**

, 2023

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**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth all costs and expenses, other than the underwriting discounts and commissions, payable by Silvaco Group, Inc., or the Registrant, in connection with the offer and sale of the common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission, or the SEC, registration fee, the FINRA filing fee and exchange listing fee.

	Amount
SEC registration fee	\$ *
FINRA filing fee	*
filing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous fees and expenses	*
Total	\$ *

\* To be provided by amendment.

**Item 14. Indemnification of Directors and Officers.**

The Registrant is incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law, or the DGCL, provides that a Delaware corporation may indemnify any persons who were, are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was serving at the request of such corporation as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who were, are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) actually and reasonably incurred.

Upon the closing of this offering, the Registrant's amended and restated certificate of incorporation will provide for the indemnification of its directors to the fullest extent permitted under the DGCL. The Registrant's amended and restated bylaws provide for the indemnification of its directors and officers to the fullest extent permitted under the DGCL. Each of the Registrant's amended and restated certificate of incorporation and amended and restated bylaws will become effective upon completion of this offering.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

- transaction from which the director derives an improper personal benefit;

- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

The Registrant's amended and restated certificate of incorporation will include such a provision. Under the Registrant's amended and restated bylaws, expenses incurred by any director or officers in defending any such action, suit or proceeding in advance of its final disposition will be paid by the Registrant upon delivery to it of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it will ultimately be determined that such director or officer is not entitled to be indemnified by the Registrant, as long as such undertaking remains required by the DGCL. Section 174 of the DGCL provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the DGCL, the Registrant has entered into indemnity agreements with each of its directors and officers that require the Registrant, among other things, to indemnify its directors and officers against certain liabilities which may arise by reason of their status or service as directors or officers to the fullest extent not prohibited by law. These indemnification agreements may be sufficiently broad to permit indemnification of the Registrant's officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act. Under these agreements, the Registrant is not required to provide indemnification for certain matters. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder.

There is at present no pending litigation or proceeding involving any of the Registrant's directors or executive officers as to which indemnification is required or permitted, and the Registrant is not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

Prior to the closing of this offering, the Registrant intends to enter into separate indemnification agreements with each of their directors and executive officers. Each indemnification agreement will provide, among other things, for indemnification to the fullest extent permitted by law and our amended and restated certificate of incorporation and amended and restated bylaws against any and all expenses, judgments, fines, penalties and amounts paid in settlement of any claim. The indemnification agreements will provide for the advancement or payment of all expenses to the indemnitee and for the reimbursement to us if it is found that such indemnitee is not entitled to such indemnification under applicable law and our amended and restated certificate of incorporation and amended and restated bylaws.

The Registrant intends to enter into an insurance policy that covers its officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act or otherwise.

The Registrant plans to enter into an underwriting agreement which provides that the underwriters are obligated, under some circumstances, to indemnify the Registrant's directors, officers and controlling persons against specified liabilities, including liabilities under the Securities Act.

#### **Item 15. Recent Sales of Unregistered Securities.**

None.

#### **Item 16. Exhibits and Financial Statement Schedules.**

##### **(a) Exhibits.**

The list of exhibits is set forth under "Exhibit Index" at the end of this registration statement and is incorporated herein by reference.

##### **(b) Financial Statement Schedules.**

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

#### **Item 17. Undertakings.**

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by

the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby further undertakes that:

- (a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act will be deemed to be part of this registration statement as of the time it was declared effective.
- (b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus will be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time will be deemed to be the initial *bona fide* offering thereof.

**EXHIBIT INDEX**

<b>Exhibit No.</b>	<b>Description</b>
1.1†	Form of Underwriting Agreement.
3.1.1*	Amended and Restated Certificate of Incorporation, as amended and as currently in effect.
3.1.2*	Certificate of Amendment to the Amended and Restated Certificate of Incorporation, as amended and as currently in effect.
3.2	Form of Amended and Restated Certificate of Incorporation, to be effective as of immediately prior to the completion of this offering.
3.3*	Bylaws, as amended and as currently in effect.
3.4	Form of Amended and Restated Bylaws, to be effective as of immediately prior to the completion of this offering.
4.1†	Form of Common Stock Certificate of the Registrant.
5.1†	Opinion of Pillsbury Winthrop Shaw Pittman LLP.
10.1+†	Form of Indemnification Agreement between the Registrant and its directors and officers.
10.2+*	2014 Stock Incentive Plan and Form of Restricted Stock Unit Agreement thereunder.
10.3	2023 Stock Incentive Plan and Forms of Stock Option Agreement, Notice of Exercise, Stock Option Grant Notice, Restricted Stock Unit Agreement and Restricted Stock Agreement thereunder.
10.4	2023 Employee Stock Purchase Plan.
10.5+*	Offer Letter Agreement, dated December 25, 2021, between the Registrant and Dr. Raúl Camposano.
10.6+*	Offer Letter Agreement, dated May 1, 2017, between the Registrant and Dr. Eric Guichard.
10.7+	Offer Letter Agreement, dated January 27, 2022, between the Registrant and Robert J. McMullan, as amended by the Amendment to the Offer Letter Agreement, dated November 16, 2022.
10.8+*	Consulting Advisory Agreement, dated January 12, 2022, between the Registrant and Katherine S. Ngai-Pesic.
10.9+*	Consulting Advisory Agreement, dated January 12, 2022, between the Registrant and Iliya I. Pesic.
10.10+*	Offer Letter Agreement, dated May 21, 2021, between the Registrant and Gregory F. Swyt.
10.11+	Offer Letter and Termination of Separation Agreement, dated November 23, 2021, between the Registrant and Dr. Babak A. Taheri, as amended by the Amendment to the Offer Letter and Termination of Separation Agreement, dated November 16, 2022.
10.12+*	Separation Agreement and Release, dated September 1, 2021, between the Registrant and Dr. Babak A. Taheri.
10.13*	California Commercial Lease Agreement, dated May 1, 2022, between Silvaco, Inc. and Kipee International, Inc.

10.14*	Lease Relating to Silvaco Suite, First Floor, Silvaco Technology Centre Compass Point, St. Ives, Cambridgeshire, dated January 1, 2020, between Silvaco Europe Ltd. and New Horizons (Cambridge) Ltd.
10.15†	Commercial Lease, dated April 28, 2017, by and between the Registrant, as successor, and New Horizons, as amended by the Supplementary Agreement No. 1 to the Commercial Lease entered into on April 28, 2017, dated November 1, 2019.
10.16†	Commercial Lease, dated September 30, 2021, by and between the Registrant, as successor, and New Horizons.
10.17+*	Executive Change in Control Plan.
10.18#†	Technology License and Distribution Agreement, dated October 30, 2015, between the Registrant, as successor, and NXP Semiconductors Netherlands B.V., originally entered into by Registrant on September 1, 2016, as amended by First Amendment to Technology License and Distribution Agreement, dated April 20, 2016, Second Amendment to Technology License and Distribution Agreement, dated October 18, 2016, Third Amendment to Technology License and Distribution Agreement, dated November 10, 2018, and Fourth Amendment to Technology License and Distribution Agreement, dated March 22, 2022.
10.19*	Promissory Note, dated May 1, 2019, between Silvaco, Inc. and Kipee International, Inc.
10.20*	Promissory Note, dated July 1, 2019, between Silvaco, Inc. and Kipee International, Inc.
10.21*	Promissory Note, dated August 14, 2019, between Silvaco, Inc. and Kipee International, Inc.
10.22*	Promissory Note, dated October 10, 2019, between Silvaco, Inc. and Kipee International, Inc.
10.23*	Promissory Note, dated February 14, 2020, between Silvaco, Inc. and Kipee International, Inc.
10.24*	Promissory Note, dated December 8, 2021, between Silvaco, Inc. and Kipee International, Inc., as amended by Amendment to Promissory Note, dated April 18, 2022, between Silvaco, Inc., Kipee International, Inc. and Katherine S. Ngai-Pesic.
10.25*	Promissory Note, dated March 30, 2022, between Silvaco, Inc. and Katherine S. Ngai-Pesic.
10.26*	Promissory Note and Line of Credit, dated June 13, 2022, between Silvaco, Inc. and Katherine S. Ngai-Pesic.
10.27+†	Non-Employee Director Compensation Policy of the Board of Directors of the Registrant.
21.1†	Subsidiaries of the Registrant.
23.1†	Consent of Moss Adams LLP.
23.2†	Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 5.1).
24.1†	Power of Attorney (see signature page hereto).
107†	Filing Fee Table.

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† To be filed by amendment.

+ Indicates management contract or compensatory plan.

\* Previously filed.

# Certain confidential information – identified by a bracketed asterisk “[\*]” – has been omitted from this exhibit pursuant to Item 601(b)(10) of Regulation S-K. The Registrant agrees to furnish supplementally a copy of an unredacted copy to the SEC upon request.



## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Santa Clara, State of California, on .

SILVACO GROUP, INC.

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Dr. Babak A. Taheri  
Chief Executive Officer

## POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Dr. Babak A. Taheri and Robert J. McMullan, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place, or stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<hr/> Dr. Babak A. Taheri	Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	
<hr/> Robert J. McMullan	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	
<hr/> Katherine S. Ngai-Pesic	Chair of the Board	
<hr/> John W. Cleveland	Director	
<hr/> Dr. Hau L. Lee	Director	
<hr/> William H. Molloie, Jr.	Director	
<hr/> Anthony K. K. Ngai	Director	
<hr/> Iliya I. Pesic	Director	
<hr/> Dr. Walden C. Rhines	Director	
<hr/> Jodi L. Shelton	Director	

**AMENDED AND RESTATED****CERTIFICATE OF INCORPORATION OF****SILVACO GROUP, INC.**

Silvaco Group, Inc., a corporation organized and existing under the laws of the State of Delaware, hereby certifies as follows:

FIRST: The name of the corporation is Silvaco Group, Inc.

SECOND: The original certificate of incorporation of the corporation was filed with the Secretary of State of the State of Delaware on November 18, 2009 and most recently amended and restated pursuant to an Amended and Restated Certificate of Incorporation filed with the Secretary of State of the State of Delaware on November 18, 2013, as amended by the Certificate of Amendment to the Amended and Restated Certificate of Incorporation filed with the Secretary of State of the State of Delaware on (as so amended, the “**Existing Certificate**”).

THIRD: Pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware, this Amended and Restated Certificate of Incorporation restates, integrates, and further amends the provisions of the Existing Certificate.

FOURTH: The Existing Certificate shall be amended and restated to read in full as follows:

ARTICLE I

The name of the corporation is Silvaco Group, Inc. (the “**Corporation**”).

ARTICLE II

The registered agent and the address of the registered offices in the State of Delaware are:

Corporation Service Company  
251 Little Falls Drive  
Wilmington, Delaware 19808  
County of New Castle

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law (the “**DGCL**”).

## ARTICLE IV

A. Classes of Stock. The total number of shares of all classes of capital stock that the Corporation shall have authority to issue is \_\_\_\_\_ Million ( \_\_\_\_\_ ), of which \_\_\_\_\_ Million ( \_\_\_\_\_ ) shares shall be Common Stock, par value of \$0.0001 per share (the “**Common Stock**”), and of which \_\_\_\_\_ Million ( \_\_\_\_\_ ) shares shall be Preferred Stock, \$0.0001 par value per share (the “**Preferred Stock**”). The number of authorized shares of Common Stock or Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the then-outstanding shares of Common Stock, voting together as a single class, without the vote of the holders of Preferred Stock, unless a separate, additional vote of the holders of Preferred Stock, or of any series thereof, is expressly required pursuant to the Preferred Stock Designation (as defined below) established by the board of directors of the Corporation (the “**Board**”).

B. Preferred Stock. The Preferred Stock may be issued from time to time in one or more series, as determined by the Board. The Board is expressly authorized to provide for the issue, in one or more series, of all or any of the remaining shares of Preferred Stock and, in the resolution or resolutions providing for such issue (each, a “**Preferred Stock Designation**”), to establish for each such series the number of its shares, the voting powers, full or limited, of the shares of such series, or that such shares shall have no voting powers, and the designations, preferences, and relative participating, optional, or other special rights of the shares of such series, and the qualifications, limitations, or restrictions thereof. The Board is also expressly authorized (unless forbidden in the resolution or resolutions providing for such issue) to increase or decrease (but not below the number of shares of such series then outstanding) the number of shares of any series subsequent to the issuance of shares of that series. Unless the Preferred Stock Designation otherwise provides, in case the number of shares of any such series shall be so decreased, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series. Unless the Board provides to the contrary in the Preferred Stock Designation and to the fullest extent permitted by law, neither the consent by series, or otherwise, of the holders of any outstanding Preferred Stock nor the consent of the holders of any outstanding Common Stock shall be required for the issuance of any new series of Preferred Stock regardless of whether the rights and preferences of the new series of Preferred Stock are senior or superior, in any way, to the outstanding series of Preferred Stock or the Common Stock.

C. Common Stock.

1. Relative Rights of Preferred Stock and Common Stock. All preferences, voting powers, relative participating, optional, or other special rights and privileges, and qualifications, limitations, or restrictions of the Common Stock are expressly made subject and subordinate to those that may be fixed with respect to any shares of the Preferred Stock.

2. Voting Rights. Except as otherwise required by law or certificate of incorporation of the Corporation, as amended from time to time (this “**Certificate**” or “**Certificate of Incorporation**”), each holder of Common Stock shall have one vote in respect of

each share of stock held by such holder of record on the books of the Corporation. No holder of shares of Common Stock shall have the right to cumulative votes.

3. Dividends. Subject to the preferential rights of the Preferred Stock and except as otherwise required by law or this Certificate, the holders of shares of Common Stock shall be entitled to receive dividends, when, as and if declared by the Board, out of the assets of the Corporation which are by law available therefor.

#### ARTICLE V

In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware:

The following provisions are inserted for the management of the business and the conduct of the affairs of the Corporation, and for further definition, limitation, and regulation of the powers of the Corporation and of its directors and stockholders:

A. Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the board of directors. In addition to the powers and authority expressly conferred upon them by statute or by this Certificate of Incorporation or the bylaws of the Corporation (the “**Bylaws**”), the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

B. Election of Directors. The directors of the Corporation need not be elected by written ballot unless the Bylaws so provide.

C. Action by Stockholders. Subject to the rights of the holders of any series of Preferred Stock, any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

D. Special Meetings of Stockholders. Special meetings of stockholders of the Corporation may be called only by the Board acting pursuant to a resolution adopted by a majority of the Whole Board or by the Chairman of the Board, the Chief Executive Officer, or the President of the Corporation. For purposes of this Certificate of Incorporation, the term “**Whole Board**” shall mean the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships.

E. Annual Meeting of Stockholders. An annual meeting of stockholders, for the election of directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting, shall be held at such date and time as the Board (or its designees) shall fix.

#### ARTICLE VI

A. Number and Terms of Directors. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the number

of directors shall be fixed from time to time exclusively by the Board pursuant to a resolution adopted by a majority of the Whole Board. The directors, other than those who may be elected by the holders of any series of Preferred Stock under specified circumstances, shall be divided into three classes, with the term of office of the first class to expire at the Corporation's first annual meeting of stockholders following the effectiveness of the filing of this Article VI (the "**Effective Time**"), the term of office of the second class to expire at the Corporation's second annual meeting of stockholders following the Effective Time, and the term of office of the third class to expire at the Corporation's third annual meeting of stockholders following the Effective Time, with each director to hold office until his or her successor shall have been duly elected and qualified. The Board is authorized to assign members of the Board already in office at the Effective Time to such classes as it determines. At each annual meeting of stockholders, (i) directors elected to succeed those directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election, with each director to hold office until his or her successor shall have been duly elected and qualified; and (ii) if authorized by a resolution of the Board, directors may be elected to fill any vacancy on the Board, regardless of how such vacancy shall have been created.

B. Quorum. A majority of the Whole Board shall constitute a quorum for all purposes at any meeting of the Board, and, except as otherwise expressly required by law or by this Certificate of Incorporation, all matters shall be determined by the affirmative vote of a majority of the directors present at any meeting at which a quorum is present.

C. Board Vacancies. Subject to the rights of the holders of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the authorized number of directors or any vacancies in the Board resulting from death, resignation, disqualification, removal from office, or other cause shall, unless otherwise required by law or determined by the Board, be filled only by a majority vote of the directors then in office, though less than a quorum (and not by stockholders), and directors so chosen shall serve for a term expiring at the annual meeting of stockholders at which the term of office of the class to which they have been chosen expires, with each director to hold office until his or her successor shall have been duly elected and qualified. No decrease in the authorized number of directors shall shorten the term of any incumbent director.

D. Notice. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Corporation shall be given in the manner provided in the Bylaws.

E. Removal. Subject to the rights of the holders of any series of Preferred Stock then outstanding, any director, or the entire Board, may be removed from office at any time, but only for cause and only by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of capital stock of the Corporation then entitled to vote at an election of directors, voting together as a single class.

## ARTICLE VII

The Board is expressly authorized to adopt, amend, or repeal bylaws of the Corporation. Any adoption, amendment, or repeal of the Bylaws by the Board shall require the affirmative vote of a majority of the Whole Board. The stockholders shall also have power to adopt, amend, or repeal the Bylaws; provided, however, that, in addition to any vote of the holders of any class or series of stock of the Corporation required by law, by this Certificate of Incorporation or by any Preferred Stock Designation, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote thereon, voting together as a single class, shall be required to adopt, amend, or repeal any provision of the Bylaws.

## ARTICLE VIII

A. Limitation on Liability. To the fullest extent permitted by the DGCL, as the same exists or as may hereafter be amended (including, but not limited to Section 102(b)(7) of the DGCL), a director or officer of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director or officer, as applicable. If the DGCL hereafter is amended to authorize corporate action further eliminating or limiting the personal liability of directors or officers, then the liability of a director or officer, as applicable, of the Corporation, in addition to the limitation on personal liability provided herein, shall be eliminated or limited to the fullest extent permitted by the amended DGCL. Any repeal or modification of this paragraph by the stockholders of the Corporation shall be prospective only, and shall not adversely affect any limitation on the personal liability of a director or officer of the Corporation existing at the time of such repeal or modification.

B. Indemnification. To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers, employees, and agents of the Corporation (and any other persons to which DGCL permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such persons, vote of stockholders or disinterested directors, or otherwise.

C. Repeal and Modification. Any repeal or modification of the foregoing provisions of this Article VIII shall not adversely affect any right or protection existing hereunder immediately prior to such repeal or modification.

## ARTICLE IX

A. Exclusive Forum; Delaware Chancery Court. Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state or federal court located within the State of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought in the name or right of the Corporation or on behalf of the Corporation, (ii) any action or proceeding asserting a claim of breach of any fiduciary duty owed by any director, officer, employee, agent or stockholder of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action or proceeding

arising or asserting a claim arising pursuant to any provision of the DGCL, this Certificate, any Preferred Stock Designation or the Bylaws, (iv) any action to interpret, apply, enforce or determine the validity of this Certificate or Bylaws, or (v) any action or proceeding asserting a claim governed by the internal affairs doctrine. If any action, the subject matter of which is within the scope of this Section, is filed in a court other than a court located within the State of Delaware (a “**Foreign Action**”) in the name of any stockholder, that stockholder shall be deemed to have consented to: (x) the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce this Section (an “**Enforcement Action**”), and (y) having service of process made upon such stockholder in any such Enforcement Action by service upon such stockholder’s counsel in the Foreign Action as agent for such stockholder, in each case, to the fullest extent permitted by law. Any person or entity purchasing or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to the provisions of this Section.

B. Exclusive Forum; Federal District Courts. Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States shall, to the fullest extent permitted by law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act of 1933. Any person or entity purchasing or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to the provisions of this Section.

C. Failure to enforce the provisions contained in this Article IX would cause the Corporation irreparable harm, and the Corporation shall be entitled to equitable relief, including injunctive relief and specific performance, to enforce the foregoing provisions.

#### ARTICLE X

Notwithstanding any other provision of this Certificate of Incorporation or any provision of law that might otherwise permit a lesser vote or no vote, but in addition to any vote of the holders of any class or series of the stock of this Corporation required by law, by this Certificate of Incorporation or by any Preferred Stock Designation, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote thereon, voting together as a single class, shall be required to amend in any respect or repeal this Article X or any of Articles V, VI, VII, VIII, or IX.

*[remainder of page intentionally left blank]*

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed by its Chief Executive Officer this day of \_\_\_\_\_, 2023.

SILVACO GROUP, INC.

By: \_\_\_\_\_  
Babak Taheri, Chief Executive Officer



**AMENDED AND RESTATED**  
**BYLAWS**  
**OF**  
**SILVACO GROUP, INC.**  
**(a Delaware corporation)**

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**AMENDED AND RESTATED**

**BYLAWS**

**OF**

**SILVACO GROUP, INC.**

**(a Delaware corporation)**

ARTICLE 1

Offices

1.1 Registered Office. The registered office of Silvaco Group, Inc. shall be set forth in the certificate of incorporation of the corporation.

1.2 Other Offices. The corporation may also have offices at such other places, either within or without the State of Delaware, as the board of directors of the corporation (the “*Board of Directors*”) may from time to time designate, or as the business of the corporation may require.

ARTICLE 2

Meeting of Stockholders

2.1 Place of Meeting. Meetings of stockholders may be held at such place, either within or without the State of Delaware, as may be designated by or in the manner provided in these bylaws, or, if not so designated, at the principal executive offices of the corporation. The Board of Directors may, in its sole discretion, (a) determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication, or (b) permit participation by stockholders at such meeting by means of remote communication as authorized by Section 211(a)(2) of the Delaware General Corporation Law (the “*DGCL*”).

2.2 Annual Meeting.

(a) Annual meetings of stockholders shall be held each year on such date and at such time as shall be designated from time to time by or in the manner determined by the Board of Directors and stated in the notice of the meeting. Except as otherwise provided in the certificate of incorporation, at each such annual meeting, the stockholders shall elect the number of directors equal to the number of directors of the class whose term expires at such meeting (or, if fewer, the number of directors properly nominated and qualified for election) to hold office until the third succeeding annual meeting of stockholders after their election. The stockholders shall also transact such other business as may properly be brought before the meeting. Except as otherwise restricted by the certificate of incorporation of the corporation or applicable law, the Board of Directors may postpone, reschedule or cancel any annual meeting of stockholders.

### 2.3 Advance Notice of Business to be Brought before a Meeting.

(a) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before the annual meeting, business must be (i) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (ii) otherwise properly brought before the meeting by or at the direction of the Board of Directors, or (iii) otherwise properly brought before the meeting by a stockholder of record. A motion related to business proposed to be brought before any stockholders' meeting may be made by any stockholder entitled to vote if the business proposed is otherwise proper to be brought before the meeting. However, any such stockholder may propose business to be brought before a meeting only if such stockholder has given timely notice to the Secretary of the corporation in proper written form of the stockholder's intent to propose such business.

(b) Without qualification, for business to be properly brought before an annual meeting by a stockholder, the stockholder must (i) provide Timely Notice (as defined below) thereof in writing and in proper form to the Secretary of the corporation and (ii) provide any updates or supplements to such notice at the time and in the forms required by this Section 2.3. To be timely, the stockholder's notice must be delivered to, or mailed and received at, the principal executive offices of the corporation not more than one hundred twenty (120) days nor less than ninety (90) days in advance of the anniversary of the date of the corporation's proxy statement provided in connection with the previous year's annual meeting of stockholders (which anniversary date, for purposes of the corporation's first annual meeting of stockholders following the consummation of the initial public offering of the common stock of the corporation (the "**IPO**") shall be deemed to be \_\_\_\_\_); *provided, however*, that in the event that no annual meeting was held in the previous year or the annual meeting is called for a date that is more than thirty (30) days before or after the anniversary date of the previous year's annual meeting, notice by the stockholder must be received by the Secretary of the corporation not later than the close of business on the later of (x) the ninetieth (90th) day prior to such annual meeting and (y) the tenth (10th) day following the day on which public announcement of the date of such meeting is first made (such notice within such time periods, "**Timely Notice**"). For the purposes of these bylaws, "**public announcement**" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission. In no event shall the public announcement of an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above.

(c) To be in proper form for purposes of this Section 2.3, a stockholder's notice to the Secretary of the corporation shall set forth:

(i) As to each Proposing Person (as defined below), (1) the name and address of such Proposing Person (including, if applicable, the name and address that appears on the corporation's books and records); and (2) the number of shares of each class or series of stock of the corporation that are, directly or indirectly, owned of record or beneficially

owned (within the meaning of Rule 13d-3 under the Securities Exchange Act of 1934 (the “*Exchange Act*”)) by such Proposing Person, except that such Proposing Person shall in all events be deemed to beneficially own any shares of any class or series of stock of the corporation as to which such Proposing Person has a right to acquire beneficial ownership at any time in the future (the disclosures to be made pursuant to the foregoing clauses (1) and (2) are referred to as “*Stockholder Information*”);

(ii) As to each Proposing Person, (1) the full notional amount of any securities that, directly or indirectly, underlie any “*derivative security*” (as such term is defined in Rule 16a-1(c) under the Exchange Act) that constitutes a “*call equivalent position*” (as such term is defined in Rule 16a-1(b) under the Exchange Act) (“*Synthetic Equity Position*”) and that is, directly or indirectly, held or maintained by such Proposing Person with respect to any shares of any class or series of stock of the corporation; *provided* that, for the purposes of the definition of “Synthetic Equity Position,” the term “derivative security” shall also include any security or instrument that would not otherwise constitute a “derivative security” as a result of any feature that would make any conversion, exercise or similar right or privilege of such security or instrument determinable only at some future date or upon the happening of a future occurrence, in which case the determination of the amount of securities into which such security or instrument would be convertible or exercisable shall be made assuming that such security or instrument is immediately convertible or exercisable at the time of such determination; and, *provided, further*, that any Proposing Person satisfying the requirements of Rule 13d-1(b)(1) under the Exchange Act (other than a Proposing Person that so satisfies Rule 13d-1(b)(1) under the Exchange Act solely by reason of Rule 13d-1(b)(1)(ii)(E)) shall not be deemed to hold or maintain the notional amount of any securities that underlie a Synthetic Equity Position held by such Proposing Person as a hedge with respect to a bona fide derivatives trade or position of such Proposing Person arising in the ordinary course of such Proposing Person’s business as a derivatives dealer, (2) any rights to dividends on the shares of any class or series of stock of the corporation owned beneficially by such Proposing Person that are separated or separable from the underlying shares of the corporation, (3) any material pending or threatened legal proceeding in which such Proposing Person is a party or material participant involving the corporation or any of its officers or directors, or any affiliate of the corporation, (4) any other material relationship between such Proposing Person, on the one hand, and the corporation or any affiliate of the corporation, on the other hand, (5) any direct or indirect material interest in any material contract or agreement of such Proposing Person with the corporation or any affiliate of the corporation (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement), (6) a representation that such Proposing Person intends or is part of a group which intends to deliver a proxy statement or form of proxy to holders of at least the percentage of the corporation’s outstanding capital stock required to approve or adopt the proposal or otherwise solicit proxies from stockholders in support of such proposal and (7) any other information relating to such Proposing Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting

pursuant to Section 14(a) of the Exchange Act (the disclosures to be made pursuant to the foregoing clauses (1) through (7) are referred to as “**Disclosable Interests**”); *provided, however*, that Disclosable Interests shall not include any such disclosures with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these bylaws on behalf of a beneficial owner; and

(iii) As to each item of business that the stockholder proposes to bring before the annual meeting, (1) a brief description of the business desired to be brought before the annual meeting, the reasons for conducting such business at the annual meeting and any material interest in such business of each Proposing Person, (2) the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend the bylaws, the language of the proposed amendment), (3) a reasonably detailed description of all agreements, arrangements and understandings (x) between or among any of the Proposing Persons or (y) between or among any Proposing Person and any other record or beneficial holder(s) or person(s) who have a right to acquire beneficial ownership at any time in the future of the shares of any class or series of stock of the corporation or other person or entity (including the names of such other holder(s), person(s) or entity(ies)) in connection with the proposal of such business by such stockholder and (4) any other information relating to such item of business that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act; *provided, however*, that the disclosures required by this Section 2.3(c) shall not include any disclosures with respect to any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these bylaws on behalf of a beneficial owner.

(d) For purposes of this Section 2.3, the term “**Proposing Person**” shall mean (i) the stockholder providing the notice of business proposed to be brought before an annual meeting, (ii) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the business proposed to be brought before the annual meeting is made and (iii) any participant (as defined in paragraphs (a)(ii)-(vi) of Instruction 3 to Item 4 of Schedule 14A) with such stockholder in such solicitation.

(e) A Proposing Person shall update and supplement its notice to the corporation of its intent to propose business at an annual meeting, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.3 shall be true and correct as of the record date for stockholders entitled to vote at the meeting and as of the date that is ten (10) business days prior to the later of the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the corporation (i) not later than five (5) business days after the record date for stockholders entitled to vote at the meeting (in the case of the update and



supplement required to be made as of such record date), and (ii) not later than eight (8) business days prior to the later of the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the later of the meeting or any adjournment or postponement thereof). For the avoidance of doubt, the obligation to update and supplement as set forth in this paragraph or any other Section of these bylaws shall not limit the corporation's rights with respect to any deficiencies in any notice provided by a stockholder, extend any applicable deadlines hereunder or enable or be deemed to permit a stockholder who has previously submitted notice hereunder to amend or update any proposal or to submit any new proposal, including by changing or adding matters, business or resolutions proposed to be brought before a meeting of the stockholders.

(f) Notwithstanding anything in these bylaws to the contrary, no business shall be conducted at an annual meeting that is not properly brought before the meeting in accordance with this Section 2.3. The presiding person of the meeting shall, if the facts warrant, determine that the business was not properly brought before the meeting in accordance with this Section 2.3, and if he or she should so determine, he or she shall so declare to the meeting and any such business not properly brought before the meeting shall not be transacted.

(g) This Section 2.3 is expressly intended to apply to any business proposed to be brought before an annual meeting of stockholders other than any proposal made in accordance with Rule 14a-8 under the Exchange Act and included in the corporation's proxy statement. In addition to the requirements of this Section 2.3 with respect to any business proposed to be brought before an annual meeting, each Proposing Person shall comply with all applicable requirements of the Exchange Act with respect to any such business. Nothing in this Section 2.3 shall be deemed to affect the rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act.

#### 2.4 Advance Notice of Nominations for Election of Directors at a Meeting.

(a) Subject to the rights, if any, of holders of preferred stock to vote separately to elect directors, nominations of any person for election to the Board of Directors at an annual meeting or at a special meeting (but, in the case of a special meeting, only if the election of directors is a matter specified in the notice of meeting given by or at the direction of the person calling such special meeting) may be made at such meeting only (i) by or at the direction of the Board of Directors, including by any committee or persons authorized to do so by the Board of Directors or these bylaws, or (ii) by a stockholder present in person who (A) was a stockholder of record of the corporation (and with respect to any beneficial owner, if different, on whose behalf such nomination is proposed to be made, only if such beneficial owner was the beneficial owner of shares of the corporation) both at the time of giving the notice provided for in Section 2.4(b) and at the time of the meeting, (B) is entitled to vote at the meeting and (C) has complied with this Section 2.4 and Section 2.5 as to such notice and nomination. The foregoing clause (ii) shall be the exclusive means for a stockholder to make any nomination of a person or

persons for election to the Board of Directors at any annual meeting or special meeting of stockholders.

(b) Without qualification, for a stockholder to make any nomination of a person or persons for election to the Board of Directors at an annual meeting or, subject to the limitations set forth in these bylaws, at a special meeting of the stockholders, the stockholder must (i) provide Timely Notice (as defined in Section 2.3(b) of these bylaws) thereof in writing and in proper form to the Secretary of the corporation; (ii) have acted in accordance with the representations set forth in the Solicitation Statement required by these bylaws; (iii) provide the information, agreements and questionnaires with respect to such stockholder and its candidate for nomination as required to be set forth by this Section 2.4 and Section 2.5; and (iv) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.4 and Section 2.5. The number of nominees a stockholder may nominate for election at the annual meeting (or in the case of a stockholder giving the notice on behalf of a beneficial owner, the number of nominees a stockholder may nominate for election at the annual meeting on behalf of such beneficial owner) shall not exceed the number of directors to be elected at such annual meeting. Notwithstanding anything herein to the contrary, in the event that the number of directors to be elected to the Board of Directors is increased and there has been no public announcement naming all of the nominees for director or indicating the increase in the size of the Board of Directors made by the corporation at least ten (10) days before the last day a Nominating Person may deliver Timely Notice, a Nominating Person's notice required by this bylaw shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the tenth (10<sup>th</sup>) day following the day on which such public announcement is first made by the corporation.

(c) In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described above.

(d) To be in proper form for purposes of this Section 2.4, a stockholder's notice to the Secretary shall set forth:

(i) As to each Nominating Person (as defined below), the Stockholder Information (as defined in Section 2.3(c)(i), except that for purposes of this Section 2.4, the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.3(c)(i));

(ii) As to each Nominating Person, any Disclosable Interests (as defined in Section 2.3(c)(ii), except that for purposes of this Section 2.4, the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.3(c)(ii), and the disclosure with respect to the business to be brought before the meeting in Section 2.3(c)(ii) shall be made with respect to nomination of each person for election as a director at the meeting) and a statement whether or not each such Nominating Person will deliver a proxy statement and form of proxy to holders of at least sixty-seven percent (67%) of the voting power of the shares entitled to vote on the

election of directors and file a definitive proxy statement with the U.S. Securities and Exchange Commission in accordance with the requirements of the Exchange Act (such statement, a “**Solicitation Statement**”); and

(iii) As to each candidate whom a Nominating Person proposes to nominate for election as a director, (A) all information with respect to such candidate for nomination that would be required to be set forth in a stockholder’s notice pursuant to this Section 2.4 and Section 2.5 if such candidate for nomination were a Nominating Person, (B) all information relating to such candidate for nomination that is required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors in a contested election pursuant to Section 14(a) under the Exchange Act (including such candidate’s written consent to being named in the proxy statement as a nominee and to serving as a director if elected), (C) a description of any direct or indirect material interest in any material contract or agreement between or among any Nominating Person, on the one hand, and each candidate for nomination or his or her respective associates or any other participants in such solicitation, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 under Regulation S-K if such Nominating Person were the “registrant” for purposes of such rule and the candidate for nomination were a director or executive officer of such registrant (the disclosures to be made pursuant to the foregoing clauses (A) through (C) are referred to as “**Nominee Information**”), and (D) a completed and signed questionnaire, representation and agreement as provided in Section 2.5(a).

(e) For purposes of this Section 2.4, the term “**Nominating Person**” shall mean (i) the stockholder providing the notice of the nomination proposed to be made at the meeting, (ii) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the nomination proposed to be made at the meeting is made and (iii) any other participant in such solicitation.

(f) A stockholder providing notice of any nomination proposed to be made at a meeting shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.4 shall be true and correct as of the record date for stockholders entitled to vote at the meeting and as of the date that is ten (10) business days prior to the later of the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the corporation (i) not later than five (5) business days after the record date for stockholders entitled to vote at the meeting (in the case of the update and supplement required to be made as of such record date), and (ii) not later than eight (8) business days prior to the later of the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the later of the meeting or any adjournment or postponement thereof). For the avoidance of doubt, the obligation to update and supplement as set forth in this paragraph or any other Section of these bylaws shall not limit the corporation’s rights with respect to any deficiencies in any notice provided by a stockholder, extend any applicable deadlines hereunder or enable or be deemed to permit a stockholder who

has previously submitted notice hereunder to amend or update any nomination or to submit any new nomination.

(g) In addition to the requirements of this Section 2.4 with respect to any nomination proposed to be made at a meeting, each Nominating Person shall comply with all applicable requirements of the Exchange Act with respect to any such nominations.

2.5 Additional Requirements for Valid Nomination of Candidates to Serve as Directors and, if Elected, to be Seated as Directors.

(a) To be eligible to be a candidate for election as a director of the corporation at an annual meeting, a candidate must be nominated in the manner prescribed in Section 2.4 and the candidate for nomination, whether nominated by the Board of Directors or by a stockholder of record, must have previously delivered (in accordance with the time period prescribed for delivery in a notice to such candidate given by or on behalf of the Board of Directors), to the Secretary at the principal executive offices of the corporation, (i) a completed written questionnaire (in the form provided by the corporation upon written request therefor) with respect to the background, qualifications, stock ownership and independence of such proposed nominee and (ii) a written representation and agreement (in the form provided by the corporation upon written request therefor) that such candidate for nomination (A) is not and, if elected as a director during his or her term of office, will not become a party to (1) any agreement, arrangement or understanding with, and has not given and will not give any commitment or assurance to, any person or entity as to how such proposed nominee, if elected as a director of the corporation, will act or vote on any issue or question (a “**Voting Commitment**”), or (2) any Voting Commitment that could limit or interfere with such proposed nominee’s ability to comply, if elected as a director of the corporation, with such proposed nominee’s fiduciary duties under applicable law, (B) is not, and will not become a party to, any agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation or reimbursement for service as a director of the corporation that has not been disclosed therein, and (C) if elected as a director of the corporation, will comply with all applicable corporate governance, conflict of interest, confidentiality, stock ownership and trading and other policies and guidelines of the corporation applicable to directors and in effect during such person’s term in office as a director (and, if requested by any candidate for nomination, the Secretary of the corporation shall provide to such candidate for nomination all such policies and guidelines then in effect).

(b) The Board of Directors may also require any proposed candidate for nomination as a director to furnish such other information as may reasonably be requested by the Board of Directors in writing prior to the meeting of stockholders at which such candidate’s nomination is to be acted upon in order for the Board of Directors to determine the eligibility of such candidate for nomination to be an independent director of the corporation.

(c) A candidate for nomination as a director shall further update and supplement the materials delivered pursuant to this Section 2.5, if necessary, so that the information provided or required to be provided pursuant to this Section 2.5 shall be true and correct as of the record date for stockholders entitled to vote at the meeting and as of the date that is ten (10) business days

prior to the later of the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the corporation (or any other office specified by the corporation in any public announcement) (i) not later than five (5) business days after the record date for stockholders entitled to vote at the meeting (in the case of the update and supplement required to be made as of such record date), and (ii) not later than eight (8) business days prior to the later of the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the later of the meeting or any adjournment or postponement thereof). For the avoidance of doubt, the obligation to update and supplement as set forth in this paragraph or any other Section of these bylaws shall not limit the corporation's rights with respect to any deficiencies in any notice provided by a stockholder or information provided by a candidate, extend any applicable deadlines hereunder or enable or be deemed to permit a stockholder who has previously submitted notice hereunder to amend or update any nomination or to submit any new nomination.

(d) In addition to the requirements of this Section 2.5 with respect to any nomination proposed to be made at a meeting, each Proposing Person shall comply with all applicable requirements of the Exchange Act with respect to any such nominations.

(i) No candidate shall be eligible for nomination as a director of the corporation unless such candidate for nomination and the Nominating Person seeking to place such candidate's name in nomination has complied with Section 2.4 and this Section 2.5, as applicable. For any nomination to be properly brought before a meeting, the information provided by any Nominating Person or candidate, including the information contained in any questionnaire, shall not contain any false or misleading information or omit any material information that has been requested. In the event of a failure to meet the requirements of Section 2.4 and Section 2.5, (1) the corporation may omit or, to the extent feasible, remove the information concerning the nomination from its proxy materials and/or otherwise communicate to its stockholders that the nominee is not eligible for election at the annual meeting, (2) the corporation shall not be required to include in its proxy materials any successor or replacement nominee proposed by the party and (3) the presiding person of the meeting shall declare such nomination to be invalid and such nomination shall be disregarded notwithstanding that proxies in respect of such vote may have been received by the corporation. The presiding person at the meeting shall, if the facts warrant, determine that a nomination was not properly made in accordance with Section 2.4 or this Section 2.5, and if he or she should so determine, he or she shall so declare such determination to the meeting, the defective nomination shall be disregarded and any ballots cast for the candidate in question (but in the case of any form of ballot listing other qualified nominees, only the votes cast for the nominee in question) shall be void and of no force or effect.

(e) Notwithstanding anything in these bylaws to the contrary, no candidate for nomination by a Nominating Person shall be eligible to be seated as a director of the corporation unless nominated and elected in accordance with Section 2.4 and this Section 2.5.

2.6 Special Meetings. Special meetings of the stockholders of the corporation may be called only by the Chairman of the Board of Directors, the Chief Executive Officer or the President of the corporation, or by a resolution duly adopted by the affirmative vote of a majority of the Board of Directors. Such request shall state the purpose or purposes of the proposed meeting. Business transacted at any special meeting shall be limited to the matters relating to the purpose or purposes stated in the notice of meeting. Except as otherwise restricted by the certificate of incorporation or applicable law, the Board of Directors may postpone, reschedule or cancel any special meeting of stockholders.

2.7 Notice of Meetings. Except as otherwise provided by law, the certificate of incorporation, or these bylaws, written or electronic notice of each annual or special meeting of stockholders stating the place, if any, date, and time of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and, in the case of a special meeting, the purpose or purposes for which such special meeting is called, shall be given in accordance with Section 232 of the DGCL not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

2.8 List of Stockholders. The corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, *provided, however*, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the meeting date, the list shall reflect the stockholders entitled to vote as of the tenth (10<sup>th</sup>) day before the meeting date, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting: (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation.

2.9 Organization and Conduct of Business. Such person as the Board of Directors may have designated or, in the absence of such a person, the Chairman of the Board of Directors or, in his or her absence, the Chief Executive Officer or President of the corporation or, in their absence, such person as may be chosen by the holders of a majority of the voting power of the shares entitled to vote who are present, in person or by proxy, shall call to order any meeting of the stockholders and act as chairman of the meeting. In the absence of the Secretary of the corporation, the secretary of the meeting shall be such person as the chairman of the meeting appoints.

The chairman of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of discussion as seems to him or her in order.

2.10 Quorum. Except where otherwise required by law, the rules of any stock exchange upon which the corporation's securities are listed, the certificate of incorporation of the corporation or these bylaws, the holders of a majority of the voting power of the capital stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

2.11 Adjournments. The chairperson of the meeting, the stockholders, by the affirmative vote of a majority of the voting power of the shares of capital stock present in person or represented by proxy at the meeting and entitled to vote, though less than a quorum, or any officer entitled to preside at such meeting, shall be entitled to adjourn such meeting from time to time, without notice other than announcement at the meeting. When a meeting is adjourned to another place, date or time, notice need not be given of the adjourned meeting if the place, if any, date and time thereof and the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are (i) announced at the meeting at which the adjournment is taken, (ii) displayed, during the time scheduled for the meeting, on the same electronic network used to enable stockholder and proxy holders to participate in the meeting by means of remote communication, or (iii) set forth in the notice of meeting given in accordance with Section 2.7 of these bylaws; *provided, however*, that if the adjournment is for more than thirty (30) days, notice of the place, if any, date, time and means of remote communications, if any, of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for stockholders entitled to vote is fixed for the adjourned meeting, the Board of Directors shall fix a new record date for notice of such adjourned meeting in accordance with Section 2.14 of these bylaws and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting. At any adjourned meeting, any business may be transacted that might have been transacted at the original meeting.

2.12 Voting Rights. Unless otherwise required by the DGCL or the certificate of incorporation of the corporation, each stockholder shall at every meeting of the stockholders be entitled to one vote for each share of the capital stock having voting power held by such stockholder. No holder of shares of the corporation's common stock shall have the right to cumulative votes.

2.13 Majority Vote. When a quorum is present at any meeting, the vote of the holders of a majority of the votes cast affirmatively or negatively shall decide any question brought before such meeting, unless the question is one upon which by express provision of an applicable statute or of the certificate of incorporation of the corporation or of these bylaws, including Section 3.2 hereof, or of the rules of any a stock exchange upon which the corporation's securities are listed, a different vote is required, in which case such express provision shall govern and control the decision of such question.

2.14 Record Date for Stockholder Notice and Voting. For purposes of determining the stockholders entitled (i) to notice of, or to vote at, any meeting of stockholders or any adjournment thereof, (ii) to receive payment of any dividend or other distribution or allotment of any rights, or (iii) to exercise any right in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not (a) precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, (b) be more than sixty (60) days nor less than ten (10) days before the date of any such meeting, or (c) be more than sixty (60) days before any other action to which the record date relates. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however*, that the Board of Directors may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting in accordance with the foregoing provisions. If the Board of Directors does not fix a record date as described in the first two sentences of this paragraph, (a) the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the business day next preceding the day on which notice is given or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held, and (b) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose.

2.15 Proxies. Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. All proxies must be filed with the Secretary of the corporation at the beginning of each meeting in order to be counted in any vote at the meeting.

2.16 Inspectors of Election. The corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors of election to act at the meeting and make a written report thereof. The corporation may designate one or more persons to act as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his or her ability.

2.17 No Action Without a Meeting. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called and noticed in the manner required by these bylaws. The stockholders may not in any circumstance take action by written consent.



## ARTICLE 3

### Directors

3.1 Number, Election, Tenure and Qualifications. Subject to the rights of the holders of any series of preferred stock to elect additional directors under specified circumstances, the number of directors shall be fixed from time to time exclusively by the Board of Directors pursuant to a resolution adopted by the affirmative vote of a majority of the Board of Directors. The directors, other than those who may be elected by the holders of any series of preferred stock under specified circumstances, shall be divided into three classes, with the term of office of the first class to expire at the corporation's first annual meeting of stockholders following the effectiveness of the filing of the certificate of incorporation of the corporation first containing a classified board provision (the "*Effective Time*"), the term of office of the second class to expire at the corporation's second annual meeting of stockholders following the Effective Time, and the term of office of the third class to expire at the corporation's third annual meeting of stockholders following the Effective Time, with each director to hold office until his or her successor shall have been duly elected and qualified. The Board of Directors is authorized to assign members of the Board of Directors already in office at the Effective Time to such classes as it determines. At each annual meeting of stockholders, (a) directors elected to succeed those directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election, with each director to hold office until his or her successor shall have been duly elected and qualified; and (b) if authorized by a resolution of the Board of Directors, directors may be elected to fill any vacancy on the Board of Directors, regardless of how such vacancy shall have been created.

3.2 Director Nominations. At each annual meeting of the stockholders, directors shall be elected by a plurality of votes cast, except as otherwise provided in this Section 3.2, and each director so elected shall hold office until such director's successor is duly elected and qualified or until such director's earlier resignation, removal, death, or incapacity.

Notwithstanding the previous sentence, to the fullest extent permitted by law, if a majority of the votes cast with respect to the election of a director are marked "against" or "withheld" in an uncontested election, the director shall promptly tender his or her irrevocable resignation for the Board of Directors' or the Nominating and Governance Committee's consideration. If such director's resignation is accepted by the Board of Directors or the Nominating and Governance Committee, then the Board of Directors or the Nominating and Governance Committee, in its sole discretion, may fill the resulting vacancy or may decrease the size of the Board of Directors.

3.3 Enlargement and Vacancies. Except as otherwise provided by the certificate of incorporation of the corporation, subject to the rights of the holders of any series of preferred stock then outstanding, newly created directorships resulting from any increase in the authorized number of directors or any vacancies in the Board of Directors resulting from death, resignation, disqualification, removal from office or other cause shall, unless otherwise required by law or determined by the Board of Directors, be filled solely by a majority vote of the directors then in office, although less than a quorum, or by a sole remaining director. If there are no directors in

office, then an election of directors may be held in the manner provided by statute. Directors chosen pursuant to any of the foregoing provisions shall hold office until the next annual election at which the term of the class to which he or she has been elected expires and until such director's successor is duly elected and qualified or until such director's earlier resignation, removal or death. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, or by the certificate of incorporation of the corporation or these bylaws, may exercise the powers of the full Board of Directors until the vacancy is filled.

3.4 Resignation and Removal. Any director may resign at any time upon written or electronic notice to the corporation addressed to the attention of the Chief Executive Officer, the Secretary, the Chairman of the Board of Directors or the Chair of the Nominating and Corporate Governance Committee of the Board of Directors, who shall in turn notify the full Board of Directors (although failure to provide such notification to the full Board of Directors shall not impact the effectiveness of such resignation). Such resignation shall be effective upon receipt of such notice by one of the individuals designated above unless the notice specifies such resignation to be effective at some other time or upon the happening of some other event. Subject to the rights of the holders of any series of preferred stock then outstanding, any director, or the entire Board, may be removed from office at any time, but only for cause and only by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of capital stock of the corporation then entitled to vote at an election of directors, voting together as a single class.

3.5 Powers. The business of the corporation shall be managed by or under the direction of the Board of Directors, which may exercise all such powers of the corporation and do all such lawful acts and things as are not by statute or by the certificate of incorporation of the corporation or by these bylaws directed or required to be exercised or done by the stockholders.

3.6 Chairman of the Board of Directors. The directors shall elect a Chairman of the Board of Directors and may elect a Vice Chair of the Board, each to hold such office until their successor is elected and qualified or until their earlier resignation or removal. In the absence or disability of the Chairman of the Board of Directors, the Vice Chair of the Board, if one has been elected, or another director designated by the Board of Directors, shall perform the duties and exercise the powers of the Chairman of the Board of Directors. The Chairman of the Board of Directors of the corporation may preside at all meetings of the stockholders and the Board of Directors and shall have such other duties as may be vested in the Chairman of the Board of Directors by the Board of Directors. The Vice Chair of the Board of the corporation shall have such duties as may be vested in the Vice Chair of the Board by the Board of Directors.

3.7 Place of Meetings. The Board of Directors may hold meetings, both regular and special, either within or without the State of Delaware.

3.8 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as may be determined from time to time by the Board of Directors; *provided, however*, that any director who is absent when such a determination is made shall be given prompt notice of such determination.

3.9 Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board of Directors, the Chief Executive Officer, or by the written request of a majority of the directors then in office. Notice of the time and place, if any, of special meetings shall be delivered personally or by telephone to each director, or sent by first-class mail or commercial delivery service, facsimile transmission, or by electronic mail or other electronic means, charges prepaid, sent to such director's business or home address or email address, as applicable, as they appear upon the records of the corporation. In case such notice is mailed, it shall be deposited in the United States mail at least three (3) days prior to the time of holding of the meeting. In case such notice is delivered personally or by telephone or by commercial delivery service, facsimile transmission, or electronic mail or other electronic means, it shall be so delivered at least twenty-four (24) hours prior to the time of the holding of the meeting. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

3.10 Quorum, Action at Meeting, Adjournments. At all meetings of the Board of Directors, a majority of the Board of Directors, but in no case less than  $\frac{1}{3}$  of the Whole Board, shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by law or by the certificate of incorporation of the corporation or these bylaws. For purposes of these bylaws, the term "**Whole Board**" shall mean the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships. If a quorum shall not be present at any meeting of the Board of Directors, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

3.11 Action Without Meeting. Unless otherwise restricted by the certificate of incorporation of the corporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission. After such action is taken, the writing or writings or electronic transmission or transmissions shall be filed with the minutes of proceedings of the Board of Directors or committee.

3.12 Telephone Meetings. Unless otherwise restricted by the certificate of incorporation of the corporation or these bylaws, any member of the Board of Directors or any committee thereof may participate in a meeting of the Board of Directors or of any committee, as the case may be, by means of conference telephone or by any form of communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.13 Committees. The Board of Directors may, by resolution, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members present at any

meeting and not disqualified from voting, whether or not the member or members present constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all of the lawfully delegated powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors. Except as the Board of Directors may otherwise determine, any committee may make rules for the conduct of its business, but unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these bylaws for the conduct of its business by the Board of Directors.

3.14 Fees and Compensation of Directors. The Board of Directors shall have the authority to fix the compensation of directors.

## ARTICLE 4

### Officers

4.1 Officers Designated. The officers of the corporation shall be chosen by or in the manner determined by the Board of Directors and shall be a Chief Executive Officer, a President, a Secretary and a Chief Financial Officer. The Board of Directors may also choose a Treasurer, one or more Vice Presidents, and one or more assistant Secretaries or assistant Treasurers. Any number of offices may be held by the same person, unless the certificate of incorporation of the corporation or these bylaws otherwise provide.

4.2 Election. The Board of Directors shall choose a Chief Executive Officer, a President, a Secretary and a Chief Financial Officer. Other officers may be appointed by the Board of Directors or may be appointed pursuant to a delegation of authority from the Board of Directors.

4.3 Tenure. Each officer of the corporation shall hold office until such officer's successor is appointed and qualified, unless a different term is specified at the appointment of such officer, or until such officer's earlier death, resignation, removal or incapacity. Any officer may be removed with or without cause at any time by the Board of Directors or a committee duly authorized to do so (or in the manner determined by the Board of Directors). Any vacancy occurring in any office of the corporation may be filled by or in the manner determined by the Board of Directors, at its discretion. Any officer may resign by delivering such officer's written resignation to the corporation to the attention of the Chief Executive Officer or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

4.4 The Chief Executive Officer. Subject to such supervisory powers, if any, as may be given by the Board of Directors to the Chairman of the Board of Directors, in the absence of the Chairman of the Board of Directors, the Chief Executive Officer shall preside at all meetings

of the stockholders and at all meetings of the Board of Directors, shall have general and active management of the business of the corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. He or she shall execute bonds, mortgages and other contracts requiring a seal, under the seal of the corporation, except where required or permitted by law to be otherwise signed and executed and except where the signing and execution thereof shall be delegated by the Board of Directors to some other officer or agent of the corporation.

4.5 The President. The President shall, in the event there is no Chief Executive Officer or in the absence of the Chief Executive Officer or in the event of his or her disability, perform the duties of the Chief Executive Officer, and when so acting, shall have the powers of and be subject to all the restrictions upon the Chief Executive Officer. The President shall perform such other duties and have such other powers as may from time to time be prescribed for such person by the Board of Directors, the Chief Executive Officer, or these bylaws.

4.6 The Vice President. The Vice President, if any (or in the event there be more than one, the Vice Presidents in the order designated by the directors, or in the absence of any designation, in the order of their election), shall, in the absence of the President or in the event of his or her disability or refusal to act, perform the duties of the President, and when so acting, shall have the powers of and be subject to all the restrictions upon the President. The Vice President(s) shall perform such other duties and have such other powers as may from time to time be prescribed for such person(s) by the Board of Directors, the Chief Executive Officer, the President, or these bylaws.

4.7 The Secretary. The Secretary shall attend all meetings of the Board of Directors and the stockholders and record all votes and the proceedings of the meetings in a book to be kept for that purpose and shall perform like duties for the standing committees, when required. The Secretary shall give, or cause to be given, notice of all meetings of stockholders and special meetings of the Board of Directors, and shall perform such other duties as may from time to time be prescribed by the Board of Directors, the Chairman of the Board of Directors or the Chief Executive Officer, under whose supervision he or she shall act. The Secretary shall sign such instruments on behalf of the corporation as the Secretary may be authorized to sign by the Board of Directors or by law and shall countersign, attest and affix the corporate seal to all certificates and instruments where such countersigning or such sealing and attesting are necessary to their true and proper execution.

4.8 The Assistant Secretary. The Assistant Secretary, or if there be more than one, any Assistant Secretaries in the order designated by the Board of Directors (or in the absence of any designation, in the order of their election) shall assist the Secretary in the performance of his or her duties and, in the absence of the Secretary or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the Secretary and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

4.9 The Chief Financial Officer. The Chief Financial Officer shall be the principal financial officer in charge of the general accounting books, accounting and cost records and forms. The Chief Financial Officer may also serve as the principal accounting officer and shall

perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors or the Chief Executive Officer.

4.10 The Treasurer and Assistant Treasurers. The Treasurer (if one is appointed) shall have such duties as may be specified by the Chief Financial Officer to assist the Chief Financial Officer in the performance of his or her duties and to perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors or the Chief Executive Officer. It shall be the duty of any Assistant Treasurers to assist the Treasurer in the performance of his or her duties and to perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors or the Chief Executive Officer.

4.11 Bond. If required by the Board of Directors, any officer shall give the corporation a bond in such sum and with such surety or sureties and upon such terms and conditions as shall be satisfactory to the Board of Directors, including without limitation a bond for the faithful performance of the duties of such officer's office and for the restoration to the corporation of all books, papers, vouchers, money and other property of whatever kind in such officer's possession or under such officer's control and belonging to the corporation.

4.12 Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officers or agents, notwithstanding any provision hereof.

## ARTICLE 5

### Notices

5.1 Delivery. Whenever, under the provisions of law, or of the certificate of incorporation of the corporation or these bylaws, written notice is required to be given to any stockholder, such notice may be given (a) by mail, addressed to such stockholder, at such person's address as it appears on the records of the corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail, or (b) by nationally recognized courier service, and such notice shall be deemed to be given at the earlier of when the notice is received or left at such stockholder's address. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the DGCL.

5.2 Waiver of Notice. Whenever any notice is required to be given under the provisions of law or of the certificate of incorporation of the corporation or of these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or members of a committee of directors

need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

## ARTICLE 6

### Indemnification of Directors and Officers

6.1 **Right to Indemnification.** Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative (hereinafter a “**proceeding**”), by reason of the fact that he or she is or was a director or an officer of the corporation or is or was serving at the request of the corporation as a director, officer or trustee of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan (hereinafter an “**indemnitee**”), whether the basis of such proceeding is alleged action in an official capacity as a director, officer, or trustee or in any other capacity while serving as a director, officer, or trustee, shall be indemnified and held harmless by the corporation to the fullest extent permitted by Delaware law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the corporation to provide broader indemnification rights than such law permitted the corporation to provide prior to such amendment), against all expense, liability, and loss (including attorneys’ fees, judgments, fines, ERISA excise taxes or penalties, and amounts paid in settlement) reasonably incurred or suffered by such indemnitee in connection therewith; *provided, however*, that, except as provided in Section 6.3 of this Article 6 with respect to proceedings to enforce rights to indemnification, the corporation shall indemnify any such indemnitee in connection with a proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Board of Directors of the corporation.

6.2 **Right to Advancement of Expenses.** In addition to the right to indemnification conferred in Section 6.1 of this Article 6, an indemnitee shall also have the right to be paid by the corporation the expenses (including attorney’s fees) incurred in defending any such proceeding in advance of its final disposition (hereinafter an “**advancement of expenses**”); *provided, however*, that, if the DGCL requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking (hereinafter an “**undertaking**”), by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (hereinafter a “**final adjudication**”) that such indemnitee is not entitled to be indemnified for such expenses under this Section 6.2 or otherwise.

6.3 **Right of Indemnitee to Bring Suit.** If a claim under Section 6.1 or 6.2 of this Article 6 is not paid in full by the corporation within 60 days after a written claim has been received by the corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be 20 days, the indemnitee may at any time thereafter bring suit against the corporation to recover the unpaid amount of the claim. To the fullest extent permitted by law, if successful in whole or in part in any such suit, or in a suit brought by the

corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall be entitled to be paid also the expense of prosecuting or defending such suit. In (a) any suit brought by the indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the indemnitee to enforce a right to an advancement of expenses) it shall be a defense that, and (b) in any suit brought by the corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the corporation shall be entitled to recover such expenses upon a final adjudication that, the indemnitee has not met any applicable standard for indemnification set forth in the DGCL. Neither the failure of the corporation (including its directors who are not parties to such action, a committee of such directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such suit that indemnification of the indemnitee is proper in the circumstances because the indemnitee has met the applicable standard of conduct set forth in the DGCL, nor an actual determination by the corporation (including its directors who are not parties to such action, a committee of such directors, independent legal counsel, or its stockholders) that the indemnitee has not met such applicable standard of conduct, shall create a presumption that the indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the indemnitee, be a defense to such suit. In any suit brought by the indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article 6 or otherwise shall be on the corporation.

6.4 Non-Exclusivity of Rights. The rights to indemnification and to the advancement of expenses conferred in this Article 6 shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, the corporation's certificate of incorporation, bylaws, agreement, vote of stockholders or directors, or otherwise.

6.5 Insurance. The corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee, or agent of the corporation or another corporation, partnership, joint venture, trust, or other enterprise against any expense, liability, or loss, whether or not the corporation would have the power to indemnify such person against such expense, liability, or loss under the DGCL.

6.6 Indemnification of Employees and Agents of the Corporation. The corporation may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification and to the advancement of expenses to any employee or agent of the corporation to the fullest extent of the provisions of this Article with respect to the indemnification and advancement of expenses of directors and officers of the corporation.

6.7 Nature of Rights. The rights conferred upon indemnitees in this Article 6 shall be contract rights and such rights shall continue as to an indemnitee who has ceased to be a director, officer, or trustee and shall inure to the benefit of the indemnitee's heirs, executors, and administrators. Any amendment, alteration, or repeal of this Article 6 that adversely affects any right of an indemnitee or its successors shall be prospective only and shall not limit, eliminate, or



impair any such right with respect to any proceeding involving any occurrence or alleged occurrence of any action or omission to act that took place prior to such amendment or repeal.

6.8 Severability. If any word, clause, provision or provisions of this Article 6 shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (a) the validity, legality and enforceability of the remaining provisions of this Article 6 (including, without limitation, each portion of any Section or paragraph of this Article 6 containing any such provision held to be invalid, illegal or unenforceable, that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (b) to the fullest extent possible, the provisions of this Article 6 (including, without limitation, each such portion of any Section or paragraph of this Article 6 containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

## ARTICLE 7

### Capital Stock

7.1 Certificates for Shares. The shares of the corporation shall be (a) represented by certificates or (b) uncertificated and evidenced by a book-entry system maintained by or through the corporation's transfer agent or registrar. Certificates shall be signed by, or in the name of the corporation by, any two authorized officers of the corporation, including the Chief Executive Officer, the President, the Secretary, or the Chief Financial Officer.

Within a reasonable time after the issuance or transfer of uncertificated stock, the corporation shall send or cause to be sent to the registered owner thereof a written notice or electronic transmission containing the information required by Section 151(f) of the DGCL or a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

7.2 Signatures on Certificates. Any or all of the signatures on a certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

7.3 Transfer of Stock. Upon surrender to the corporation or the transfer agent of the corporation of a certificate of shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, and proper evidence of compliance of other conditions to rightful transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books. Upon receipt of proper transfer instructions and proper evidence of compliance of other conditions to rightful transfer from the registered owner of uncertificated shares, such uncertificated shares shall be canceled and issuance of new equivalent uncertificated shares or

certificated shares shall be made to the person entitled thereto and the transaction shall be recorded upon the books of the corporation.

7.4 Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by the laws of Delaware.

7.5 Lost, Stolen or Destroyed Certificates. The corporation may direct that a new certificate or certificates be issued to replace any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed and on such terms and conditions as the corporation may require. When authorizing the issue of a new certificate or certificates, the corporation may, in its discretion and as a condition precedent to the issuance thereof, require the owner of the lost, stolen or destroyed certificate or certificates, or his or her legal representative, to advertise the same in such manner as it may require, to indemnify the corporation in such manner as it may require, and/or to give the corporation a bond or other adequate security in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

## ARTICLE 8

### General Provisions

8.1 Dividends. Dividends upon the capital stock of the corporation, subject to any restrictions contained in the DGCL or the provisions of the certificate of incorporation of the corporation, if any, may be declared by the Board of Directors at any regular or special meeting or by unanimous written consent. Dividends may be paid in cash, in property or in shares of capital stock, subject to the provisions of the certificate of incorporation of the corporation.

8.2 Checks. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors or its designees may from time to time designate.

8.3 Corporate Seal. The Board of Directors may, by resolution, adopt a corporate seal. The corporate seal shall have inscribed thereon the name of the corporation, the year of its organization and the word "Delaware." The seal may be used by causing it or a facsimile thereof to be impressed or affixed or otherwise reproduced. The seal may be altered from time to time by the Board of Directors.

8.4 Execution of Corporate Contracts and Instruments. The Board of Directors, except as otherwise provided in these bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances.

8.5 Representation of Shares or Interests of Other Entities. The Chief Executive Officer, the President or any Vice President, the Chief Financial Officer or the Treasurer or any Assistant Treasurer, or the Secretary or any Assistant Secretary of the corporation is authorized to vote, represent and exercise on behalf of the corporation all rights incident to any and all shares of any corporation or corporations or similar ownership interests of other business entities standing in the name of the corporation. The authority herein granted to said officers to vote or represent on behalf of the corporation any and all shares or similar ownership interests held by the corporation in any other corporation or corporations or other business entities may be exercised either by such officers in person or by any other person authorized so to do by proxy or power of attorney duly executed by said officers.

## ARTICLE 9

### Forum for Adjudication of Disputes

9.1 Exclusive Forum; Delaware Chancery Court. Unless the corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state or federal court located within the State of Delaware), shall, to the fullest extent permitted by law, be the sole and exclusive forum for (a) any derivative action or proceeding brought in the name or right of the corporation or on behalf of the corporation, (b) any action or proceeding asserting a claim for breach of any fiduciary duty owed by any director, officer, employee, agent, or stockholder of the corporation to the corporation or the corporation's stockholders, (c) any action or proceeding arising or asserting a claim arising pursuant to any provision of the DGCL or any provision of the certificate of incorporation of the corporation, any Preferred Stock Designation (as that term is defined in the certificate of incorporation of the corporation, or these bylaws, (d) any action or proceeding to interpret, apply, enforce, or determine the validity of the certificate of incorporation of the corporation or these bylaws, or (e) any action or proceeding asserting a claim governed by the internal affairs doctrine. If any action, the subject matter of which is within the scope of this Section, is filed in a court other than a court located within the State of Delaware (a "*Foreign Action*") in the name of any stockholder, that stockholder shall be deemed to have consented to: (x) the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce this Section (an "*Enforcement Action*"), and (y) having service of process made upon such stockholder in any such Enforcement Action by service upon such stockholder's counsel in the Foreign Action as agent for such stockholder, in each case, to the fullest extent permitted by law. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the corporation shall be deemed to have notice of and consented to the provisions of this Section 9.1.

9.2 Exclusive Forum; Federal District Courts. Unless the corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States shall, to the fullest extent permitted by law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act of 1933. Any person or entity

purchasing or otherwise acquiring any interest in any security of the corporation shall be deemed to have notice of and consented to the provisions of this Section 9.2.

9.3 Failure to Enforce Exclusive Forum. Failure to enforce the provisions contained in this Article 9 would cause the corporation irreparable harm, and the corporation shall be entitled to equitable relief, including injunctive relief and specific performance, to enforce the foregoing provisions.

## ARTICLE 10

### Amendments

Subject to the laws of the State of Delaware, the Board of Directors is expressly authorized to adopt, amend or repeal the bylaws of the corporation, without any action on the part of the stockholders, by the affirmative vote of at least a majority of the Board of Directors. In addition to any vote of the holders of any class or series of stock of the corporation required by law, by the certificate of incorporation of the corporation, or by any Preferred Stock Designation, the bylaws may also be adopted, amended or repealed by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote thereon, voting together as a single class.

CERTIFICATE OF SECRETARY

I, the undersigned, hereby certify:

(i) that I am a duly elected, acting and qualified Secretary of Silvaco Group, Inc., a Delaware corporation; and

(ii) that the foregoing bylaws, comprising 23 pages, constitute the bylaws of such corporation as duly adopted by the Board of Directors of such corporation on \_\_\_\_\_, 2023, which bylaws became effective \_\_\_\_\_, 2023.

IN WITNESS WHEREOF, I have hereunto subscribed my name as of the \_\_\_\_\_ day of \_\_\_\_\_, 2023.

\_\_\_\_\_  
, Secretary

**SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN**

Effective Date:

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SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN

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**Section 1. ESTABLISHMENT AND PURPOSE.**

The Plan is effective on the date on which the registration statement covering the initial public offering of the Shares is declared effective by the United States Securities and Exchange Commission (the “**Effective Date**”). The Plan’s purpose is to enhance the Company’s ability to attract, retain, incent, reward, and motivate persons who make (or are expected to make) important contributions to the Company and/or its Subsidiaries and Affiliates by providing Participants with equity ownership and other incentive opportunities.

**Section 2. DEFINITIONS.**

(a) “**2014 Plan**” means the Silvaco Group, Inc. 2014 Stock Incentive Plan.

(b) “**Affiliate**” means any entity other than a Subsidiary if the Company and/or one or more Subsidiaries own not less than fifty percent (50%) of such entity.

(c) “**Award**” means any award of an Option, a SAR, a Restricted Share, a Stock Unit, a Stock-Based Award, or a Cash-Based Award under the Plan.

(d) “**Award Agreement**” means the agreement between the Company and the recipient of an Award which contains the terms, conditions and restrictions pertaining to such Award.

(e) “**Board of Directors**” or “**Board**” means the Board of Directors of the Company, as constituted from time to time.

(f) “**Cash-Based Award**” means an Award that entitles the Participant to receive a cash-denominated payment.

(g) “**Change in Control**” means the occurrence of any of the following events:

- (i) A change in the composition of the Board occurs as a result of which fewer than one-half of the incumbent directors are directors who either:
  - (A) Had been directors of the Company on the “look-back date” (as defined below) (the “**original directors**”); or
  - (B) Were elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the aggregate of the original directors who were still in office at the time of the election or nomination and the directors whose election or nomination was previously so approved (the “**continuing directors**”);

provided, however, that for this purpose, the “original directors” and “continuing directors” shall not include any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board;

- (ii) Any “person” (as defined below) who by the acquisition or aggregation of securities, is or becomes the “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the combined voting power of the Company’s then outstanding securities ordinarily (and apart from rights accruing under special circumstances) having the right to vote at elections of directors (the “**Base Capital Stock**”); except that any change in the relative beneficial ownership of the Company’s securities by any person resulting solely from a reduction in the aggregate number of outstanding Shares of Base Capital Stock, and any decrease thereafter in such person’s ownership of securities, shall be disregarded until such person increases in any manner, directly or indirectly, such person’s beneficial ownership of any securities of the Company;
- (iii) The consummation of a merger or consolidation of the Company or a Subsidiary of the Company with or into another entity or any other corporate reorganization, if persons who were not stockholders of the Company immediately prior to such merger, consolidation or other reorganization own immediately after such merger, consolidation or other reorganization fifty percent (50%) or more of the voting power of the outstanding securities of each of (A) the Company (or its successor) and (B) any direct or indirect parent corporation of the Company (or its successor); or
- (iv) The sale, transfer, or other disposition of all or substantially all of the Company’s assets.

For purposes of subsection (g)(i) above, the term “look-back” date means the later of (1) the Effective Date and (2) the date that is twenty-four (24) months prior to the date of the event that may constitute a Change in Control.

For purposes of subsection (g)(ii) above, the term “person” shall have the same meaning as when used in Sections 13(d) and 14(d) of the Exchange Act, but shall exclude (1) a trustee or other fiduciary holding securities under an employee benefit plan maintained by the Company or a Parent or Subsidiary, (2) a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of the Stock, and (3) the Company or any Subsidiary of the Company.

Any other provision of this Section 2(g) notwithstanding, a transaction shall not constitute a Change in Control if its sole purpose is to change the state of the Company’s incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held the Company’s securities immediately before such transaction, and a Change in Control shall not be deemed to occur if the Company files a registration statement with the United States Securities and Exchange Commission in connection with an initial or secondary public offering of securities or debt of the Company to the public or on account of any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by the Company or any successor or indebtedness of the Company is cancelled or converted or a combination thereof.

(h) “**Code**” means the United States Internal Revenue Code of 1986, as amended, and the rules and regulations promulgated thereunder.

(i) “**Committee**” means the Compensation Committee as designated by the Board which is authorized to administer the Plan as described in Section 3 hereof.

(j) “**Company**” means Silvaco Group, Inc., a Delaware corporation, including any successor thereto.

(k) “**Consultant**” means an individual who is a consultant or advisor and who provides bona fide services to the Company, a Parent, a Subsidiary, or an Affiliate as an independent contractor (not including service as a member of the Board) or a member of the board of directors of a Parent or a Subsidiary, in each case who is not an Employee.

(l) “**Disability**” means any permanent and total disability as defined by Section 22(e)(3) of the Code, or in the case of a Participant outside the United States, such other definition as determined by the Committee for purposes of the Plan taking into consideration the provisions of applicable law.

(m) “**Employee**” means any individual who is a common-law employee of the Company, a Parent, a Subsidiary, or an Affiliate.

(n) “**Exchange Act**” means the United States Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(o) “**Exercise Price**” means, in the case of an Option, the amount for which one Share may be purchased upon exercise of such Option, as specified in the applicable Stock Option Award Agreement. “**Exercise Price**” means, in the case of a SAR, an amount, as specified in the applicable SAR Award Agreement, which is subtracted from the Fair Market Value of one Share in determining the amount payable upon exercise of such SAR.

(p) “**Fair Market Value**” with respect to a Share means the market price of one Share determined by the Committee as follows:

- (i) If the Share was traded over-the-counter on the date in question, then the Fair Market Value shall be equal to the last transaction price quoted for such date by the OTC Bulletin Board or, if not so quoted, shall be equal to the mean between the last reported representative bid and asked prices quoted for such date by the principal automated inter-dealer quotation system on which the Shares are quoted or, if the Shares are not quoted on any such system, by the Pink Quote system;
- (ii) If the Share was traded on any established stock exchange (such as the New York Stock Exchange, The Nasdaq Capital Market, The Nasdaq Global Market or The Nasdaq Global Select Market) or national market system on the date in question, then the Fair Market Value shall be equal to the closing price reported for such date by the applicable exchange or system; or
- (iii) If none of the foregoing provisions is applicable, then the Fair Market Value shall be determined by the Committee in good faith on such basis as it deems appropriate.

The determination of fair market value for purposes of tax withholding may be made in the Committee’s discretion subject to applicable law and is not required to be consistent with the determination of Fair Market Value for other purposes.

In all cases, the determination of Fair Market Value by the Committee shall be conclusive and binding on all persons.

For any date that is not a trading day, the Fair Market Value of a Share for such date shall be determined under clauses (i) and (ii) above with reference to the immediately preceding trading day. In all cases, the determination of Fair Market Value by the Committee shall be conclusive and binding on all persons and shall be consistent with the rules of Section 409A and Section 422 of the Code to the extent applicable.

(q) “**ISO**” means an Option intended to be an “incentive stock option” described in Section 422 of the Code. Each Option granted pursuant to the Plan will be treated as providing by its terms that it is to be an NSO unless, as of the date of grant, it is expressly designated as an ISO in the applicable Stock Option Award Agreement.

(r) “**Nonstatutory Option**” or “**NSO**” means an Option that is not an ISO.

(s) “**Option**” means an option entitling the holder to acquire Shares upon payment of the exercise price.

(t) “**Outside Director**” means a member of the Board who is not a common-law employee of, or paid consultant to, the Company, a Parent or a Subsidiary.

(u) “**Parent**” means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company, if each of the corporations other than the Company owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain. A corporation that attains the status of a Parent on a date after the adoption of the Plan shall be a Parent commencing as of such date.

(v) “**Participant**” means a person who holds an Award.

(w) “**Plan**” means this 2023 Stock Incentive Plan of Silvaco Group, Inc., as amended from time to time.

(x) “**Purchase Price**” means the consideration for which one Share may be acquired under the Plan (other than upon exercise of an Option or SAR), as specified by the Committee.

(y) “**Restricted Share**” means a Share subject to restrictions requiring that it be forfeited, redelivered or offered for sale to the Company if specified performance or other vesting conditions are not satisfied awarded under the Plan.

(z) “**Returning Shares**” means Shares subject to outstanding stock awards granted under the 2014 Plan and that following the Effective Date: (A) are not issued because such award or portion thereof is forfeited or terminated for any reason before being exercised or settled; (B) are not issued because such stock award or any portion thereof is settled in cash; (C) are subject to vesting restrictions and are subsequently forfeited; (D) are withheld or reacquired to satisfy the exercise, strike or purchase price; or (E) are withheld or reacquired to satisfy a tax withholding obligation.

(aa) “**SAR**” means a right entitling the holder upon exercise to receive an amount (payable in cash or in Shares of equivalent value) equal to the excess of the Fair Market Value of the Shares subject to the right over the Exercise Price from which appreciation under the SAR is to be measured.

(bb) “**Section 409A**” means Section 409A of the Code.

(cc) “**Securities Act**” means the United States Securities Act of 1933, as amended, the rules and regulations promulgated thereunder.

(dd) “**Service**” means service as an Employee, Consultant or Outside Director, subject to such further limitations as may be set forth in the Plan or the applicable Award Agreement. Service terminates three (3) months after an Employee goes on a bona fide leave of absence, that was approved by the Company in writing, except where the terms of the approved leave provide otherwise, or when continued Service crediting is required by applicable law. For purposes of determining whether an Option is entitled to ISO status, an Employee’s employment will be treated as terminating three (3) months after such Employee went on leave, unless such Employee’s right to return to active work is guaranteed by law or by a contract. Service terminates in any event when the approved leave ends, unless such Employee immediately returns to active work. The Administrator determines which leaves of absence count toward Service, and when Service terminates for all purposes under the Plan. Unless a different treatment is approved by the Administrator, vesting will be adjusted pro-rata for any approved reductions in work hours (for example, from full-time to part-time) other than due to an approved leave of absence as discussed in the prior sentence (i.e., the portion of the award vesting on each vesting date is reduced pro-rata based on the reduction in hours worked).

(ee) “**Share**” means one share of ordinary stock, par value \$0.0001 per share, of the Company as adjusted in accordance with Section 12 (if applicable).

(ff) “**Stock-Based Award**” means an Award other than an Option, a SAR, a Restricted Share, a Stock Unit that is convertible into or otherwise based on Shares.

(gg) “**Stock Unit**” means a bookkeeping entry representing the Company’s obligation to deliver one Share (or distribute cash measured by the value of a Share on a future date) and may be subject to the satisfaction of performance or other vesting conditions.

(hh) “**Subsidiary**” means any corporation, if the Company owns and/or one or more other Subsidiaries own not less than fifty percent (50%) of the total combined voting power of all classes of outstanding stock of such corporation. A corporation that attains the status of a Subsidiary on a date after the adoption of the Plan shall be considered a Subsidiary commencing as of such date. The determination of whether an entity is a “Subsidiary” shall be made in accordance with Section 424(f) of the code.

### **Section 3. ADMINISTRATION.**

(a) *Committee Composition.* The Plan shall be administered by a Committee appointed by the Board, or by the Board acting as the Committee. The Committee shall consist of two or more directors of the Company. In addition, to the extent required by the Board, the composition of the Committee shall satisfy such requirements of the New York Stock Exchange or the Nasdaq Stock Market, as applicable, and as the Securities and Exchange Commission may establish for administrators acting under plans intended to qualify for exemption under Rule 16b-3 (or its successor) under the Exchange Act.

(b) *Committee Appointment.* The Board may also appoint one or more separate committees of the Board, each composed of one or more directors of the Company who need not satisfy the requirements of Section 3(a), who may administer the Plan, grant Awards under the Plan and determine all terms of such grants, in each case with respect to all Employees, Consultants and Outside Directors (except such as may be on such committee), provided that such committee or committees may perform these functions only with respect to Employees who are not considered officers or directors of the Company under Section 16 of the Exchange Act. Within the limitations of the preceding sentence, any reference in the Plan to the Committee shall

include such committee or committees appointed pursuant to the preceding sentence. To the extent permitted by applicable laws, the Board or Committee may also authorize one or more officers of the Company to designate Employees, other than officers under Section 16 of the Exchange Act, to receive Awards and/or to determine the number of such Awards to be received by such persons; provided, however, that the Board or Committee shall specify the total number of Awards that such officers may so award.

(c) *Committee Responsibilities.* Subject to the provisions of the Plan, the Committee shall have full authority and discretion to take the following actions:

- (i) To interpret the Plan and to apply its provisions;
- (ii) To adopt, amend, or rescind rules, procedures, and forms relating to the Plan;
- (iii) To adopt, amend, or terminate sub-plans established for the purpose of satisfying applicable foreign laws including qualifying for preferred tax treatment under applicable foreign tax laws;
- (iv) To authorize any person to execute, on behalf of the Company, any instrument required to carry out the purposes of the Plan;
- (v) To determine when Awards are to be granted under the Plan;
- (vi) To select the Participants to whom Awards are to be granted;
- (vii) To determine the type of Award and number of Shares or amount of cash to be made subject to each Award;
- (viii) To prescribe the terms and conditions of each Award, including (without limitation) the Exercise Price and Purchase Price, and the vesting or duration of the Award (including accelerating the vesting of Awards, either at the time of the Award or thereafter, without the consent of the Participant), to determine whether an Option is to be classified as an ISO or as an NSO, and to specify the provisions of the agreement relating to such Award;
- (ix) To amend any outstanding Award Agreement, subject to applicable legal restrictions and to the consent of the Participant if the Participant's rights or obligations would be materially impaired;
- (x) To prescribe the consideration for the grant of each Award or other right under the Plan and to determine the sufficiency of such consideration;
- (xi) To determine the disposition of each Award or other right under the Plan in the event of a Participant's divorce or dissolution of marriage;
- (xii) To determine whether Awards under the Plan will be granted in replacement of other grants under an incentive or other compensation plan of an acquired business;
- (xiii) To correct any defect, supply any omission, or reconcile any inconsistency in the Plan or any Award Agreement;



- (xiv) To establish or verify the extent of satisfaction of any performance goals or other conditions applicable to the grant, issuance, exercisability, vesting, and/or ability to retain any Award; and
- (xv) To take any other actions deemed necessary or advisable for the administration of the Plan.

Subject to the requirements of applicable law, the Committee may designate persons other than members of the Committee to carry out its responsibilities and may prescribe such conditions and limitations as it may deem appropriate, except that the Committee may not delegate its authority with regard to the selection for participation of or the granting of Awards under the Plan to persons subject to Section 16 of the Exchange Act. All decisions, interpretations and other actions of the Committee shall be final and binding on all Participants and all persons deriving their rights from a Participant. No member of the Committee shall be liable for any action that such member of the Committee has taken or has failed to take in good faith with respect to the Plan or any Award under the Plan.

#### **Section 4. ELIGIBILITY.**

(a) *General Rule.* The Committee will select Participants from among Employees, Consultants and Outside Directors. Eligibility for ISOs is limited to individuals described in the first sentence of this Section 4(a) who are employees of the Company or of a “parent corporation” or “subsidiary corporation” of the Company as those terms are defined in Section 424 of the Code. Eligibility for Stock Options, other than ISOs, and SARs is limited to individuals described in the first sentence of this Section 4(a) who are providing direct services on the date of grant of the Award to the Company or to a subsidiary of the Company that would be described in the first sentence of Section 1.409A-1(b)(5)(iii)(E) of the United States Treasury Regulations.

(b) *Ten-Percent Shareholders.* An Employee who owns more than ten percent (10%) of the total combined voting power of all classes of outstanding stock of the Company, a Parent or Subsidiary shall not be eligible for the grant of an ISO unless such grant satisfies the requirements of Section 422(c)(5) of the Code.

(c) *Attribution Rules.* For purposes of Section 4(b) above, in determining stock ownership, an Employee shall be deemed to own the stock owned, directly or indirectly, by or for such Employee’s brothers, sisters, spouse, ancestors, and lineal descendants. Stock owned, directly or indirectly, by or for a corporation, partnership, estate, or trust shall be deemed to be owned proportionately by or for its shareholder, partners, or beneficiaries.

(d) *Outstanding Stock.* For purposes of Section 4(b) above, “outstanding stock” shall include all stock actually issued and outstanding immediately after the grant. “Outstanding stock” shall not include Shares authorized for issuance under outstanding options held by the Employee or by any other person.

#### **Section 5. STOCK SUBJECT TO PLAN; OUTSIDE DIRECTOR COMPENSATION LIMIT.**

(a) *Basic Limitation.* Shares offered under the Plan shall be authorized but unissued shares or treasury shares. The maximum aggregate number of Shares authorized for issuance as Awards under the Plan shall not exceed (i) Shares (the “**Share Reserve**”), plus (ii) the sum of any Returning Shares which become available from time to time, plus (iii) the number of reserved Shares not issued or subject to outstanding grants under the 2014 Plan on the Effective Date, plus (iv) an annual increase on the first day of each calendar year for a period of not more

than ten years beginning on January 1, 2023 and ending on (and including) January 1, 2032, in an amount equal to (x) percent ( ) of the total number of Shares outstanding on the last day of the immediately preceding calendar year or (y) such lesser amount (including zero) that the Committee or Board determines for purposes of the annual increase for that calendar year. Notwithstanding the foregoing, the number of Shares that may be delivered in the aggregate pursuant to the exercise of ISOs granted under the Plan shall not exceed five (5) times the number of Shares provided under clause (i) above plus, to the extent allowable under Section 422 of the Code, any Shares that become available for issuance under the Plan pursuant to Section 5(b), but nothing in this Section 5 will be construed as requiring that any, or any fixed number of, ISOs be awarded under the Plan. The limitations of this Section 5(a) shall be subject to adjustment pursuant to Section 12. The number of Shares that are subject to Awards outstanding at any time under the Plan shall not exceed the number of Shares which then remain available for issuance under the Plan. The Company shall at all times reserve and keep available sufficient Shares to satisfy the requirements of the Plan.

(b) *Additional Shares.* If Restricted Shares or Shares issued upon the exercise of options are forfeited, then such Shares shall again become available for Awards under the Plan. If Stock Units, Options, or SARs are forfeited or terminate for any reason before being exercised or settled, or an Award is settled in cash without the delivery of Shares to the holder, then the corresponding Shares shall again become available for Awards under the Plan. If Stock Units or SARs are settled, then only the number of Shares (if any) actually issued in settlement of such Stock Units or SARs shall reduce the number available in Section 5(a) and the balance (including any Shares withheld to satisfy tax withholding obligations) shall again become available for Awards under the Plan. Any Shares withheld to satisfy the Exercise Price or tax withholding obligation pursuant to any Award of Options or SARs shall be added back to the Shares available for Awards under the Plan. Notwithstanding the foregoing provisions of this Section 5(b), Shares that have actually been issued shall not again become available for Awards under the Plan except for Shares that are forfeited and do not become vested.

(c) *Substitution and Assumption of Awards.* The Committee may make Awards under the Plan by assumption, substitution, or replacement of stock options, stock appreciation rights, stock units, or similar awards granted by another entity (including a Parent or Subsidiary), if such assumption, substitution, or replacement is in connection with an asset acquisition, stock acquisition, merger, consolidation, or similar transaction involving the Company (and/or its Parent or Subsidiary) and such other entity (and/or its affiliate). The terms of such assumed, substituted, or replaced Awards shall be as the Committee, in its discretion, determines is appropriate, notwithstanding limitations on Awards in the Plan. Any such substitute or assumed Awards shall not count against the Share limitation set forth in Section 5(a) (nor shall Shares subject to such Awards be added to the Shares available for Awards under the Plan as provided in Section 5(b) above), except that Shares acquired by exercise of substitute ISOs will count against the maximum number of Shares that may be issued pursuant to the exercise of ISOs under the Plan.

(d) *Outside Director Compensation Limit.* The maximum number of Shares subject to Awards granted under the Plan during any one calendar year to any Outside Director taken together with any cash fees paid by the Company to such Outside Director during such calendar year for service on the Board (other than the calendar year in which an Outside Director commences service on the Board), will not exceed \_\_\_\_\_ dollars (\$ \_\_\_\_\_) in total value (calculating the value of any such Awards based on the grant date fair value of such Awards for financial reporting purposes), or, with respect to the calendar year in which an Outside Director is first appointed or elected to the Board, \_\_\_\_\_ dollars (\$ \_\_\_\_\_).

## **Section 6. RESTRICTED SHARES.**

(a) *Restricted Share Award Agreement.* Each grant of Restricted Shares under the Plan shall be evidenced by a Restricted Share Award Agreement between the Participant and the Company. Such Restricted Shares shall be subject to all applicable terms of the Plan and may be subject to any other terms that are not inconsistent with the Plan. The provisions of the various Restricted Share Award Agreements entered into under the Plan need not be identical.

(b) *Payment for Awards.* Restricted Shares may be sold or awarded under the Plan for such consideration as the Committee may determine, including (without limitation) cash, cash equivalents, full-recourse promissory notes, past services, and future services.

(c) *Vesting.* Each Award of Restricted Shares may or may not be subject to vesting. Vesting shall occur, in full or in installments, upon satisfaction of the conditions specified in the Restricted Share Award Agreement. A Restricted Share Award Agreement may provide for accelerated vesting in the event of the Participant's death, Disability or retirement or other events. The Committee may determine, at the time of granting Restricted Shares or thereafter, that all or part of such Restricted Shares shall become vested in the event that a Change in Control occurs with respect to the Company.

(d) *Voting and Dividend Rights.* A holder of Restricted Shares awarded under the Plan shall have the same voting, dividend, and other rights as the Company's other shareholder, except that in the case of any unvested Restricted Shares, the holder shall not be entitled to any dividends or other distributions paid or distributed by the Company in respect of outstanding Shares. Notwithstanding the foregoing, at the Committee's discretion, the holder of unvested Restricted Shares may be credited with such dividends and other distributions, provided that such dividends and other distributions shall be paid or distributed to the holder only if, when and to the extent such unvested Restricted Shares vest. The value of dividends and other distributions payable or distributable with respect to any unvested Restricted Shares that do not vest shall be forfeited. At the Committee's discretion, the Restricted Share Award Agreement may require that the holder of Restricted Shares invest any cash dividends received in additional Restricted Shares. Such additional Restricted Shares shall be subject to the same conditions as the Award with respect to which the dividend was paid. For the avoidance of doubt, other than with respect to the right to receive dividends and other distributions, the holders of unvested Restricted Shares shall have the same voting rights and other rights as the Company's other shareholder in respect of such unvested Restricted Shares.

(e) *Restrictions on Transfer of Shares.* Restricted Shares shall be subject to such rights of repurchase, rights of first refusal, or other restrictions as the Committee may determine. Such restrictions shall be set forth in the applicable Restricted Share Award Agreement and shall apply in addition to any general restrictions that may apply to all holders of Shares.

## **Section 7. TERMS AND CONDITIONS OF OPTIONS.**

(a) *Stock Option Award Agreement.* Each grant of an Option under the Plan shall be evidenced by a Stock Option Award Agreement between the Participant and the Company. Such Option shall be subject to all applicable terms and conditions of the Plan and may be subject to any other terms and conditions which are not inconsistent with the Plan and which the Committee deems appropriate for inclusion in a Stock Option Award Agreement. The Stock Option Award Agreement shall specify whether the Option is an ISO or an NSO. The provisions of the various Stock Option Award Agreements entered into under the Plan need not be identical.

(b) *Number of Shares.* Each Stock Option Award Agreement shall specify the number of Shares that are subject to the Option and shall provide for the adjustment of such number in accordance with Section 12.

(c) *Exercise Price.* Each Stock Option Award Agreement shall specify the Exercise Price. The Exercise Price of an ISO shall not be less than one hundred percent (100%) of the Fair Market Value of a Share on the date of grant (one hundred and ten percent (110%) for ISOs granted to Employees described in Section 4(b)), and the Exercise Price of an NSO shall not be less than one hundred percent (100%) of the Fair Market Value of a Share on the date of grant. Notwithstanding the foregoing, Options may be granted with an Exercise Price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code. Subject to the foregoing in this Section 7(c), the Exercise Price under any Option shall be determined by the Committee in its sole discretion. The Exercise Price shall be payable in one of the forms described in Section 8.

(d) *Withholding Taxes.* As a condition to the exercise of an Option, the Participant shall make such arrangements as the Committee may require for the satisfaction of any federal, state, local or foreign withholding tax obligations that may arise in connection with such exercise. The Participant shall also make such arrangements as the Committee may require for the satisfaction of any federal, state, local or foreign withholding tax obligations that may arise in connection with the disposition of Shares acquired by exercising an Option.

(e) *Exercisability and Term.* Each Stock Option Award Agreement shall specify the date when all or any installment of the Option is to become exercisable. The Stock Option Award Agreement shall also specify the term of the Option; provided that the term of an option shall in no event exceed ten (10) years from the date of grant (five (5) years for ISOs granted to Employees described in Section 4(b)). A Stock Option Award Agreement may provide for accelerated exercisability in the event of the Participant's death, Disability, or retirement or other events and may provide for expiration prior to the end of its term in the event of the termination of the Participant's Service. Options may be awarded in combination with SARs, and such an Award may provide that the Options will not be exercisable unless the related SARs are forfeited. Subject to the foregoing in this Section 7(e), the Committee in its sole discretion shall determine when all or any installment of an Option is to become exercisable and when an Option is to expire.

(f) *Exercise of Options.* Each Stock Option Award Agreement shall set forth the extent to which the Participant shall have the right to exercise the Option following termination of the Participant's Service with the Company and its Subsidiaries, and the right to exercise the Option of any executors or administrators of the Participant's estate or any person who has acquired such Option(s) directly from the Participant by bequest or inheritance. Such provisions shall be determined in the sole discretion of the Committee, need not be uniform among all Options issued pursuant to the Plan, and may reflect distinctions based on the reasons for termination of Service.

(g) *Effect of Change in Control.* The Committee may determine, at the time of granting an Option or thereafter, that such Option shall become exercisable as to all or part of the Shares subject to such Option in the event that a Change in Control occurs with respect to the Company.

(h) *No Rights as a Stockholder.* A Participant shall have no rights as a stockholder with respect to any Shares covered by an Option or other Award until the date of issuance of a stock certificate or other evidence of ownership for such Shares or until the Participant's

ownership of such Shares shall have been entered into the books of the registrar in the case of uncertificated shares. No adjustments shall be made, except as provided in Section 12.

(i) *Modification, Extension and Renewal of Options.* Within the limitations of the Plan, the Committee may modify, extend, or renew outstanding options or may accept the cancellation of outstanding options (to the extent not previously exercised), whether or not granted hereunder, in return for the grant of new Options for the same or a different number of Shares and at the same or a different Exercise Price, or in return for the grant of a different Award for the same or a different number of Shares or for cash. The foregoing notwithstanding, no modification of an Option shall, without the consent of the Participant, materially impair the Participant's rights or obligations under such Option; provided, however, that an amendment or modification that may cause an ISO to become an NSO, and any amendment or modification that is required to comply with the rules applicable to ISOs, shall not be treated as materially impairing the rights or obligations of the Participant.

(j) *Restrictions on Transfer of Shares.* Any Shares issued upon exercise of an Option shall be subject to such special forfeiture conditions, rights of repurchase, rights of first refusal, and other transfer restrictions as the Committee may determine. Such restrictions shall be set forth in the applicable Stock Option Award Agreement and shall apply in addition to any general restrictions that may apply to all holders of Shares.

(k) *Buyout Provisions.* The Committee may at any time (i) offer to buy out for a payment in cash or cash equivalents an Option previously granted or (ii) authorize a Participant to elect to cash out an Option previously granted, in either case at such time and based upon such terms and conditions as the Committee shall establish.

## **Section 8. PAYMENT FOR SHARES.**

(a) *General Rule.* The entire Exercise Price or Purchase Price of Shares issued under the Plan shall be payable in lawful money of the United States of America at the time when such Shares are purchased, except as provided in Section 8(b) through Section 8(h) below.

(b) *Surrender of Stock.* To the extent that a Stock Option Award Agreement so provides, payment may be made all or in part by surrendering, or attesting to the ownership of, Shares which have already been owned by the Participant or the Participant's representative. Such Shares shall be valued at their Fair Market Value on the date when the new Shares are purchased under the Plan. The Participant shall not surrender, or attest to the ownership of, Shares in payment of the Exercise Price if such action would cause the Company to recognize compensation expense (or additional compensation expense) with respect to the Option for financial reporting purposes.

(c) *Services Rendered.* At the discretion of the Committee, Shares may be awarded under the Plan in consideration of services rendered to the Company or a Subsidiary. If Shares are awarded without the payment of a Purchase Price in cash, the Committee shall make a determination (at the time of the Award) of the value of the services rendered by the Participant and the sufficiency of the consideration to meet the requirements of Section 6(b).

(d) *Cashless Exercise.* To the extent that a Stock Option Award Agreement so provides, if the Stock is traded on an established securities market, payment may be made all or in part by delivery (on a form prescribed by the Committee) of an irrevocable direction to a securities broker to sell Shares and to deliver all or part of the sale proceeds to the Company in payment of the aggregate Exercise Price.

(e) *Exercise/Pledge.* To the extent that a Stock Option Award Agreement so provides, payment may be made all or in part by delivery (on a form prescribed by the Committee) of an irrevocable direction to a securities broker or lender to pledge Shares, as security for a loan, and to deliver all or part of the loan proceeds to the Company in payment of the aggregate Exercise Price.

(f) *Net Exercise.* To the extent that a Stock Option Award Agreement so provides, by a “net exercise” arrangement pursuant to which the number of Shares issuable upon exercise of the Option shall be reduced by the largest whole number of Shares having an aggregate Fair Market Value that does not exceed the aggregate Exercise Price (plus tax withholdings, if applicable) and any remaining balance of the aggregate Exercise Price (and/or applicable tax withholdings) not satisfied by such reduction in the number of whole Shares to be issued shall be paid by the Participant in cash or any other form of payment permitted under the Stock Option Award Agreement.

(g) *Promissory Note.* To the extent that a Stock Option Award Agreement or Restricted Share Award Agreement so provides, payment may be made all or in part by delivering (on a form prescribed by the Company) a full-recourse promissory note.

(h) *Other Forms of Payment.* To the extent that a Stock Option Award Agreement or Restricted Share Award Agreement so provides, payment may be made in any other form that is consistent with applicable laws, regulations, and rules.

(i) *Limitations under Applicable Law.* Notwithstanding anything herein or in a Stock Option Award Agreement or Restricted Share Award Agreement to the contrary, payment may not be made in any form that is unlawful, as determined by the Committee in its sole discretion.

## **Section 9. STOCK APPRECIATION RIGHTS.**

(a) *SAR Award Agreement.* Each grant of a SAR under the Plan shall be evidenced by a SAR Award Agreement between the Participant and the Company. Such SAR shall be subject to all applicable terms of the Plan and may be subject to any other terms that are not inconsistent with the Plan. The provisions of the various SAR Award Agreements entered into under the Plan need not be identical.

(b) *Number of Shares.* Each SAR Award Agreement shall specify the number of Shares to which the SAR pertains and shall provide for the adjustment of such number in accordance with Section 12.

(c) *Exercise Price.* Each SAR Award Agreement shall specify the Exercise Price. The Exercise Price of a SAR shall not be less than one hundred percent (100%) of the Fair Market Value of a Share on the date of grant. Notwithstanding the foregoing, SARs may be granted with an Exercise Price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code. Subject to the foregoing in this Section 9(c), the Exercise Price under any SAR shall be determined by the Committee in its sole discretion.

(d) *Exercisability and Term.* Each SAR Award Agreement shall specify the date when all or any installment of the SAR is to become exercisable. The SAR Award Agreement shall also specify the term of the SAR provided that the term of the SAR shall in no event exceed ten (10) years from the date of grant. A SAR Award Agreement may provide for accelerated exercisability in the event of the Participant’s death, Disability, retirement, or other events and may provide for expiration prior to the end of its term in the event of the termination of the Participant’s Service. SARs may be awarded in combination with Options, and such an Award

may provide that the SARs will not be exercisable unless the related Options are forfeited. A SAR may be included in an ISO only at the time of grant but may be included in an NSO at the time of grant or thereafter. A SAR granted under the Plan may provide that it will be exercisable only in the event of a Change in Control.

(e) *Effect of Change in Control.* The Committee may determine, at the time of granting a SAR or thereafter, that such SAR shall become fully exercisable as to all Shares subject to such SAR in the event that a Change in Control occurs with respect to the Company.

(f) *Exercise of SARs.* Upon exercise of a SAR, the Participant (or any person having the right to exercise the SAR after the Participant's death) shall receive from the Company (i) Shares, (ii) cash or (iii) a combination of Shares and cash, as the Committee shall determine. The amount of cash and/or the Fair Market Value of Shares received upon exercise of SARs shall, in the aggregate, be equal to the amount by which the Fair Market Value (on the date of surrender) of the Shares subject to the SARs exceeds the Exercise Price.

(g) *Modification, Extension or Assumption of SARs.* Within the limitations of the Plan, the Committee may modify, extend, or assume outstanding SARs or may accept the cancellation of outstanding SARs (whether granted by the Company or by another issuer) in return for the grant of new SARs for the same or a different number of Shares and at the same or a different Exercise Price, or in return for the grant of a different Award for the same or a different number of Shares or cash. The foregoing notwithstanding, no modification of a SAR shall, without the consent of the holder, materially impair the Participant's rights or obligations under such SAR.

(h) *Buyout Provisions.* The Committee may at any time (i) offer to buy out for a payment in cash or cash equivalents a SAR previously granted, or (ii) authorize a Participant to elect to cash out a SAR previously granted, in either case at such time and based upon such terms and conditions as the Committee shall establish.

## **Section 10. STOCK UNITS.**

(a) *Stock Unit Award Agreement.* Each grant of Stock Units under the Plan shall be evidenced by a Stock Unit Award Agreement between the Participant and the Company. Such Stock Units shall be subject to all applicable terms of the Plan and may be subject to any other terms that are not inconsistent with the Plan. The provisions of the various Stock Unit Award Agreements entered into under the Plan need not be identical.

(b) *Payment for Awards.* To the extent that an Award is granted in the form of Stock Units, no cash consideration shall be required of the Award recipients.

(c) *Vesting Conditions.* Each Award of Stock Units may or may not be subject to vesting. Vesting shall occur, in full or in installments, upon satisfaction of the conditions specified in the Stock Unit Award Agreement. A Stock Unit Award Agreement may provide for accelerated vesting in the event of the Participant's death, Disability, retirement, or other events. The Committee may determine, at the time of granting Stock Units or thereafter, that all or part of such Stock Units shall become vested in the event that a Change in Control occurs with respect to the Company.

(d) *Voting and Dividend Rights.* The holders of Stock Units shall have no voting rights. Prior to settlement or forfeiture, any Stock Unit awarded under the Plan may, at the Committee's discretion, carry with it a right to dividend equivalents. Such right, if awarded, entitles the holder to be credited with an amount equal to all cash dividends paid on one Share while the Stock Unit is outstanding. Settlement of dividend equivalents may be made in the form

of cash, in the form of Shares, or in a combination of both. Dividend equivalents may also be converted into additional Stock Units at the Committee's discretion. Dividend equivalents shall not be distributed prior to settlement of the Stock Unit to which the dividend equivalents pertain. Prior to distribution, any dividend equivalents shall be subject to the same conditions and restrictions (including without limitation, any forfeiture conditions) as the Stock Units to which they attach. The value of dividend equivalents payable or distributable with respect to any unvested Stock Units that do not vest shall be forfeited. Any entitlement to dividend equivalents or similar entitlements will be established and administered either consistent with an exemption from, or in compliance with, the applicable requirements of Section 409A to the extent applicable to the Participant.

(e) *Form and Time of Settlement of Stock Units.* Settlement of vested Stock Units may be made in the form of (i) cash, (ii) Shares or (iii) any combination of both, as determined by the Committee. The actual number of Stock Units eligible for settlement may be larger or smaller than the number included in the original Award, based on predetermined performance factors. Methods of converting Stock Units into cash may include (without limitation) a method based on the average Fair Market Value of Shares over a series of trading days. A Stock Unit Award Agreement may provide that vested Stock Units may be settled in a lump sum or in installments. A Stock Unit Award Agreement may provide that the distribution may occur or commence when all vesting conditions applicable to the Stock Units have been satisfied or have lapsed, or it may be deferred to any later date, subject to compliance with Section 409A, to the extent applicable. The amount of a deferred distribution may be increased by an interest factor or by dividend equivalents. Until an Award of Stock Units is settled, the number of such Stock Units shall be subject to adjustment pursuant to Section 12.

(f) *Death of Participant.* Any Stock Unit Award that becomes payable after the Participant's death shall be distributed to the Participant's beneficiary or beneficiaries, provided the Committee has permitted the designation of a beneficiary and such beneficiary has been designated prior to the Participant's death in a form acceptable to the Committee. Each recipient of a Stock Unit Award under the Plan shall designate one or more beneficiaries for this purpose by filing the prescribed form with the Company, provided the Committee has permitted the designation of beneficiaries. A beneficiary designation may be changed by filing the prescribed form with the Company at any time before the Participant's death. If the Committee has not permitted the designation of a beneficiary, if no beneficiary was designated or if no designated beneficiary survives the Participant, then any Stock Units Award that becomes payable after the Participant's death shall be distributed to the Participant's estate.

(g) *Creditors' Rights.* A holder of Stock Units shall have no rights other than those of a general creditor of the Company. Stock Units represent an unfunded and unsecured obligation of the Company subject to the terms and conditions of the applicable Stock Unit Award Agreement.

## **Section 11. CASH-BASED AWARDS AND STOCK BASED AWARDS.**

The Committee may, in its sole discretion, grant Cash-Based Awards and Stock-Based Awards to any Participant in such number or amount and upon such terms, and subject to such conditions, as the Committee shall determine at the time of grant and specify in an applicable Award Agreement. The Committee shall determine the maximum duration of the Cash-Based Award or Stock-Based Awards, the amount of cash which may be payable pursuant to the Cash-Based Award, the conditions upon which the Cash-Based Award or Stock-Based Awards shall become vested or payable, and such other provisions as the Committee shall determine. Each Cash-Based Award shall specify a cash-denominated payment amount, formula, or payment ranges as determined by the Committee. Payment, if any, with respect to a Cash-Based Award



or Stock-Based Award shall be made in accordance with the terms of the Award and may be made in cash or in Shares, as the Committee determines.

**Section 12. ADJUSTMENT OF SHARES.**

(a) *Adjustments.*

- (i) Recapitalization Transactions. In the event of a subdivision of the outstanding Stock, a declaration of a dividend payable in Shares, a declaration of a dividend payable in a form other than Shares in an amount that has a material effect on the price of Shares, a combination or consolidation of the outstanding Stock (by reclassification or otherwise) into a lesser number of Shares, a recapitalization, a spin-off or a similar occurrence, the Committee shall make appropriate and equitable adjustments in:
  - (A) The class(es) and number of securities available for future Awards and the limitations set forth under Section 5;
  - (B) The class(es) and number of securities covered by each outstanding Award; and
  - (C) The Exercise Price under each outstanding Option and SAR.
- (ii) Other adjustments. In the event of other transactions, the Committee may make such changes as provided in subsection (a) herein, as it determines are necessary or appropriate to avoid distortion in the operation of the Plan.
- (iii) Committee's Authority. The Committee's determinations will be final, binding and conclusive.

(b) *Dissolution or Liquidation.* To the extent not previously exercised or settled, Options, SARs, and Stock Units shall terminate immediately prior to the dissolution or liquidation of the Company.

(c) *Merger or Reorganization.* In the event that the Company is a party to a merger or other reorganization, outstanding Awards shall be subject to the agreement of merger or reorganization. Such agreement may provide for, without limitation, one or more of the following:

- (i) The continuation of the outstanding Awards by the Company, if the Company is a surviving corporation;
- (ii) The assumption of the outstanding Awards by the surviving corporation or its parent or subsidiary;
- (iii) The substitution by the surviving corporation or its parent or subsidiary of its own awards for the outstanding Awards;
- (iv) Immediate vesting, exercisability, or settlement of outstanding Awards followed by the cancellation of such Awards upon or immediately prior to the effectiveness of such transaction;

- (v) Cancellation of the Award, to the extent not vested or not exercised prior to the effective time of the merger or reorganization, in exchange for such cash or equity consideration (including no consideration) as the Committee, in its sole discretion, may consider appropriate; or
- (vi) Settlement of the intrinsic value of the outstanding Awards (whether or not then vested or exercisable) in cash or cash equivalents or equity (including cash or equity subject to deferred vesting and delivery consistent with the vesting restrictions applicable to such Awards or the underlying Shares) followed by the cancellation of such Awards (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the Committee determines in good faith that no amount would have been attained upon the exercise of such Award or realization of the Participant's rights, then such Award may be terminated by the Company without payment), provided that any such amount may be delayed to the same extent that payment of consideration to the holders of Stock in connection with the merger or reorganization is delayed as a result of escrows, earnouts, holdbacks or other contingencies;

in each case without the Participant's consent. Any acceleration of payment of an amount that is subject to Section 409A will be delayed, if necessary, until the earliest time that such payment would be permissible under Section 409A without triggering any additional taxes applicable under Section 409A. Any actions hereunder will comply with, or be exempt from, Section 409A to the extent determined by the Committee to be reasonably practicable.

The Company will have no obligation to treat all Awards, all Awards held by a Participant, or all Awards of the same type, similarly.

(d) *Reservation of Rights.* Except as provided in this Section 12, a Participant shall have no rights by reason of any subdivision or consolidation of Shares of stock of any class, the payment of any dividend or any other increase or decrease in the number of Shares of stock of any class. Any issue by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number or Exercise Price of Shares subject to an Award. The grant of an Award pursuant to the Plan shall not affect in any way the right or power of the Company to make adjustments, reclassifications, reorganizations, or changes of its capital or business structure, to merge or consolidate or to dissolve, liquidate, sell, or transfer all or any part of its business or assets. In the event of any potential change affecting the Shares or the Exercise Price of Shares subject to an Award, including a merger or other reorganization, for reasons of administrative convenience, the Company in its sole discretion may refuse to permit the exercise of any Award during a period of up to thirty (30) days prior to the occurrence of such event.

### **Section 13. DEFERRAL OF AWARDS.**

(a) *Committee Powers.* Subject to compliance with Section 409A, the Committee (in its sole discretion) may permit or require a Participant to:

- (i) Have cash that otherwise would be paid to such Participant as a result of the exercise of a SAR or the settlement of Stock Units credited to a deferred compensation account established for such Participant by the Committee as an entry on the Company's books;

- (ii) Have Shares that otherwise would be delivered to such Participant as a result of the exercise of an Option or SAR converted into an equal number of Stock Units; or
- (iii) Have Shares that otherwise would be delivered to such Participant as a result of the exercise of an Option or SAR or the settlement of Stock Units converted into amounts credited to a deferred compensation account established for such Participant by the Committee as an entry on the Company's books.

Such amounts shall be determined by reference to the Fair Market Value of such Shares as of the date when they otherwise would have been delivered to such Participant.

(b) *General Rules.* A deferred compensation account established under this Section 13 may be credited with interest or other forms of investment return, as determined by the Committee. A Participant for whom such an account is established shall have no rights other than those of a general creditor of the Company. Such an account shall represent an unfunded and unsecured obligation of the Company and shall be subject to the terms and conditions of the applicable agreement between such Participant and the Company. If the deferral or conversion of Awards is permitted or required, the Committee (in its sole discretion) may establish rules, procedures, and forms pertaining to such Awards, including (without limitation) the settlement of deferred compensation accounts established under this Section 13.

#### **Section 14. AWARDS UNDER OTHER PLANS.**

The Company may grant awards under other plans or programs. Such awards may be settled in the form of Shares issued under the Plan. Such Shares shall be treated for all purposes under the Plan like Shares issued in settlement of Stock Units and shall, when issued, reduce the number of Shares available under Section 5.

#### **Section 15. PAYMENT OF DIRECTOR'S FEES IN SECURITIES.**

(a) *Effective Date.* No provision of this Section 15 shall be effective unless and until the Board has determined to implement such provision.

(b) *Elections to Receive NSOs, SARs, Restricted Shares, or Stock Units.* An Outside Director may elect to receive the Outside Director's annual retainer payments and/or meeting fees from the Company in the form of cash, NSOs, SARs, Restricted Shares, Stock Units, or a combination thereof, as determined by the Board. Alternatively, the Board may mandate payment in any of such alternative forms. Such NSOs, SARs, Restricted Shares, and Stock Units shall be issued under the Plan. An election under this Section 15 shall be filed with the Company on the prescribed form.

(c) *Number and Terms of NSOs, SARs, Restricted Shares or Stock Units.* The number of NSOs, SARs, Restricted Shares, or Stock Units to be granted to Outside Directors in lieu of annual retainers and meeting fees that would otherwise be paid in cash shall be calculated in a manner determined by the Board. The terms of such NSOs, SARs, Restricted Shares, or Stock Units shall also be determined by the Board.

#### **Section 16. LEGAL AND REGULATORY REQUIREMENTS.**

Shares shall not be issued under the Plan unless the issuance and delivery of such Shares complies with (or is exempt from) all applicable requirements of law, including (without limitation) the Securities Act, United States state securities laws and regulations, the regulations

of any stock exchange on which the Company's securities may then be listed and any foreign securities, exchange control or other applicable laws, and the Company has obtained the approval or favorable ruling from any governmental agency which the Company determines is necessary or advisable. The Company shall not be liable to a Participant or other persons as to: (a) the non-issuance or sale of Shares as to which the Company has not obtained from any regulatory body having jurisdiction the authority deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares under the Plan; and (b) any tax consequences expected, but not realized, by any Participant or other person due to the receipt, exercise or settlement of any Award granted under the Plan.

#### **Section 17. TAXES.**

(a) *Withholding Taxes.* To the extent required by applicable federal, state, local, or foreign law, a Participant or the Participant's successor shall make arrangements satisfactory to the Company for the satisfaction of any withholding tax obligations that arise in connection with the Plan. The Company shall not be required to issue any Shares or make any cash payment under the Plan until such obligations are satisfied.

(b) *Share Withholding.* The Committee may permit a Participant to satisfy all or part of the Participant's withholding or income tax obligations by having the Company withhold all or a portion of any Shares that otherwise would be issued to him or her or by surrendering all or a portion of any Shares that the Participant previously acquired. Such Shares shall be valued at their fair market value on the date when taxes otherwise would be withheld in cash. In no event may a Participant have Shares withheld that would otherwise be issued to him or her in excess of the number necessary to satisfy the maximum legally required tax withholding.

(c) *Section 409A.* Each Award that provides for "nonqualified deferred compensation" within the meaning of Section 409A shall be subject to such additional rules and requirements as specified by the Committee from time to time in order to comply with Section 409A. If any amount under such an Award is payable upon a "separation from service" (within the meaning of Section 409A) to a Participant who is then considered a "specified employee" (within the meaning of Section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six (6) months and one day after the Participant's separation from service, or (ii) the Participant's death, but only to the extent such delay is necessary to prevent such payment from being subject to interest, penalties, and/or additional tax imposed pursuant to Section 409A. In addition, the settlement of any such Award may not be accelerated except to the extent permitted by Section 409A.

#### **Section 18. TRANSFERABILITY.**

Unless the agreement evidencing an Award (or an amendment thereto authorized by the Committee) expressly provides otherwise, no Award granted under the Plan, nor any interest in such Award, may be sold, assigned, conveyed, gifted, pledged, hypothecated, or otherwise transferred in any manner (prior to the vesting and lapse of any and all restrictions applicable to Shares issued under such Award), other than by will or the laws of descent and distribution; provided, however, that an ISO may be transferred or assigned only to the extent consistent with Section 422 of the Code. Any purported assignment, transfer, or encumbrance in violation of this Section 18 shall be void and unenforceable against the Company.

#### **Section 19. PERFORMANCE BASED AWARDS.**

The number of Shares or other benefits granted, issued, retained, and/or vested under an Award may be made subject to the attainment of performance goals. The Committee may utilize any performance criteria selected by it in its sole discretion to establish performance goals.

## **Section 20. RECOUPMENT.**

In the event that the Company is required to prepare restated financial results owing to an executive officer's intentional misconduct or grossly negligent conduct, the Committee shall have the authority, to the extent permitted by applicable law, to require reimbursement or forfeiture to the Company of the amount of bonus or incentive compensation (whether cash-based or equity-based) such executive officer received during a fixed period, determined by the Committee, preceding the year the restatement is determined to be required, to the extent that such bonus or incentive compensation exceeds what the officer would have received based on an applicable restated performance measure or target. The Company will recoup incentive-based compensation from executive officers to the extent required under the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules, regulations and listing standards that may be issued under that act. Any right of recoupment under this provision will be in addition to, and not in lieu of, any other rights of recoupment that may be available to the Company. No recovery of compensation under any clawback policy or this Section 20 will be an event giving rise to a right to resign for "good reason" or "constructive termination" (or similar term) under any agreement with the Company or any of its Subsidiaries or Affiliates.

## **Section 21. NO EMPLOYMENT RIGHTS.**

No provision of the Plan, nor any Award granted under the Plan, shall be construed to give any person any right to become, to be treated as, or to remain an Employee or Consultant. The Company and/or its Subsidiaries, as applicable, reserve the right to terminate any person's Service at any time and for any reason, with or without notice.

## **Section 22. DURATION AND AMENDMENTS.**

(a) *Term of the Plan.* The Plan, as set forth herein, shall come into existence on the date of its adoption by the Board; provided, however, that no Award may be granted hereunder prior to the Effective Date. The Board may suspend or terminate the Plan at any time. No ISOs may be granted after the tenth anniversary of the earlier of (i) the date the Plan is adopted by the Board or (ii) the date the Plan is approved the shareholders of the Company.

(b) *Right to Amend the Plan.* The Board may amend the Plan at any time and from time to time. Rights and obligations under any Award granted before amendment of the Plan shall not be materially impaired by such amendment except with consent of the Participant. An amendment of the Plan shall be subject to the approval of the Company's shareholders only to the extent required by applicable laws, regulations or rules.

(c) *Effect of Termination.* No Awards shall be granted under the Plan after the termination thereof. The termination of the Plan shall not affect Awards previously granted under the Plan.

## **Section 23. AWARDS TO PARTICIPANTS OUTSIDE THE UNITED STATES.**

Notwithstanding any provision of the Plan to the contrary, to comply with the laws in countries outside the United States in which the Company and its Subsidiaries and Affiliates operate or in which Participants work or reside, the Committee, in its sole discretion, will have the power and authority to: (i) determine which Participants outside the United States will be eligible to participate in the Plan; (ii) modify the terms and conditions of any Award granted to Participants outside the United States; (iii) establish sub-plans and modify exercise procedures and other terms and procedures and rules, to the extent such actions may be necessary or advisable, including adoption of rules, procedures or sub-plans applicable to particular Subsidiaries and Affiliates or Participants in particular locations; provided that no such sub-plans

and/or modifications shall take precedence over Section 3 of the Plan or otherwise require stockholder approval; (iv) take any action, before or after an Award is granted, that it deems advisable to obtain approval or to facilitate compliance with any necessary local governmental regulatory exemptions or approvals and (v) impose conditions on the exercise, vesting, or settlement of Awards in order to minimize the Company's obligation with respect to tax equalization for Participants on assignments outside their home country. Without limiting the generality of the foregoing, the Committee is specifically authorized to adopt rules, procedures and sub-plans with provisions that limit or modify rights on eligibility to receive an Award under the Plan or on death, Disability, retirement or other termination of employment, available methods of exercise or settlement of an Award, payment of income tax, social insurance contributions and payroll taxes, the shifting of employer tax or social insurance contribution liability to a Participant, the withholding procedures and handling of any Share certificates or other indicia of ownership. Notwithstanding the foregoing, the Board will only take action and grant Awards that comply with applicable laws.

**Section 24. GOVERNING LAW.**

The Plan and each Award Agreement shall be governed by the laws of the State of Delaware in the United States of America without application of the conflicts of law principles thereof.

**Section 25. SUCCESSORS AND ASSIGNS.**

The terms of the Plan shall be binding upon and inure to the benefit of the Company and any successor entity, including any successor entity contemplated by Section 12(c).

**Section 26. EXECUTION.**

To record the adoption of the Plan by the Board, the Company has caused its authorized officer to execute the same.

Silvaco Group, Inc.

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN

**SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN  
NOTICE OF STOCK OPTION GRANT**

You have been granted the following Option (this “**Option**” or this “**Award**”) to purchase shares of Common Stock (“**Stock**”) of Silvaco Group, Inc. (the “**Company**”) under the Silvaco Group, Inc. 2023 Stock Incentive Plan (as may be amended from time to time, the “**Plan**”):

*Name of Optionee:* [Name of Optionee]

*Grant Date:* [Date of Grant]

*Total Number of Shares Subject to Option:* [Total Shares]

*Type of Option:*  Incentive Stock Option  
 Nonstatutory Stock Option

*Exercise Price Per Share:* \$[Exercise Price]

*Vesting Commencement Date:* [Vesting Commencement Date]

*Vesting Schedule:* [This Option becomes exercisable when you complete [ ] months of continuous Service as an Employee or a Consultant from the Vesting Commencement Date. *Actual vesting schedule to be inserted.*]

*Expiration Date:* [Expiration Date] This Option expires earlier if your Service terminates earlier, as described in the Stock Option Agreement.

**By your written signature below (or your electronic acceptance) and the signature of the Company’s representative below, you and the Company agree that this Option is granted under and governed by the terms and conditions of the Plan, this Notice of Option Grant and the Stock Option Agreement, including any special terms for Participants outside the United States (collectively, this “Agreement”), each of which are attached to and made a part of this document.**

**By your written signature below (or your electronic acceptance), you further agree that the Company may deliver by e-mail all documents relating to the Plan or this Award (including without limitation, prospectuses required by the Securities and Exchange Commission) and all other documents that the Company is required to deliver to its security holders (including without limitation, annual reports and proxy statements). You also agree that the Company may deliver these documents by posting them on a website maintained by the Company or by a third party under contract with the Company. If the Company posts these documents on a website, it will notify you by e-mail. Should you electronically accept this Agreement, you agree to the following: “This electronic contract**

contains my electronic signature, which I have executed with the intent to sign this Agreement.”

You acknowledge and agree that (i) you have carefully read, fully understand and agree to all of the terms and conditions described in this Notice of Stock Option Grant, the attached Stock Option Agreement and the Plan and (ii) you have been given an opportunity to consult your own legal and tax counsel with respect to all matters relating to this Option prior to signing (or electronically accepting) this Notice of Stock Option Grant and that you have either consulted such counsel or voluntarily declined to consult such counsel.

OPTIONEE

\_\_\_\_\_  
Optionee’s Signature

\_\_\_\_\_  
Optionee’s Printed Name

SILVACO GROUP, INC.

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



**SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN  
STOCK OPTION AGREEMENT**

**The Plan and Other Agreements** The Option that you are receiving is granted pursuant and subject in all respects to the applicable provisions of the Plan, which is incorporated herein by reference. Capitalized terms not defined in this Agreement will have the meanings ascribed to them in the Plan.

The attached Notice of Stock Option Grant, this Agreement, including any additional terms for Participants outside of the United States (“U.S.”) set forth in the addendum hereto, and the Plan constitute the entire understanding between you and the Company regarding this Award. Any prior agreements, commitments or negotiations concerning this Option are superseded with the exception of (1) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (2) any written employment or severance arrangement that would provide for vesting acceleration of this Option upon the terms and conditions set forth therein. This Agreement may be amended by the Committee without your consent; however, if any such amendment would materially impair your rights or obligations under this Agreement, this Agreement may be amended only by another written agreement, signed by you and the Company.

**Tax Treatment** This Option is intended to be an incentive stock option under Section 422 of the Code or a nonstatutory option, as provided in the Notice of Stock Option Grant. Even if this Option is designated as an incentive stock option, it will be deemed to be a nonstatutory option to the extent required by the \$100,000 annual limitation under Section 422(d) of the Code.

**Vesting** This Option becomes exercisable in installments, as shown in the Notice of Stock Option Grant. This Option will in no event become exercisable for additional Shares after your Service as an Employee, an Outside Director or a Consultant has terminated for any reason.

**Term** This Option expires in any event at the close of business at the Company’s headquarters on the day before the tenth (10th) anniversary of the Grant Date, as shown on the Notice of Stock Option Grant (fifth (5th) anniversary for a more than ten percent (10%) shareholder as provided under the Plan if this is an incentive stock option). This Option may expire earlier if your Service terminates, as described below.

**Regular Termination** If your Service terminates for any reason except due to your death or Disability, then this Option will expire at the close of business at the Company’s headquarters on the date three (3) months after the date your Service terminates (or, if earlier, the Expiration Date). The Company determines when your Service terminates for this purpose and all purposes under the Plan and its determinations are conclusive and binding on all persons.

<b>Death</b>	If your Service terminates because of your death, then this Option will expire at the close of business at the Company's headquarters on the date twelve (12) months after the date your Service terminates (or, if earlier, the Expiration Date). During that period of up to twelve (12) months, your estate or heirs may exercise this Option.
<b>Disability</b>	If your Service terminates because of your Disability, then this Option will expire at the close of business at the Company's headquarters on the date twelve (12) months after the date your Service terminates (or, if earlier, the Expiration Date).
<b>Leaves of Absence</b>	<p>For purposes of this Option, your Service does not terminate when you go on a military leave, a sick leave or another <i>bona fide</i> leave of absence, if the leave of absence was approved by the Company in writing and if continued crediting of Service is required by the terms of the leave or by applicable law. But your Service terminates when the approved leave ends, unless you immediately return to active work.</p> <p>If you go on a leave of absence, then the vesting schedule specified in the Notice of Stock Option Grant may be adjusted in accordance with the Company's leave of absence policy or the terms of your leave. If your work schedule changes (i.e., your work hours are increased or reduced), then the vesting schedule specified in the Notice of Stock Option Grant may be adjusted in accordance with the Company's part-time work policy or the terms of an agreement between you and the Company pertaining to your part-time schedule.</p>
<b>Restrictions on Exercise</b>	The Company will not permit you to exercise this Option if the issuance of Shares at that time would violate any law or regulation. The inability of the Company to obtain approval from any regulatory body having authority deemed by the Company to be necessary to the lawful issuance and sale of the Stock pursuant to this Option will relieve the Company of any liability with respect to the non-issuance or sale of the Stock as to which such approval will not have been obtained.
<b>Notice of Exercise</b>	When you wish to exercise this Option you must provide a written or electronic notice of exercise form (substantially in the form attached to this Agreement as <u>Exhibit A</u> ) in accordance with such procedures as are established by the Company and communicated to you from time to time. Any notice of exercise must specify how many Shares you wish to purchase and how your Shares should be registered. The notice of exercise will be effective when it is received by the Company. If someone else wants to exercise this Option after your death, that person must prove to the Company's satisfaction that he or she is entitled to do so.
<b>Form of Payment</b>	When you submit your notice of exercise, you must include payment of the Option exercise price for the Shares you are purchasing. Payment may be made in the following form(s):

- Your personal check, a cashier's check, a money order or a wire transfer.
- Certificates for Shares that you own, along with any forms needed to effect a transfer of those Shares to the Company. The value of the Shares, determined as of the effective date of the Option exercise, will be applied to the Option exercise price. If approved by the Company, instead of surrendering Shares, you may attest to the ownership of those Shares on a form provided by the Company and have the same number of Shares subtracted from the Shares issued to you upon exercise of this Option. However, you may not surrender or attest to the ownership of Shares in payment of the exercise price if your action would cause the Company to recognize a compensation expense (or additional compensation expense) with respect to this Option for financial reporting purposes.
- By delivery on a form approved by the Company of an irrevocable direction to a securities broker approved by the Company to sell all or part of the Shares that are issued to you when you exercise this Option and to deliver to the Company from the sale proceeds an amount sufficient to pay the Option exercise price and any withholding taxes. The balance of the sale proceeds, if any, will be delivered to you. The directions must be given by providing a notice of exercise form approved by the Company.
- By delivery on a form approved by the Company of an irrevocable direction to a securities broker or lender approved by the Company to pledge Shares that are issued to you when you exercise this Option as security for a loan and to deliver to the Company from the loan proceeds an amount sufficient to pay the Option exercise price and any withholding taxes. The directions must be given by providing a notice of exercise form approved by the Company.
- If permitted by the Committee, by a “**net exercise**” arrangement pursuant to which the number of Shares issuable upon exercise of the Option will be reduced by the largest whole number of Shares having an aggregate Fair Market Value that does not exceed the aggregate exercise price (plus tax withholdings, if applicable) and any remaining balance of the aggregate exercise price (and/or applicable tax withholdings) not satisfied by such reduction in the number of whole Shares to be issued will be paid by you in cash or other form of payment permitted under this Option. The directions must be given by providing a notice of exercise form approved by the Company.
- Any other form permitted by the Committee in its sole discretion.

Notwithstanding the foregoing, payment may not be made in any

form that is unlawful, as determined by the Committee in its sole discretion.

**Withholding Taxes and Stock Withholding**

Regardless of any action the Company and/or the Subsidiary or Affiliate employing you (your “**Employer**”) takes with respect to any or all income tax, social insurance, payroll tax, payment on account or other tax-related withholding (“**Tax-Related Items**”), you acknowledge that the ultimate liability for all Tax-Related Items legally due by you is and remains your responsibility and that the Company and/or your Employer (1) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of this Option, including the grant, vesting or exercise of this Option, the subsequent sale of Shares acquired pursuant to such exercise and the receipt of any dividends; and (2) do not commit to structure the terms of the grant or any aspect of this Option to reduce or eliminate your liability for Tax-Related Items. Further, if you are subject to Tax-Related Items in more than one jurisdiction, you acknowledge that the Company and your Employer may be required to withhold or account for Tax-Related Items in more than one jurisdiction

Prior to exercise of this Option, you will pay or make adequate arrangements satisfactory to the Company and/or your Employer to satisfy all withholdings and payments on account obligations of the Company and/or your Employer. In this regard, you authorize the Company and/or your Employer to withhold all applicable Tax-Related Items legally payable by you from your wages or other cash compensation paid to you by the Company and/or your Employer. With the Company’s consent, these arrangements may also include, if permissible under local law, (a) withholding Shares that otherwise would be issued to you when you exercise this Option, provided that the Company only withholds the amount of Shares necessary to satisfy the maximum applicable tax withholding rate, (b) having the

Company withhold taxes from the proceeds of the sale of the Shares, either through a voluntary sale or through a mandatory sale arranged by the Company (on your behalf pursuant to this authorization), or (c) any other arrangement approved by the Committee. The Fair Market Value of the Shares, determined as of the effective date of the Option exercise, will be applied as a credit against the withholding taxes. The Company and your Employer may withhold or account for Tax-Related Items by considering statutory withholding amounts or other withholding rates applicable in your jurisdiction(s), including maximum applicable rates, in which case you may receive a refund of any over-withheld amount in cash and will have no entitlement to the Stock equivalent. Finally, you will pay to the Company or your Employer any amount of Tax-Related Items that the Company or your Employer may be required to withhold as a result of your participation in the Plan or your purchase of Shares that cannot be satisfied by the means previously described. The Company may refuse to honor the exercise and refuse to deliver the Shares if you fail to comply with your obligations in connection with the Tax-Related Items as described in this section.

**Restrictions on Resale**

You agree not to sell any Shares at a time when applicable laws, Company policies or an agreement between the Company and its underwriters prohibit a sale. This restriction will apply as long as your Service continues and for such period of time after the termination of your Service as the Company may specify.

**Transfer of Option**

In general, only you can exercise this Option prior to your death. You may not sell, transfer, assign, pledge or otherwise dispose of this Option, other than as designated by you, by will or by the laws of descent and distribution, except as provided below. For instance, you may not use this Option as security for a loan. If you attempt to do any of these things, this Option will immediately become invalid. You may in any event dispose of this Option in your will. Regardless of any marital property settlement agreement, the Company is not obligated to honor a notice of exercise from your former spouse, nor is the Company obligated to recognize your former spouse's interest in this Option in any other way.

However, if this Option is designated as a nonstatutory stock option in the Notice of Stock Option Grant, then the Committee may, in its sole discretion, allow you to transfer this Option as a gift to one or more family members. For purposes of this Agreement, "**family member**" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships), any individual sharing your household (other than a tenant or employee), a trust in which one or more of these individuals have more than fifty percent (50%) of the beneficial interest, a foundation in which you or one or more of these persons control the management of assets, and any entity in which you or one or more of these persons own more than fifty percent (50%) of the voting interest.

In addition, if this Option is designated as a nonstatutory stock option in the Notice of Stock Option Grant, then the Committee may, in its sole discretion, allow you to transfer this Option to your spouse or former spouse pursuant to a domestic relations order in settlement of marital property rights.

The Committee will allow you to transfer this Option only if both you and the transferee(s) execute the forms prescribed by the Committee, which include the consent of the transferee(s) to be bound by this Agreement.

**Stockholder Rights**

This Option carries neither voting rights nor rights to dividends. You, or your estate or heirs, have no rights as a shareholder of the Company unless and until you have exercised this Option by giving the required notice to the Company and paying the exercise price. No adjustments will be made for dividends or other rights if the applicable record date occurs before you exercise this Option, except as described in the Plan.

**No Retention Rights**

Neither this Option nor this Agreement gives you the right to be employed or retained by the Company or any Subsidiary or Affiliate of the Company in any capacity. The Company and its Subsidiaries and Affiliates reserve the right to terminate your Service at any time, with or without cause.

You understand and acknowledge that the vesting of this Option pursuant to the vesting schedule hereof is earned only by your continued Service, or the satisfaction of any other conditions set forth herein, in each case at the will of the Company (not through the act of being hired or being granted this Option). As such, this Agreement, the transactions contemplated hereunder and the vesting schedule set forth herein do not constitute an express or implied promise of continued engagement as a service provider for the vesting period, for any period, or at all, and shall not interfere in any way with your right or the Company's right to terminate your continued Service at any time, with or without cause.

**Adjustments**

The number of Shares covered by this Option and the exercise price per Share will be subject to adjustment in the event of a stock split, a stock dividend or a similar change in Company Shares, and in other circumstances, as set forth in the Plan. The forfeiture provisions and restrictions described above will apply to all new, substitute or additional stock options or securities to which you are entitled by reason of this Award.

**Successors and Assigns**

Except as otherwise provided in the Plan or this Agreement, every term of this Agreement will be binding upon and inure to the benefit of the parties hereto and their respective heirs, legatees, legal representatives, successors, transferees and assigns.

**Notice**

Any notice required or permitted under this Agreement will be given in writing, including electronically, and will be deemed effectively given upon the earliest of personal delivery, electronic delivery to the email address assigned to you by the Company or provided by you to the Company, receipt or the third (3<sup>rd</sup>) full day following mailing with postage and fees prepaid, addressed to the other party hereto at the address last known in the Company's records or at such other address as such party may designate by ten (10) days' advance written notice to the other party hereto.

The Company may, in its sole discretion, deliver any documents related to your current or future participation in the Plan by electronic means. By accepting this Award, you hereby: (1) consent to receive such documents by electronic means; (2) consent to the use of electronic signatures; and (3) agree to participate in the Plan and/or receive any such documents through an on-line or electronic system established and maintained by the Company or a third party designated by the Company, including but not limited to the use of electronic signatures or click-through electronic acceptance of terms and conditions.

**Section 409A of the Code**

To the extent this Agreement is subject to, and not exempt from, Section 409A of the Code, this Agreement is intended to comply with Section 409A, and its provisions will be interpreted in a manner consistent with such intent. You acknowledge and agree that changes may be made to this Agreement to avoid adverse tax consequences to you under Section 409A.

**Applicable Law and Choice of Venue**

This Agreement will be interpreted and enforced under the laws of the State of Delaware without application of the conflicts of law principles thereof.

For purposes of litigating any dispute that arises directly or indirectly from the relationship of the parties evidenced by this Award or this Agreement, the parties hereby submit to and consent to the exclusive jurisdiction of the State of California and agree that any such litigation will be conducted only in the courts of California, or the federal courts of the United States located in California and no other courts.

**Governing Document**

This Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of the Award, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. Except as expressly provided in this Agreement, in the event of any conflict between the provisions of this Agreement, the Notice of Stock Option Grant, and those of the Plan, the provisions of the Plan will control.

Notwithstanding provisions in this Agreement, the Award shall be subject to additional terms and conditions for Participants outside the U.S. set forth in an addendum to this Agreement, including any additional terms and conditions for your country. Moreover, if you relocate to another country, the special terms and conditions for such country will apply to you, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. Any addendum to this Agreement constitutes part of this Agreement.

**Severability**

In the event that all or any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any section of this Agreement (or part of such a section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such section or part of a section to the fullest extent possible while remaining lawful and valid.

**Recoupment**

This Option is subject to the terms of the Company's recoupment, clawback or similar policy as it may be in effect from time to time, as well as any similar provisions of applicable law, any of which could in certain circumstances require forfeiture of the Option and repayment or forfeiture of any Stock or other cash or property received with respect to the Option (including any value received from a disposition of the Stock acquired upon exercise of the Option).

**No Tax, Legal or Investment Advice**

The Company and your Employer are not providing any tax, legal or financial advice, nor is the Company or your Employer making any recommendations regarding your participation in the Plan or your acquisition or sale of the underlying Stock. You understand and agree that you should consult with your own personal tax, financial and/or legal advisors regarding the Award and Tax-Related Items arising in connection with the Award and by accepting the Award, you have agreed that you have done so or knowingly and voluntarily declined to do so.

**Miscellaneous**

You understand and acknowledge that (1) the Plan is entirely discretionary, (2) the Company and your Employer have reserved the right to amend, suspend or terminate the Plan at any time, (3) the grant of this Option does not in any way create any contractual or other right to receive additional grants of options (or benefits in lieu of options) at any time or in any amount and no inference shall be drawn from the grant of this Option with respect to the quality of your service to, or standing with, the Company and (4) all determinations with respect to any additional grants, including (without limitation) the times when options will be granted, the number of shares of Stock subject to options, the exercise price and the vesting schedule, will be at the sole discretion of the Company.

The value of this Option will be an extraordinary item of compensation outside the scope of your employment contract, if any, and will not be considered a part of your normal or expected compensation for purposes of calculating severance, resignation, redundancy or end-of-service payments, bonuses, service awards, pension or retirement benefits or similar payments.

You understand and acknowledge that participation in the Plan ceases upon termination of your Service for any reason, except as may explicitly be provided otherwise in the Plan or this Agreement.

You hereby authorize and direct your Employer to disclose to the Company or any Subsidiary or Affiliate any information regarding your employment, the nature and amount of your compensation and the fact and conditions of your participation in the Plan, as your Employer deems necessary or appropriate to facilitate the administration of the Plan.



You consent to the collection, use and transfer of personal data as described in this subsection. You understand and acknowledge that the Company, your Employer and the Company's other Subsidiaries and Affiliates hold certain personal information regarding you for the purpose of managing and administering the Plan, including (without limitation) your name, home address, telephone number, date of birth, social insurance or other government identification number, salary, nationality, job title, any shares of Stock or directorships held in the Company and details of all options or any other entitlements to shares of Stock awarded, canceled, exercised, vested, unvested or outstanding in your favor ("**Data**"). You further understand and acknowledge that the Company, its Subsidiaries and/or its Affiliates will transfer Data among themselves as necessary for the purpose of implementation, administration and management of your participation in the Plan and that the Company and/or any Subsidiary may each further transfer Data to any third party assisting the Company in the implementation, administration and management of the Plan. You understand and acknowledge that the recipients of Data may be located in the United States or elsewhere, and that the laws of a recipient's country of operation (e.g., the United States) may not have equivalent privacy protections as local laws where you reside or work. You authorize such recipients to receive, possess, use, retain and transfer Data, in electronic or other form, for the purpose of administering your participation in the Plan, including a transfer to any broker or other third party with whom you elect to deposit shares of Stock acquired under the Plan of such Data as may be required for the administration of the Plan and/or the subsequent holding of shares of Stock on your behalf. You may, at any time, view Data, require any necessary modifications of Data, make inquiries about the treatment of Data or withdraw the consents set forth in this subsection by contacting the Human Resources Department of the Company in writing.

You acknowledge and agree that you have reviewed the documents provided to you in relation to the Option in their entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting the Option, and fully understand all provisions of such documents. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of the Option.

**BY SIGNING THE NOTICE OF STOCK OPTION GRANT, YOU AGREE TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.**

**SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN  
NOTICE OF EXERCISE OF STOCK OPTION**

**OPTIONEE INFORMATION:**

Name: \_\_\_\_\_

Social Security Number: \_\_\_\_\_

Employee Number: \_\_\_\_\_

Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**OPTION INFORMATION:**

Grant Date: \_\_\_\_\_

Exercise Price per Share: \$ \_\_\_\_\_

Total Number of Shares of Silvaco Group, Inc. (the “**Company**”) Covered by Option: \_\_\_\_\_

Type of Stock Option:  Nonstatutory (NSO)  
 Incentive (ISO)

Number of Shares of the Company for which Option is Being Exercised Now: \_\_\_\_\_ (the “**Purchased Shares**”)

Total Exercise Price for the Purchased Shares: \$ \_\_\_\_\_

Form of Payment:  Cash or Check for \$ payable to “Silvaco Group, Inc.”  
 Cashless exercise  
 Net exercise

Name(s) in which the Purchased Shares should be Registered: \_\_\_\_\_  
 The Certificate for the Purchased Shares (if any) should be sent to the Following Address: \_\_\_\_\_

**ACKNOWLEDGMENTS:**

1. I understand that all sales of Purchased Shares are subject to compliance with the Company’s policy on securities trades.

2. I hereby acknowledge that I received and read a copy of the prospectus describing the Silvaco Group, Inc. 2023 Stock Incentive Plan and the tax consequences of an exercise.
3. In the case of a nonstatutory option, I understand that I must recognize ordinary income equal to the spread between the fair market value of the Purchased Shares on the date of exercise and the exercise price. I further understand that I am required to pay withholding taxes at the time of exercising a nonstatutory option.
4. In the case of an incentive stock option, I agree to notify the Company if I dispose of the Purchased Shares before I have met both of the tax holding periods applicable to incentive stock options (that is, if I dispose of the Purchased Shares prior to the date that is two (2) years after the Grant Date and one (1) year after the date the option was exercised).

**SIGNATURE AND DATE:**

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**SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN  
NOTICE OF RESTRICTED STOCK UNIT AWARD**

You have been granted the following Restricted Stock Units (the “**Restricted Stock Units**”, “**RSUs**” or this “**Award**”) representing shares of Common Stock of Silvaco Group, Inc. (the “**Company**”) under the Silvaco Group, Inc. 2023 Stock Incentive Plan (as may be amended from time to time, the “**Plan**”):

*Name of Recipient:* [Name of Recipient]

*Grant Date:* [Date of Grant]

*Total Number of Shares Subject to Restricted  
Stock Units:* [Total Shares]

*Vesting Commencement Date:* [Vesting Commencement Date]

*Vesting Schedule:* [The RSUs vest when you complete [ ] months of continuous Service as an Employee or a Consultant from the Vesting Commencement Date. *Actual vesting schedule to be inserted.*]

**By your written signature below (or your electronic acceptance) and the signature of the Company’s representative below, you and the Company agree that the RSUs are granted under and governed by the terms and conditions of the Plan, this Notice of Restricted Stock Unit Grant and the Restricted Stock Unit Agreement, including any special terms for Participants outside of the United States (“U.S.”) (collectively, this “Agreement”), each of which are attached to and made a part of this document.**

**By your written signature below (or your electronic acceptance), you further agree that the Company may deliver by e-mail all documents relating to the Plan or this Award (including without limitation, prospectuses required by the Securities and Exchange Commission) and all other documents that the Company is required to deliver to its security holders (including without limitation, annual reports and proxy statements). You also agree that the Company may deliver these documents by posting them on a website maintained by the Company or by a third party under contract with the Company. If the Company posts these documents on a website, it will notify you by e-mail. Should you electronically accept this Agreement, you agree to the following: “This electronic contract contains my electronic signature, which I have executed with the intent to sign this Agreement.”**

**You acknowledge and agree that (i) you have carefully read, fully understand and agree to all of the terms and conditions described in this Notice of Restricted Stock Unit Award, the attached Restricted Stock Unit Agreement and the Plan and (ii) you have been given an opportunity to consult your own legal and tax counsel with respect to all matters relating to these RSUs prior to signing (or electronically accepting) this Notice of Restricted Stock Unit Award and that you have either consulted such counsel or voluntarily declined to consult such counsel.**

**RECIPIENT**

\_\_\_\_\_  
Recipient's Signature

\_\_\_\_\_  
Recipient's Printed Name

**SILVACO GROUP, INC.**

By: \_\_\_\_\_

Name \_\_\_\_\_

Title: \_\_\_\_\_

**SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN  
RESTRICTED STOCK UNIT AGREEMENT**

**The Plan and Other Agreements**

The RSUs that you are receiving are granted pursuant and subject in all respects to the applicable provisions of the Plan, which is incorporated herein by reference. Capitalized terms not defined in this Agreement will have the meanings ascribed to them in the Plan.

The attached Notice of Restricted Stock Unit Award, this Agreement, including any additional terms for Participants outside of the United States (“U.S.”) set forth in the addendum hereto, and the Plan constitute the entire understanding between you and the Company regarding this Award. Any prior agreements, commitments or negotiations concerning this Award are superseded, with the exception of (1) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (2) any written employment or severance arrangement that would provide for vesting acceleration of the RSUs upon the terms and conditions set forth therein. This Agreement may be amended by the Committee without your consent; however, if any such amendment would materially impair your rights or obligations under this Agreement, this Agreement may be amended only by another written agreement, signed by you and the Company.

**Payment for RSUs**

No cash payment is required for the RSUs you receive. You are receiving the RSUs in consideration for Services rendered by you.

**Vesting**

The RSUs that you are receiving will vest as shown in the Notice of Restricted Stock Unit Award. No additional RSUs vest after your Service as an Employee, an Outside Director or a Consultant has terminated for any reason.

**Forfeiture**

If your Service terminates for any reason, then this Award expires immediately as to the number of RSUs that have not vested before the termination date and do not vest as a result of termination. Your Service will not be extended by any notice period. This means that the unvested RSUs will immediately be cancelled. You will receive no payment for RSUs that are forfeited. The Company determines when your Service terminates for this purpose and all purposes under the Plan and its determinations are conclusive and binding on all persons.

**Leaves of Absence**

For purposes of this Award, your Service does not terminate when you go on a military leave, a sick leave or another *bona fide* leave of absence, if the leave of absence was approved by the Company in writing and if continued crediting of Service is required by the terms of the leave or by applicable law. But your Service terminates when the approved leave ends, unless you immediately return to active work.

If you go on a leave of absence, then the vesting schedule specified in the Notice of Restricted Stock Unit Award may be adjusted in accordance with the Company's leave of absence policy or the terms of your leave. If your work schedule changes (i.e., your work hours are increased or reduced), then the vesting schedule specified in the Notice of Restricted Stock Unit Award may be adjusted in accordance with the Company's part-time work policy or the terms of an agreement between you and the Company pertaining to your part-time schedule.

**Nature of RSUs**

Your RSUs are mere bookkeeping entries. They represent only the Company's unfunded and unsecured promise to issue Shares on a future date. As a holder of RSUs, you have no rights other than the rights of a general unsecured creditor of the Company.

**No Voting Rights or Dividends**

Your RSUs carry neither voting rights nor rights to dividends. Neither you, nor your estate or heirs, have any rights as a stockholder of the Company in respect of the RSUs, unless and until your RSUs are settled by issuing Shares. No adjustments will be made for dividends or other rights if the applicable record date occurs before your Shares are issued, except as described in the Plan.

**RSUs Nontransferable**

You may not sell, transfer, assign, pledge or otherwise dispose of any RSUs. For instance, you may not use your RSUs as security for a loan. If you attempt to do any of these things, your RSUs will immediately become invalid.

## Settlement of RSUs

Each of your vested RSUs will be settled when it vests; provided, however, that if the Committee requires you to pay withholding taxes through a sale of Shares, settlement of each RSU may be deferred to the first permissible trading day for the Shares, if later than the applicable vesting date.

Under no circumstances may your RSUs be settled later than two and one-half (2-1/2) months following the calendar year in which the applicable vesting date occurs.

For purposes of this Agreement, “**permissible trading day**” means a day that satisfies all of the following requirements: (1) the exchange on which the Shares are traded is open for trading on that day; (2) you are permitted to sell Shares on that day without incurring liability under Section 16(b) of the Exchange Act; (3) either (a) you are not in possession of material non-public information that would make it illegal for you to sell Shares on that day under Rule 10b-5 under the Exchange Act or (b) Rule 10b5-1 under the Exchange Act would apply to the sale; (4) you are permitted to sell Shares on that day under such written insider trading policy as may have been adopted by the Company; and (5) you are not prohibited from selling Shares on that day by a written agreement between you and the Company or a third party.

At the time of settlement, you will receive one Share for each vested RSU; provided, however, that no fractional Shares will be issued or delivered pursuant to the Plan or this Agreement, and the Committee will determine whether cash will be paid in lieu of any fractional Share or whether such fractional Share and any rights thereto will be canceled, terminated or otherwise eliminated. In addition, the Shares are issued to you subject to the condition that the issuance of the Shares does not violate any law or regulation.



**Withholding Taxes and Stock  
Withholding**

Regardless of any action the Company and/or the Subsidiary or Affiliate employing you (your “**Employer**”) takes with respect to any or all income tax, social insurance, payroll tax, payment on account or other tax-related withholding (“**Tax-Related Items**”), you acknowledge that the ultimate liability for all Tax-Related Items legally due by you is and remains your responsibility and that the Company and your Employer (1) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of this Award, including the award, vesting or settlement of the RSUs, the subsequent sale of Shares acquired pursuant to settlement and the receipt of any dividends; and (2) do not commit to structure the terms of the award or any aspect of the RSUs to reduce or eliminate your liability for Tax-Related Items. Further, if you are subject to Tax-Related Items in more than one jurisdiction, you acknowledge that the Company and your Employer (or former Employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to the settlement of the RSUs, you shall pay or make adequate arrangements satisfactory to the Company and your Employer to satisfy all withholdings and payments on account obligations of the Company and/or your Employer. In this regard, you authorize the Company and your Employer to withhold all applicable Tax-Related Items legally payable by you from your wages or other cash compensation paid to you by the Company and/or your Employer.

Unless an alternative arrangement satisfactory to the Committee has been provided prior to the vesting date, the default method for paying withholding taxes is withholding Shares that otherwise would be issued to you when the RSUs are settled, provided that the Company only withholds a number of whole Shares having a Fair Market Value equal to the amount necessary to satisfy the maximum applicable tax withholding rate. Notwithstanding the foregoing, if you are classified as a Section 16 officer of the Company under the Exchange Act when the RSUs are settled, you shall be restricted to satisfying your obligation for Tax-Related Items by withholding in fully vested Shares that otherwise would be issued to you when the RSUs are settled, unless this withholding method is not permissible under applicable laws, or the Company has authorized an alternative method for the relevant taxable event.

If the obligation for Tax-Related Items is satisfied by withholding in Shares, for tax purposes, you are deemed to have been issued the full number of Shares subject to the vested RSU, notwithstanding that a number of the Shares is held back solely for the purpose of paying the Tax-Related Items.

The Committee may also require the withholding of taxes from the proceeds of the sale of the Shares, either through a voluntary sale or through a mandatory sale arranged by the Company (on your behalf pursuant to this authorization), or any other arrangement approved by the Committee.

The Fair Market Value of the Shares, determined as of the effective date when taxes otherwise would have been withheld in cash, will be applied as a credit against the withholding taxes. The Company or your Employer may withhold or account for Tax-Related Items by considering statutory withholding amounts or other withholding rates applicable in your jurisdiction(s), including maximum applicable tax withholding rates, in which case you may receive a refund of any over-withheld amount in cash and will have no entitlement to the Share equivalent. Finally, you will pay to the Company or your Employer any amount of Tax-Related Items that the Company or your Employer may be required to withhold as a result of your participation in the Plan or your acquisition of Shares that cannot be satisfied by the means previously described. The Company may refuse to deliver the Shares if you fail to comply with your obligations in connection with the Tax-Related Items as described in this section, and your rights to the Shares will be forfeited if you do not comply with such obligations on or before the date that is two and one-half (2-1/2) months following the calendar year in which the applicable vesting date for the RSUs occurs.

**Restrictions on Resale**

You agree not to sell any Shares at a time when applicable laws, Company policies or an agreement between the Company and its underwriters prohibit a sale. This restriction will apply as long as your Service continues and for such period of time after the termination of your Service as the Company may specify.

**No Retention Rights**

Neither this Award nor this Agreement gives you the right to be employed or retained by the Company or any Subsidiary or Affiliate of the Company in any capacity. The Company and its Subsidiaries and Affiliates reserve the right to terminate your Service at any time, with or without cause.

You understand and acknowledge that the vesting of your Award pursuant to the vesting schedule hereof is earned only by your continued Service, or the satisfaction of any other conditions set forth herein, in each case at the will of the Company (not through the act of being hired or being granted this Award). As such, this Agreement, the transactions contemplated hereunder and the vesting schedule set forth herein do not constitute an express or implied promise of continued engagement as a service provider for the vesting period, for any period, or at all, and shall not interfere in any way with your right or the Company's right to terminate your continued Service at any time, with or without cause.

**Adjustments**

The number of RSUs covered by this Award will be subject to adjustment in the event of a stock split, a stock dividend or a similar change in Shares, and in other circumstances, as set forth in the Plan. The forfeiture provisions and restrictions described above will apply to all new, substitute or additional restricted stock units or securities to which you are entitled by reason of this Award.

**Successors and Assigns**

Except as otherwise provided in the Plan or this Agreement, every term of this Agreement will be binding upon and inure to the benefit of the parties hereto and their respective heirs, legatees, legal representatives, successors, transferees and assigns.

**Notice**

Any notice required or permitted under this Agreement will be given in writing, including electronically, and will be deemed effectively given upon the earliest of personal delivery, electronic delivery to the email address assigned to you by the Company or provided by you to the Company, receipt or the third (3rd) full day following mailing with postage and fees prepaid, addressed to the other party hereto at the address last known in the Company's records or at such other address as such party may designate by ten (10) days' advance written notice to the other party hereto. The Company may, in its sole discretion, deliver any documents related to your current or future participation in the Plan by electronic means. By accepting this Award, you hereby: (1) consent to receive such documents by electronic means; (2) consent to the use of electronic signatures; and (3) agree to participate in the Plan and/or receive any such documents through an online or electronic system established and maintained by the Company or a third party designated by the Company, including but not limited to the use of electronic signatures or click-through electronic acceptance of terms and conditions.

**Section 409A of the Code**

This Agreement and the RSUs are intended to be exempt from the application of Section 409A of the Code, including but not limited to by reason of complying with the “short-term deferral” rule set forth in Treasury Regulation Section 1.409A-1(b)(4) and any ambiguities herein shall be interpreted accordingly. Notwithstanding the foregoing, to the extent this Agreement and the RSUs are subject to, and not exempt from, Section 409A of the Code, this Agreement and the RSUs are intended to comply with Section 409A, and its provisions will be interpreted in a manner consistent with such intent. You acknowledge and agree that changes may be made to this Agreement to avoid adverse tax consequences to you under Section 409A. If it is determined that the RSUs are deferred compensation subject to Section 409A of the Code and you are a “specified employee” (within the meaning set forth in Section 409A(a)(2)(B)(i) of the Code) as of the date of your “separation from service” (as defined in Section 409A of the Code), then the issuance of any Shares that would otherwise be made upon the date of your separation from service or within the first six (6) months thereafter will not be made on the originally scheduled date(s) and will instead be issued in a lump sum on the date that is six (6) months and one day after the date of the separation from service, with the balance of the Shares issued thereafter in accordance with the original vesting and issuance schedule set forth above, but if and only if such delay in the issuance of the Shares is necessary to avoid the imposition of adverse taxation on you in respect of the Shares under Section 409A of the Code. Each installment of Shares that vests is intended to constitute a “separate payment” for purposes of Treasury Regulation Section 1.409A-2(b)(2).

**Applicable Law and Choice of Venue**

This Agreement will be interpreted and enforced under the laws of the State of Delaware without application of the conflicts of law principles thereof.

For purposes of litigating any dispute that arises directly or indirectly from the relationship of the parties evidenced by this Award or this Agreement, the parties hereby submit to and consent to the exclusive jurisdiction of the State of California and agree that any such litigation will be conducted only in the courts of California, or the federal courts of the United States located in California and no other courts.

**Governing Document**

This Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of the Award, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. Except as expressly provided in this Agreement, in the event of any conflict between the provisions of this Agreement, the Notice of Restricted Stock Unit Award, and those of the Plan, the provisions of the Plan will control.

Notwithstanding provisions in this Agreement, the Award shall be subject to additional terms and conditions for Participants outside the U.S. set forth in an addendum to this Agreement, including any additional terms and conditions for your country. Moreover, if you relocate to another country, the special terms and conditions for such country will apply to you, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. Any addendum to this Agreement constitutes part of this Agreement.

**Severability**

In the event that all or any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any section of this Agreement (or part of such a section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such section or part of a section to the fullest extent possible while remaining lawful and valid.

**No Tax, Legal or Investment Advice**

The Company and your Employer are not providing any tax, legal or financial advice, nor is the Company or your Employer making any recommendations regarding your participation in the Plan or your acquisition or sale of the underlying Shares. You understand and agree that you should consult with your own personal tax, financial and/or legal advisors regarding the Award and Tax-Related Items arising in connection with the Award and by accepting the Award, you have agreed that you have done so or knowingly and voluntarily declined to do so.

**Miscellaneous**

You understand and acknowledge that (1) the Plan is entirely discretionary, (2) the Company and your Employer have reserved the right to amend, suspend or terminate the Plan at any time, (3) the grant of this Award does not in any way create any contractual or other right to receive additional grants of awards (or benefits in lieu of awards) at any time or in any amount and no inference shall be drawn from the grant of this Award with respect to the quality of your service to, or standing with, the Company and (4) all determinations with respect to any additional grants, including (without limitation) the times when awards will be granted, the number of RSUs subject to awards and the vesting schedule, will be at the sole discretion of the Company.

The value of this Award will be an extraordinary item of compensation outside the scope of your employment contract, if any, and will not be considered a part of your normal or expected compensation for purposes of calculating severance, resignation, redundancy or end-of-service payments, bonuses, service awards, pension or retirement benefits or similar payments.

You understand and acknowledge that participation in the Plan ceases upon termination of your Service for any reason, except as may explicitly be provided otherwise in the Plan or this Agreement.

You hereby authorize and direct your Employer to disclose to the Company or any Subsidiary or Affiliate any information regarding your employment, the nature and amount of your compensation and the fact and conditions of your participation in the Plan, as your Employer deems necessary or appropriate to facilitate the administration of the Plan.

You consent to the collection, use and transfer of personal data as described in this subsection. You understand and acknowledge that the Company, your Employer and the Company's other Subsidiaries and Affiliates hold certain personal information regarding you for the purpose of managing and administering the Plan, including (without limitation) your name, home address, telephone number, date of birth, social insurance or other government identification number, salary, nationality, job title, any Shares or directorships held in the Company and details of all awards or any other entitlements to RSUs or Shares awarded, canceled, exercised, vested, unvested or outstanding in your favor (the "Data"). You further understand and acknowledge that the Company, its Subsidiaries and/or its Affiliates will transfer Data among themselves as necessary for the purpose of implementation, administration and management of your participation in the Plan and that the Company and/or any Subsidiary may each further transfer Data to any third party assisting the Company in the implementation, administration and management of the Plan. You understand and acknowledge that the recipients of Data may be located in the United States or elsewhere, and that the laws of a recipient's country of operation (e.g., the United States) may not have equivalent privacy protections as local laws where you reside or work. You authorize such recipients to receive, possess, use, retain and transfer Data, in electronic or other form, for the purpose of administering your participation in the Plan, including a transfer to any broker or other third party with whom you elect to deposit Shares acquired under the Plan of such Data as may be required for the administration of the Plan and/or the subsequent holding of Shares on your behalf. You may, at any time, view Data, require any necessary modifications of Data, make inquiries about the treatment of Data or withdraw the consents set forth in this subsection by contacting the Human Resources Department of the Company in writing.

You acknowledge and agree that you have reviewed the documents provided to you in relation to the Award in their entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting the Award, and fully understand all provisions of such documents. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of the Award.

**BY SIGNING THE NOTICE OF RESTRICTED STOCK UNIT AWARD, YOU AGREE TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.**

**SILVACO GROUP, INC.  
2023 STOCK INCENTIVE PLAN  
NOTICE OF RESTRICTED STOCK AWARD**

You have been granted the following restricted shares of Common Stock (the “**Restricted Shares**” or this “**Award**”) of Silvaco Group, Inc. (the “**Company**”) under the Silvaco Group, Inc. 2023 Stock Incentive Plan (as may be amended from time to time, the “**Plan**”):

*Name of Recipient:* [Name of Recipient]

*Grant Date:* [Date of Grant]

*Total Number of Shares Granted:* [Total Shares]

*Vesting Commencement Date:* [Vesting Commencement Date]

*Vesting Schedule:* [The Restricted Shares vest when you complete [\_\_\_] months of continuous Service as an Employee or a Consultant from the Vesting Commencement Date. *Actual vesting schedule to be inserted.*]

**By your written signature below (or your electronic acceptance) and the signature of the Company’s representative below, you and the Company agree that the Restricted Shares are granted under and governed by the terms and conditions of the Plan, this Notice of Restricted Stock Award and the Restricted Stock Agreement (collectively, this “Agreement”), both of which are attached to and made a part of this document.**

**By your written signature below (or your electronic acceptance), you further agree that the Company may deliver by e-mail all documents relating to the Plan or this Award (including without limitation, prospectuses required by the Securities and Exchange Commission) and all other documents that the Company is required to deliver to its security holders (including without limitation, annual reports and proxy statements). You also agree that the Company may deliver these documents by posting them on a website maintained by the Company or by a third party under contract with the Company. If the Company posts these documents on a website, it will notify you by e-mail. Should you electronically accept this Agreement, you agree to the following: “This electronic contract contains my electronic signature, which I have executed with the intent to sign this Agreement.”**

**You acknowledge and agree that (i) you have carefully read, fully understand and agree to all of the terms and conditions described in this Notice of Restricted Stock Award, the attached Restricted Stock Agreement and the Plan and (ii) you have been given an opportunity to consult your own legal and tax counsel with respect to all matters relating to this Award prior to signing (or electronically accepting) this Notice of Restricted Stock Award and that you have either consulted such counsel or voluntarily declined to consult such counsel.**



**RECIPIENT**

\_\_\_\_\_  
Recipient's Signature

\_\_\_\_\_  
Recipient's Printed Name

**SILVACO GROUP, INC.**

By:

Name

Title:

**SILVACO GROUP, INC.**  
**2023 STOCK INCENTIVE PLAN**  
**RESTRICTED STOCK AGREEMENT**

**The Plan and Other Agreements** The Restricted Shares that you are receiving are granted pursuant and subject in all respects to the applicable provisions of the Plan, which is incorporated herein by reference. Capitalized terms not defined in this Agreement will have the meanings ascribed to them in the Plan.

The attached Notice of Restricted Stock Award, this Agreement, including any additional terms for Participants outside of the United States (“U.S.”) set forth in the addendum hereto, and the Plan constitute the entire understanding between you and the Company regarding this Award. Any prior agreements, commitments or negotiations concerning this Award are superseded with the exception of (1) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (2) any written employment or severance arrangement that would provide for vesting acceleration of this Award upon the terms and conditions set forth therein. This Agreement may be amended by the Committee without your consent; however, if any such amendment would materially impair your rights or obligations under this Agreement, this Agreement may be amended only by another written agreement, signed by you and the Company.

**Payment For Shares** No cash payment is required for the Shares you receive. You are receiving the Shares in consideration for Services rendered by you.

**Vesting** The Shares that you are receiving will vest as shown in the Notice of Restricted Stock Award. No additional Shares will vest after your Service as an Employee, an Outside Director or a Consultant has terminated for any reason.

**Shares Restricted** Unvested Shares will be considered “**Restricted Shares.**” Except to the extent permitted by the Committee, you may not sell, transfer, assign, pledge or otherwise dispose of Restricted Shares.

**Forfeiture** If your Service terminates for any reason, then your Shares will be forfeited to the extent that they have not vested before the termination date and do not vest as a result of termination. This means that the Restricted Shares will immediately revert to the Company. You will receive no payment for Restricted Shares that are forfeited. The Company determines when your Service terminates for this purpose and all purposes under the Plan and its determinations are conclusive and binding on all persons.

**Leaves of Absence**

For purposes of this Award, your Service does not terminate when you go on a military leave, a sick leave or another *bona fide* leave of absence, if the leave of absence was approved by the Company in writing and if continued crediting of Service is required by the terms of the leave or by applicable law. But your Service terminates when the approved leave ends, unless you immediately return to active work.

If you go on a leave of absence, then the vesting schedule specified in the Notice of Restricted Stock Award may be adjusted in accordance with the Company's leave of absence policy or the terms of your leave. If your work schedule changes (i.e., your work hours are increased or reduced), then the vesting schedule specified in the Notice of Restricted Stock Award may be adjusted in accordance with the Company's part-time work policy or the terms of an agreement between you and the Company pertaining to your part-time schedule.

**Stock Certificates or Book Entry Form**

The Restricted Shares will be evidenced by either stock certificates or book entries on the Company's stock transfer records pending expiration of the restrictions thereon. If you are issued certificates for the Restricted Shares, the certificates will have stamped on them a special legend referring to the forfeiture restrictions. In addition to or in lieu of imposing the legend, the Company may hold the certificates in escrow. As your vested percentage increases, you may request (at reasonable intervals) that the Company release to you a non-legended certificate for your vested Shares.

**Stockholder Rights**

During the period of time between the Grant Date and the date the Restricted Shares become vested, you will have all the rights of a shareholder with respect to the Restricted Shares except for the right to transfer the Restricted Shares, as set forth above, and except in the case of any unvested Restricted Shares, you will not be entitled to any dividends or other distributions paid or distributed by the Company in respect of outstanding Shares. Accordingly, you will have the right to vote the Restricted Shares and to receive any cash dividends paid with respect to the vested Restricted Shares.

**Withholding Taxes and Stock Withholding**

Regardless of any action the Company and/or the Subsidiary or Affiliate employing you (“**Employer**”) takes with respect to any or all income tax, social insurance, payroll tax, payment on account or other tax-related withholding (“**Tax-Related Items**”), you acknowledge that the ultimate liability for all Tax-Related Items legally due by you is and remains your responsibility and that the Company and/or your Employer (1) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Shares received under this Award, including the award or vesting of such Shares, the subsequent sale of Shares under this Award and the receipt of any dividends; and (2) do not commit to structure the terms of the award to reduce or eliminate your liability for Tax-Related Items. Further, if you are subject to Tax-Related Items in more than one jurisdiction, you acknowledge that the Company and your Employer (or former Employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

No stock certificates will be released to you or no notations on any Restricted Shares issued in book-entry form will be removed, as applicable, unless you have paid or made adequate arrangements satisfactory to the Company and/or your Employer to satisfy all withholdings and payments on account obligations of the Company and/or your Employer. In this regard, you authorize the Company and/or your Employer to withhold all applicable Tax-Related Items legally payable by you from your wages or other cash compensation paid to you by the Company and/or your Employer. With the Company’s consent, these arrangements may also include, if permissible under local law, (a) withholding Shares that otherwise would be delivered to you when they vest having a Fair Market Value equal to the amount necessary to satisfy the maximum applicable tax withholding rate, (b) having the Company withhold taxes from the proceeds of the sale of the Shares, either through a voluntary sale or through a mandatory sale arranged by the Company (on your behalf pursuant to this authorization), or (c) any other arrangement approved by the Committee. The Fair Market Value of the Shares, determined as of the date when taxes otherwise would have been withheld in cash, will be applied as a credit against the withholding taxes. Finally, you will pay to the Company or your Employer any amount of Tax-Related Items that the Company or your Employer may be required to withhold as a result of your participation in the Plan or your acquisition of Shares that cannot be satisfied by the means previously described. The Company may refuse to deliver the Shares if you fail to comply with your obligations in connection with the Tax-Related Items as described in this section.

**Restrictions on Resale**

You agree not to sell any Shares at a time when applicable laws, Company policies or an agreement between the Company and its underwriters prohibit a sale. This restriction will apply as long as your Service continues and for such period of time after the termination of your Service as the Company may specify.

**No Retention Rights**

Neither this Award nor this Agreement gives you the right to be employed or retained by the Company or any Subsidiary or Affiliate of the Company in any capacity. The Company and its Subsidiaries and Affiliates reserve the right to terminate your Service at any time, with or without cause.

You understand and acknowledge that the vesting of your Award pursuant to the vesting schedule hereof is earned only by your continued Service, or the satisfaction of any other conditions set forth herein, in each case at the will of the Company (not through the act of being hired or being granted this Award). As such, this Agreement, the transactions contemplated hereunder and the vesting schedule set forth herein do not constitute an express or implied promise of continued engagement as a service provider for the vesting period, for any period, or at all, and shall not interfere in any way with your right or the Company's right to terminate your continued Service at any time, with or without cause.

**Adjustments**

The number of Restricted Shares covered by this Award will be subject to adjustment in the event of a stock split, a stock dividend or a similar change in Shares, and in other circumstances, as set forth in the Plan. The forfeiture provisions and restrictions described above will apply to all new, substitute or additional restricted shares or securities to which you are entitled by reason of this Award.

**Successors and Assigns**

Except as otherwise provided in the Plan or this Agreement, every term of this Agreement will be binding upon and inure to the benefit of the parties hereto and their respective heirs, legatees, legal representatives, successors, transferees and assigns.

**Governing Plan Document**

This Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of the Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. Except as expressly provided in this Agreement, in the event of any conflict between the provisions of this Agreement, the Notice of Restricted Award, and those of the Plan, the provisions of the Plan will control.

**Severability**

In the event that all or any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any section of this Agreement (or part of such a section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such section or part of a section to the fullest extent possible while remaining lawful and valid.

**Recoupment**

This Award is subject to the terms of the Company's recoupment, clawback or similar policy as it may be in effect from time to time, as well as any similar provisions of applicable law, any of which could in certain circumstances require forfeiture of the Award and repayment or forfeiture of any Shares or other cash or property received with respect to the Award (including any value received from a disposition of the Shares).

**No Tax, Legal or Investment Advice**

The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding your participation in the Plan, or your acquisition or sale of the underlying Shares. You understand and agree that you should consult with your own personal tax, financial and/or legal advisors regarding the Award and Tax-Related Items arising in connection with the Award and by accepting the Award, you have agreed that you have done so or knowingly and voluntarily declined to do so.

**Notice**

Any notice required or permitted under this Agreement will be given in writing, including electronically, and will be deemed effectively given upon the earliest of personal delivery, electronic delivery to the email address assigned to you by the Company or provided by you to the Company, receipt or the third (3rd) full day following mailing with postage and fees prepaid, addressed to the other party hereto at the address last known in the Company's records or at such other address as such party may designate by ten (10) days' advance written notice to the other party hereto. The Company may, in its sole discretion, deliver any documents related to your current or future participation in the Plan by electronic means. By accepting this Award, you hereby: (1) consent to receive such documents by electronic means; (2) consent to the use of electronic signatures; and (3) agree to participate in the Plan and/or receive any such documents through an on-line or electronic system established and maintained by the Company or a third party designated by the Company, including but not limited to the use of electronic signatures or click-through electronic acceptance of terms and conditions.

**Applicable Law and Choice of Venue**

This Agreement will be interpreted and enforced under the laws of the State of Delaware without application of the conflicts of law principles thereof.

For purposes of litigating any dispute that arises directly or indirectly from the relationship of the parties evidenced by this Award or this Agreement, the parties hereby submit to and consent to the exclusive jurisdiction of the State of California and agree that any such litigation will be conducted only in the courts of California, or the federal courts of the United States located in California and no other courts.

**Miscellaneous**

You understand and acknowledge that (1) the Plan is entirely discretionary, (2) the Company and your Employer have reserved the right to amend, suspend or terminate the Plan at any time, (3) the grant of this Award does not in any way create any contractual or other right to receive additional grants of awards (or benefits in lieu of awards) at any time or in any amount and no inference shall be drawn from the grant of this Award with respect to the quality of your service to, or standing with, the Company and (4) all determinations with respect to any additional grants, including (without limitation) the times when awards will be granted, the number of Shares subject to awards, the purchase price and the vesting schedule, will be at the sole discretion of the Company.

The value of this Award will be an extraordinary item of compensation outside the scope of your employment contract, if any, and will not be considered a part of your normal or expected compensation for purposes of calculating severance, resignation, redundancy or end-of-service payments, bonuses, service awards, pension or retirement benefits or similar payments.

You understand and acknowledge that participation in the Plan ceases upon termination of your Service for any reason, except as may explicitly be provided otherwise in the Plan or this Agreement.

You hereby authorize and direct your Employer to disclose to the Company or any Subsidiary or Affiliate any information regarding your employment, the nature and amount of your compensation and the fact and conditions of your participation in the Plan, as your Employer deems necessary or appropriate to facilitate the administration of the Plan.

You consent to the collection, use and transfer of personal data as described in this subsection. You understand and acknowledge that the Company, your Employer and the Company's other Subsidiaries and Affiliates hold certain personal information regarding you for the purpose of managing and administering the Plan, including (without limitation) your name, home address, telephone number, date of birth, social insurance or other government identification number, salary, nationality, job title, any Shares or directorships held in the Company and details of all awards or any other entitlements to Shares awarded, canceled, exercised, vested, unvested or outstanding in your favor ("**Data**"). You further understand and acknowledge that the Company, its Subsidiaries and/or its Affiliates will transfer Data among themselves as necessary for the purpose of implementation, administration and management of your participation in the Plan and that the Company and/or any Subsidiary may each further transfer Data to any third party assisting the Company in the implementation, administration and management of the Plan. You understand and acknowledge that the recipients of Data may be located in the United States or elsewhere, and that the laws of a recipient's country of operation (e.g., the United States) may not have equivalent privacy protections as local laws where you reside or work. You authorize such recipients to receive, possess, use, retain and transfer Data, in electronic or other form, for the purpose of administering your participation in the Plan, including a transfer to any broker or other third party with whom you elect to deposit Shares acquired under the Plan of such Data as may be required for the administration of the Plan and/or the subsequent holding of Shares on your behalf. You may, at any time, view Data, require any necessary modifications of Data, make inquiries about the treatment of Data or withdraw the consents set forth in this subsection by contacting the Human Resources Department of the Company in writing.

You acknowledge and agree that you have reviewed the documents provided to you in relation to the Award in their entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting the Award, and fully understand all provisions of such documents. You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of the Award.

**BY SIGNING THE NOTICE OF RESTRICTED STOCK AWARD, YOU AGREE TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.**



**SILVACO GROUP, INC.**  
**2023 EMPLOYEE STOCK PURCHASE PLAN**

Effective Date:

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**SILVACO GROUP, INC.**  
**2023 EMPLOYEE STOCK PURCHASE PLAN**

**SECTION 1. PURPOSE OF THE PLAN.**

The Plan is effective on the date on which the registration statement covering the initial public offering of the Shares is declared effective by the United States Securities and Exchange Commission (the “**Effective Date**”). The purpose of the Plan is to provide a broad-based employee benefit to attract the services of new Eligible Employees, to retain the services of existing Eligible Employees, and to provide incentives for such individuals to exert maximum efforts toward the Company’s success by purchasing Shares from the Company on favorable terms and to pay for such purchases through payroll deductions. The Plan is intended to qualify under Section 423 of the Code and to be exempt from the application and requirements of Section 409A of the Code, and is to be construed accordingly.

The Company intends to make two types of offerings under the Plan: offerings that are intended to qualify as an “employee stock purchase plan” under Section 423 of the Code and to be exempt from the application and requirements of Section 409A of the Code, and to be construed accordingly (each, a “Section 423 Offering”) and offerings that are not intended to qualify as an “employee stock purchase plan” under Section 423 of the Code (each, a “Non-423 Offering”). The Section 423 Offerings will be construed so as to extend and limit Plan participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423 of the Code. An option to purchase shares of Common Stock under the Non-423 Offering will be granted pursuant to any rules, procedures, agreements, appendices or sub-plans adopted by the Committee designed to achieve tax, securities laws, or any other objectives. Except as otherwise provided herein, the Non-423 Offering will operate and be administered in the same manner as the Section 423 Offering.

**SECTION 2. DEFINITIONS.**

- (a) “**Affiliate**” means any entity that, directly or indirectly through one or more intermediaries, controls, is controlled by or is under the common control with, the Company.
- (b) “**Board**” means the Board of Directors of the Company, as constituted from time to time.
- (c) “**Code**” means the United States Internal Revenue Code of 1986, as amended.
- (d) “**Committee**” means the Compensation Committee of the Board or such other committee, comprised exclusively of one or more directors of the Company, as may be appointed by the Board from time to time to administer the Plan. To the extent a such a committee is not appointed by the Board to administer the Plan, references to “Committee” in this Plan shall refer to the Board.
- (e) “**Company**” means Silvaco Group, Inc., a Delaware corporation, including any successor thereto.

(f) “**Compensation**” means, unless provided otherwise by the Committee in the terms and conditions of an Offering, base salary and wages paid in cash to a Participant by a Participating Company, without reduction for any pre-tax contributions made by the Participant under sections 401(k) or 125 of the Code. “Compensation” shall, unless provided otherwise by the Committee in the terms and conditions of an Offering, exclude variable compensation (including commissions, bonuses, incentive compensation, overtime pay and shift premiums), all non-cash items, moving or relocation allowances, cost-of-living equalization payments, car allowances, tuition reimbursements, imputed income attributable to cars or life insurance, severance pay, fringe benefits, contributions or benefits received under employee benefit plans, income attributable to the exercise of stock options or any other equity awards, and similar items. The Committee shall determine whether a particular item is included in Compensation. Further, the Committee shall have the discretion to determine the application of this definition to Participants outside the United States.

(g) “**Corporate Reorganization**” means:

- (i) The consummation of a merger or consolidation of the Company with or into another entity, or any other corporate reorganization; or
- (ii) The sale, transfer or other disposition of all or substantially all of the Company’s assets or the complete liquidation or dissolution of the Company.

(h) “**Eligible Employee**” means any Employee of a Participating Company who meets the requirements set forth in the document(s) governing the Offering for eligibility to participate in the Offering, provided that such Employee also meets the requirements for eligibility to participate set forth in the Plan. The foregoing notwithstanding, an individual shall not be considered an Eligible Employee if such individual’s participation in the Plan is prohibited by the law of any country which has jurisdiction over the employee.

(i) “**Employee**” means any person who is “employed” for purposes of Section 423(b)(4) of the Code by a Participating Company. However, service solely as a director, or payment of a fee for such services, will not cause a director to be considered an “Employee” for purposes of the Plan.

(j) “**Exchange Act**” means the United States Securities Exchange Act of 1934, as amended.

(k) “**Fair Market Value**” means the fair market value of a Share, determined as follows:

- (i) If Shares were traded on any established national securities exchange, including the New York Stock Exchange or The Nasdaq Stock Market, on the date in question, then the Fair Market Value shall be equal to the closing price as quoted on such exchange (or the exchange with the greatest volume of trading with respect to the Shares) on such date as

reported in the Wall Street Journal or such other source as the Committee deems reliable; or

- (ii) If the foregoing provision is not applicable, then the Fair Market Value shall be determined by the Committee in good faith on such basis as it deems appropriate.

The determination of fair market value for purposes of tax withholding may be made in the Committee's discretion subject to applicable law and is not required to be consistent with the determination of Fair Market Value for other purposes.

For any date that is not a Trading Day, the Fair Market Value of a Share for such date shall be determined by using the closing sale price for the immediately preceding Trading Day. Determination of the Fair Market Value pursuant to the foregoing provisions shall be conclusive and binding on all persons.

- (l) **"Offering"** means the grant of options to purchase Shares under the Plan to Eligible Employees.
- (m) **"Offering Date"** means the first day of an Offering.
- (n) **"Offering Period"** means a period with respect to which the right to purchase Shares may be granted under the Plan, as determined pursuant to Section 4(a).
- (o) **"Participant"** means an Eligible Employee who elects to participate in the Plan, as provided in Section 4(b).
- (p) **"Participating Company"** means (i) the Company and (ii) each present or future Subsidiary or Affiliate designated by the Committee as a Participating Company. The Committee may so designate any Subsidiary or Affiliate, or revoke any such designation, at any time and from time to time, either before or after the Plan is approved by the shareholders, and may further designate such companies or Participants as participating in the 423 Component or the Non-423 Component. The Committee may also determine which Affiliates or Eligible Employees may be excluded from participation in the Plan, to the extent consistent with Section 423 of the Code or as implemented under a Non-423 Offering, and determine which Participating Company or Companies will participate in separate Offerings (to the extent that the Company makes separate Offerings). For purposes of Section 423 Offerings, only the Company and its Subsidiaries may be Participating Companies; provided, however, that at any given time, a Subsidiary that is a Participating Company in a Section 423 Offering will not be a Participating Company in a Non-423 Offering.
- (q) **"Plan"** means this Silvaco Group, Inc. 2023 Employee Stock Purchase Plan, as it may be amended from time to time.
- (r) **"Plan Account"** means the account established for each Participant pursuant to Section 8(a).

(s) “**Purchase Date**” means one or more dates during an Offering on which Shares may be purchased pursuant to the terms of the Offering.

(t) “**Purchase Period**” means one or more successive periods during an Offering, beginning on the Offering Date or on the day after a Purchase Date, and ending on the next succeeding Purchase Date.

(u) “**Purchase Price**” means the price at which Participants may purchase Shares under the Plan, as determined pursuant to Section 8(b).

(v) “**Shares**” means the common stock, par value \$0.0001 per share, of the Company.

(w) “**Subsidiary**” means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company, if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

(x) “**Trading Day**” means a day on which the national stock exchange on which the Shares are traded is open for trading.

### **SECTION 3. ADMINISTRATION OF THE PLAN.**

(a) *Administrative Powers and Responsibilities.* The Plan shall be administered by the Committee. The Committee shall have full power and authority, subject to the provisions of the Plan, to promulgate such rules and regulations as it deems necessary for the proper administration of the Plan, to interpret the provisions and supervise the administration of the Plan, and to take all action in connection therewith or in relation thereto as it deems necessary or advisable. Any decision reduced to writing and signed by all of the members of the Committee shall be fully effective as if it had been made at a meeting duly held. The Committee’s determinations under the Plan, unless otherwise determined by the Board, shall be final and binding on all persons. The Company shall pay all expenses incurred in the administration of the Plan. No member of the Committee shall be personally liable for any action, determination, or interpretation made in good faith with respect to the Plan, and all members of the Committee shall be fully indemnified by the Company with respect to any such action, determination or interpretation. The Committee may adopt such rules, guidelines and forms as it deems appropriate to implement the Plan. Subject to the requirements of applicable law, the Committee may designate persons other than members of the Committee to carry out its responsibilities and may prescribe such conditions and limitations as it may deem appropriate. All decisions, interpretations and other actions of the Committee shall be final and binding on all Participants and all persons deriving their rights from a Participant. No member of the Committee shall be liable for any action that he has taken or has failed to take in good faith with respect to the Plan. Notwithstanding anything to the contrary in the Plan, the Board may, in its sole discretion, at any time and from time to time, resolve to administer the Plan. In such event, the Board shall have all of the authority and responsibility granted to the Committee herein.

(b) *International Administration.* The Committee may establish sub-plans (which need not qualify under Section 423 of the Code) and initiate separate Offerings for the purpose of (i) facilitating participation in the Plan by non-U.S. employees in compliance with foreign laws and regulations without affecting the qualification of the remainder of the Plan under Section 423 of the Code or (ii) qualifying the Plan for preferred tax treatment under foreign tax laws (which sub-plans, at the Committee's discretion, may provide for allocations of the authorized shares reserved for issue under the Plan as set forth in Section 14(a)). The rules, guidelines and forms of such sub-plans (or the Offerings thereunder) may take precedence over other provisions of the Plan, with the exception of Section 4(a)(i), Section 5(b), Section 8(b) and Section 14(a), but unless otherwise superseded by the terms of such sub-plan, the provisions of the Plan shall govern the operation of such sub-plan. Alternatively and in order to comply with the laws of a foreign jurisdiction, the Committee shall have the power, in its discretion, to grant options in an Offering to citizens or residents of a non-U.S. jurisdiction (without regard to whether they are also citizens of the United States or resident aliens) that provide terms which are less favorable than the terms of options granted under the same Offering to employees resident in the United States, subject to compliance with Section 423 of the Code.

#### **SECTION 4. ENROLLMENT AND PARTICIPATION.**

(a) *Offering Periods.* While the Plan is in effect, the Committee may from time to time grant options to purchase Shares pursuant to the Plan to Eligible Employees during a specified Offering Period. Each such Offering shall be in such form and shall contain such terms and conditions as the Committee shall determine, subject to compliance with the terms and conditions of the Plan (which may be incorporated by reference) and, as applicable, the requirements of Section 423 of the Code, including the requirement that all Eligible Employees participating in each Section 423 Offering have the same rights and privileges. The Committee shall specify prior to the commencement of each Offering (i) the period during which the Offering shall be effective, which may not exceed twenty-seven (27) months from the Offering Date and may include one or more successive Purchase Periods within the Offering, (ii) the Purchase Dates and Purchase Price for Shares which may be purchased pursuant to the Offering, and (iii) if applicable, any limits on the number of Shares purchasable by a Participant, or by all Participants in the aggregate, during any Offering Period or, if applicable, Purchase Period, in each case consistent with the limitations of the Plan. The Committee shall have the discretion to provide for the automatic termination of an Offering following any Purchase Date on which the Fair Market Value of a Share is equal to or less than the Fair Market Value of a Share on the Offering Date, and for the Participants in the terminated Offering to be automatically re-enrolled in a new Offering that commences immediately after such Purchase Date. The terms and conditions of each Offering need not be identical, and shall be deemed incorporated by reference and made a part of the Plan.

(b) *Enrollment.* Any individual who, on the day preceding the first day of an Offering Period, qualifies as an Eligible Employee may elect to become a Participant in the Plan for such Offering Period by completing the enrollment process prescribed and communicated for this purpose from time to time by the Company to Eligible Employees.



(c) *Duration of Participation.* Once enrolled in the Plan, a Participant shall continue to participate in the Plan until the Participant ceases to be an Eligible Employee or withdraws from the Plan under Section 6(a). A Participant who withdrew from the Plan under Section 6(a) may again become a Participant, if the Participant then is an Eligible Employee, by following the procedure described in Subsection (b) above. A Participant whose employee contributions were discontinued automatically under Section 9(b) shall automatically resume participation at the beginning of the earliest Offering Period ending in the next calendar year, if the Participant then is an Eligible Employee. Except as otherwise provided in the terms and conditions of an Offering, when a Participant reaches the end of an Offering Period but the Participant's participation is to continue, then such Participant shall automatically be re-enrolled for the Offering Period that commences immediately after the end of the prior Offering Period.

## **SECTION 5. EMPLOYEE CONTRIBUTIONS.**

(a) *Frequency of Payroll Deductions.* A Participant may purchase Shares under the Plan solely by means of payroll deductions; provided, however, that to the extent provided in the terms and conditions of an Offering, a Participant may also make contributions through payment by cash or check prior to one or more Purchase Dates during the Offering. Payroll deductions, subject to the provisions of Subsection (b) below or as otherwise provided under the terms and conditions of an Offering, shall occur on each payday during participation in the Plan.

(b) *Amount of Payroll Deductions.* An Eligible Employee shall designate during the enrollment process the portion of the Eligible Employee's Compensation that the Eligible Employee elects to have withheld for the purchase of Shares. Such portion shall be a whole percentage of the Eligible Employee's Compensation, but not less than one percent (1%) nor more than fifteen percent (15%) (or such lower rate of Compensation specified as the limit in the terms and conditions of the applicable Offering).

(c) *Changing Deduction Rate.* Unless otherwise provided under the terms and conditions of an Offering, (i) a Participant may not increase the rate of payroll deductions during the Offering Period, and (ii) a Participant may discontinue or decrease the rate of payroll deductions during the Offering Period to a whole percentage of the Participant's Compensation (including a reduction to zero percent (0%)) in accordance with such procedures and subject to such limitations as the Company may establish for all Participants. A Participant may also increase or decrease the rate of payroll deductions effective for a new Offering Period by submitting an authorization to change the payroll deduction rate pursuant to the process prescribed by the Company from time to time. The new deduction rate shall be a whole percentage of the Eligible Employee's Compensation consistent with Subsection (b) above.

(d) *Discontinuing Payroll Deductions.* If a Participant wishes to discontinue employee contributions entirely, the Participant may do so by withdrawing from the Plan pursuant to Section 6(a). In addition, employee contributions may be discontinued automatically pursuant to Section 9(b).

## **SECTION 6. WITHDRAWAL FROM THE PLAN.**

(a) *Withdrawal.* A Participant may elect to withdraw from the Plan by giving notice pursuant to the process prescribed and communicated by the Company from time to time. Such withdrawal may be elected at any time before the last day of an Offering Period, except as otherwise provided in the Offering. In addition, if payment by cash or check is permitted under the terms and conditions of an Offering, Participants may be deemed to withdraw from the Plan by declining or failing to remit timely payment to the Company for the Shares. As soon as reasonably practicable thereafter, payroll deductions shall cease and the entire amount credited to the Participant's Plan Account shall be refunded to him or her in cash, without interest, except as may be required by applicable law. No partial withdrawals shall be permitted.

(b) *Re-enrollment After Withdrawal.* A former Participant who has withdrawn from the Plan shall not be a Participant until the Participant re-enrolls in the Plan under Section 4(b). Re-enrollment may be effective only at the commencement of an Offering Period.

## **SECTION 7. CHANGE IN EMPLOYMENT STATUS.**

(a) *Termination of Employment.* Termination of employment as an Eligible Employee for any reason, including death, shall be treated as an automatic withdrawal from the Plan under Section 6(a). A transfer from one Participating Company to another shall not be treated as a termination of employment.

(b) *Leave of Absence.* For purposes of the Plan, employment shall not be deemed to terminate when the Participant goes on a military leave, a sick leave or another bona fide leave of absence, if the leave was approved by the Company in writing. Employment, however, shall be deemed to terminate three (3) months after the Participant goes on a leave, unless a contract or statute guarantees the Participant's right to return to work. Employment shall be deemed to terminate in any event when the approved leave ends, unless the Participant immediately returns to work.

(c) *Death.* In the event of the Participant's death, the amount credited to the Participant's Plan Account shall be paid to the Participant's estate.

## **SECTION 8. PLAN ACCOUNTS AND PURCHASE OF SHARES.**

(a) *Plan Accounts.* The Company shall maintain a Plan Account on its books in the name of each Participant. Whenever an amount is deducted from the Participant's Compensation under the Plan, such amount shall be credited to the Participant's Plan Account. Amounts credited to Plan Accounts shall not be trust funds and may be commingled with the Company's general assets and applied to general corporate purposes, except where applicable law requires that amounts credited to Plan Accounts be held separately or deposited with a third party. No interest shall be credited to Plan Accounts, except as may be required by applicable law.

- (b) *Purchase Price.* The Purchase Price for each Share purchased during an Offering Period shall be the lesser of:
- (i) eighty-five percent (85%) of the Fair Market Value of such share on the Purchase Date; or
  - (ii) eighty-five percent (85%) of the Fair Market Value of such share on the Offering Date.

The Committee may specify an alternate Purchase Price amount or formula in the terms and conditions of an Offering, but in no event may such amount or formula result in a Purchase Price less than that calculated pursuant to the immediately preceding formula.

(c) *Number of Shares Purchased.* As of each Purchase Date, each Participant shall be deemed to have elected to purchase the number of Shares calculated in accordance with this Subsection (c), unless the Participant has previously elected to withdraw from the Plan in accordance with Section 6(a). The amount then in the Participant's Plan Account shall be divided by the Purchase Price, and the number of shares that results shall be purchased from the Company with the funds in the Participant's Plan Account (rounded down to the nearest whole share, unless otherwise set forth in the terms and conditions of an Offering). Unless provided otherwise by the Committee prior to commencement of an Offering, the maximum number of Shares which may be purchased by an individual Participant during such Offering is \_\_\_\_\_ shares. The foregoing notwithstanding, no Participant shall purchase more than such number of Shares as may be determined by the Committee with respect to the Offering Period, or Purchase Period, if applicable, nor more than the amount of Shares set forth in Sections 9(b) and 14(a). For each Offering Period and, if applicable, Purchase Period, the Committee shall have the authority to establish additional limits on the number of Shares purchasable by all Participants in the aggregate.

(d) *Available Shares Insufficient.* In the event that the aggregate number of Shares that all Participants elect to purchase during an Offering Period exceeds the maximum number of Shares remaining available for issuance under Section 14(a), or which may be purchased pursuant to any additional aggregate limits imposed by the Committee, then the number of Shares to which each Participant is entitled shall be determined by multiplying the number of Shares available for issuance by a fraction, the numerator of which is the number of Shares that such Participant has elected to purchase and the denominator of which is the number of Shares that all Participants have elected to purchase.

(e) *Issuance of Shares.* Certificates representing the Shares purchased by a Participant under the Plan shall be issued to the Participant as soon as reasonably practicable after the applicable Purchase Date, except that the Company may determine that such shares shall be held for each Participant's benefit by a broker designated by the Company. Shares may be registered in the name of the Participant or jointly in the name of the Participant and the Participant's spouse as joint tenants with right of survivorship or as community property.

(f) *Unused Cash Balances.* Unless otherwise set forth in the terms and conditions of an Offering, an amount remaining in the Participant's Plan Account that represents the Purchase Price for any fractional share shall be carried over in the Participant's Plan Account to the next Offering Period or refunded to the Participant in cash at the end of the Offering Period, without interest (except as may be required by applicable law), if the Participant's participation is not continued. Any amount remaining in the Participant's Plan Account that represents the Purchase Price for whole shares that could not be purchased by reason of Subsection (c) or (d) above, Section 9(b) or Section 14(a) shall be refunded to the Participant in cash, without interest (except as may be required by applicable law).

(g) *Shareholder Approval.* The Plan shall be submitted to the shareholders of the Company for their approval within twelve (12) months after the date the Plan is adopted by the Board. Any other provision of the Plan notwithstanding, no Shares shall be purchased under the Plan unless and until the Company's shareholders have approved the adoption of the Plan.

## **SECTION 9. LIMITATIONS ON STOCK OWNERSHIP.**

(a) *Five Percent Limit.* Any other provision of the Plan notwithstanding, no Participant shall be granted a right to purchase Shares under the Plan if such Participant, immediately after the Participant's election to purchase such Shares, would own stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any parent or Subsidiary of the Company. For purposes of this Subsection (a), the following rules shall apply:

- (i) Ownership of stock shall be determined after applying the attribution rules of Section 424(d) of the Code;  
Each Participant shall be deemed to own any stock that the Participant has a right or option to purchase under this or any other plan; and
- (ii) Each Participant shall be deemed to have the right to purchase up to the maximum number of Shares that may be purchased by a Participant under the Plan under the individual limit specified pursuant to Section 8(c) with respect to each Offering Period.

(b) *Dollar Limit.* Any other provision of the Plan notwithstanding, no Participant shall accrue the right to purchase Shares at a rate which exceeds twenty-five thousand dollars (\$25,000) of Fair Market Value of such Shares per calendar year (under the Plan and all other employee stock purchase plans of the Company or any parent or Subsidiary of the Company), determined in accordance with the provisions of Section 423(b)(8) of the Code and applicable United States Treasury Regulations promulgated thereunder.

For purposes of this Subsection (b), the Fair Market Value of Shares shall be determined as of the beginning of the Offering Period in which such Shares are purchased. Employee stock purchase plans not described in Section 423 of the Code shall be disregarded. If a Participant is

precluded by this Subsection (b) from purchasing additional Shares under the Plan, then the Participant's employee contributions shall automatically be discontinued.

**SECTION 10. RIGHTS NOT TRANSFERABLE.**

The rights of any Participant under the Plan, or any Participant's interest in any Shares or moneys to which the Participant may be entitled under the Plan, shall not be transferable by voluntary or involuntary assignment or by operation of law, or in any other manner other than by the laws of descent and distribution. If a Participant in any manner attempts to transfer, assign or otherwise encumber the Participant's rights or interest under the Plan, other than by the laws of descent and distribution, then such act shall be treated as an election by the Participant to withdraw from the Plan under Section 6(a).

**SECTION 11. NO RIGHTS AS AN EMPLOYEE.**

Nothing in the Plan or in any right granted under the Plan shall confer upon the Participant any right to continue in the employ of a Participating Company for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Participating Companies or of the Participant, which rights are hereby expressly reserved by each, to terminate the Participant's at-will employment at any time and for any reason, with or without cause.

**SECTION 12. NO RIGHTS AS A SHAREHOLDER.**

A Participant shall have no rights as a shareholder with respect to any Shares that the Participant may have a right to purchase under the Plan until such shares have been purchased on the applicable Purchase Date and such Participant's ownership of such Shares shall have been entered into the books of the registrar or the Participant is issued a stock certificate, as applicable.

**SECTION 13. SECURITIES LAW REQUIREMENTS.**

Shares shall not be issued under the Plan unless the issuance and delivery of such shares comply with (or are exempt from) all applicable requirements of law, including (without limitation) the United States Securities Act of 1933, as amended, the rules and regulations promulgated thereunder, state or non-U.S. securities laws and regulations, the regulations of any stock exchange or other securities market on which the Company's securities may then be traded, and any foreign securities, exchange control or other applicable laws of any country which has jurisdiction over the applicable Participant.

**SECTION 14. SHARES OFFERED UNDER THE PLAN.**

(a) *Authorized Shares.* The maximum aggregate number of Shares available for purchase under the Plan is Shares, plus an annual increase to be added on the first day of each of the Company's fiscal years for a period of up to ten years, beginning with the fiscal year that begins January 1, 2024 and ending on (and including) the fiscal year that begins January 1, 2033, equal to the least of (i)                      percent (                      %) of the outstanding

Shares on such date, (ii) shares, or (iii) a lesser amount determined by the Committee or Board. The aggregate number of shares available for purchase under the Plan (and the limit in clause (ii) to the annual increase thereto) shall at all times be subject to adjustment pursuant to Section 14(b).

(b) *Antidilution Adjustments.* The aggregate number of Shares offered under the Plan, the individual and aggregate Participant share limitations described in Section 8(c) and the price of shares that any Participant has elected to purchase shall be adjusted proportionately by the Committee in the event of any change in the number of issued Shares (or issuance of shares other than Shares) by reason of any forward or reverse share split, subdivision or consolidation, or share dividend or bonus issue, recapitalization, reclassification, merger, amalgamation, consolidation, split-up, spin-off, reorganization, combination, exchange of Shares, the issuance of warrants or other rights to purchase Shares or other securities, or any other change in corporate structure or in the event of any extraordinary distribution (whether in the form of cash, Shares, other securities or other property), in any case, in a manner that complies with Section 423 of the Code.

(c) *Reorganizations.* Any other provision of the Plan notwithstanding, in the event of a Corporate Reorganization in which the Plan is not assumed by the surviving corporation or its parent corporation pursuant to the applicable plan of merger or consolidation, the Offering Period then in progress shall terminate immediately prior to the effective time of such Corporate Reorganization and either shares shall be purchased pursuant to Section 8 or, if so determined by the Board or Committee, all amounts in all Participant Accounts shall be refunded pursuant to Section 15 without any purchase of shares. The Plan shall in no event be construed to restrict in any way the Company's right to undertake a dissolution, liquidation, merger, consolidation or other reorganization.

#### **SECTION 15. AMENDMENT OR DISCONTINUANCE.**

The Board or Committee shall have the right to amend, suspend or terminate the Plan at any time and without notice; provided, however, that any amendment that would be treated as the adoption of a new plan for purposes of Section 423 of the Code will have no force or effect unless approved by the shareholders of the Company within twelve (12) months before or after its adoption. Upon any such amendment, suspension or termination of the Plan during an Offering Period, the Board or Committee may in its discretion determine that the applicable Offering shall immediately terminate and that all amounts in the Participant Accounts shall be carried forward into a payroll deduction account for each Participant under a successor plan, if any, or promptly refunded to each Participant. Except as provided in Section 14, any increase in the aggregate number of Shares to be issued under the Plan shall be subject to approval by a vote of the shareholders of the Company. In addition, any other amendment of the Plan shall be subject to approval by a vote of the shareholders of the Company to the extent required by an applicable law or regulation. The Plan shall continue until the earlier to occur of (a) termination of the Plan pursuant to this Section 15 or (b) issuance of all of the Shares reserved for issuance under the Plan.

SILVACO GROUP, INC.  
2023 EMPLOYEE STOCK PURCHASE PLAN

## **SECTION 16. LIMITATION ON LIABILITY.**

Notwithstanding anything to the contrary in the Plan, neither the Company, nor any of its Subsidiaries, nor the Committee, nor any person acting on behalf of the Company, any of its Subsidiaries, or the Committee, will be liable to any Participant, to any permitted transferee, to the estate or beneficiary of any Participant or any permitted transferee, or to any other person by reason of any acceleration of income, any additional tax, or any penalty, interest or other liability asserted by reason of the failure of the Plan or any option to purchase Shares to satisfy the requirements of Section 423, or otherwise asserted with respect to the Plan or any option to purchase Shares.

## **SECTION 17. UNFUNDED PLAN.**

The Company's obligations under the Plan are unfunded, and no Participant will have any right to specific assets of the Company in respect of any option to purchase Shares. Participants will be general unsecured creditors of the Company with respect to any amounts due or payable under the Plan.

## **SECTION 18. OFFER TO PARTICIPANTS OUTSIDE THE UNITED STATES.**

Notwithstanding any provision of the Plan to the contrary, to comply with applicable law in countries outside the United States in which the Company and its Subsidiaries and Affiliates operate or in which Participants work or reside, the Committee, in its sole discretion, shall have the power and authority to: (i) determine which Employees outside the United States will be Eligible Employees under the Plan; (ii) modify the terms and conditions of any Offering to Eligible Employees outside the United States; (iii) establish sub-plans and modify terms, procedures and rules, to the extent such actions may be necessary or advisable, including adoption of rules, procedures or sub-plans applicable to particular Subsidiaries and Affiliates or Participants in particular locations; provided that no such sub-plans and/or modifications shall take precedence over Section 3 of the Plan or otherwise require shareholder approval; (iv) take any action, before or after options to purchase Shares are granted, that it deems advisable to obtain approval or to facilitate compliance with any necessary local governmental regulatory exemptions or approvals and (v) impose conditions on participation in the Plan and/or the purchase of Shares in order to minimize the Company's obligation with respect to tax equalization for Participants on assignments outside their home country. Without limiting the generality of the foregoing, the Committee is specifically authorized to adopt rules, procedures and sub-plans with provisions that limit or modify rights on eligibility to participate in an Offering, on termination of employment, available methods of contribution, payment of income tax, social insurance contributions and payroll taxes, the shifting of employer tax or social insurance contribution liability to a Participant, the withholding procedures and handling of any Share certificates or other indicia of ownership. Notwithstanding the foregoing, the Board will only take action and grant options to purchase Shares that comply with applicable laws.

**SECTION 19. GOVERNING LAW.**

The Plan shall be governed by the laws of the State of Delaware, without application of the conflicts of law principles thereof.

**SECTION 20. EXECUTION.**

To record the adoption of the Plan by the Board, the Company has caused its authorized officer to execute the same.

Silvaco Group, Inc.

By: \_\_\_\_\_  
Name: Babak Taheri  
Title: Chief Executive Officer  
Date: \_\_\_\_\_

SILVACO GROUP, INC.  
2023 EMPLOYEE STOCK PURCHASE PLAN





January 27, 2021

Robert J. McMullan

Dear Robert (Bob),

Congratulations! We are pleased to confirm that you have been selected to work for Silvaco and we are delighted to make you the following job offer. The position that we are offering is that of **Chief Financial Officer (CFO)** and you will report directly to **Babak Taheri, CEO**. The terms and conditions of your employment are as follows:

**Base Salary** \$250,000.00 annually (\$10,416.60 / semi-monthly)

**Bonus option** The Corporate Bonus pool is a profit pool that is awarded based upon key corporate goals as well as your annual milestones. The company estimates that you will receive 50% of your annual salary when both corporate goals and your annual goals are met. The bonus is discretionary and not guaranteed in any way.

**Bonus Milestones**

- Corporate Goal: Company has more than \$2M of GAAP Net Income for the year 2022. If the company is not profitable, the bonuses are not paid, otherwise scaled if the GAAP Net Income is less than \$2M.
- Personal Goals:
  - Completion of 2020 audit by end of January 2022 (5%)
  - Completion of 2021 audit by end of May 2022 (20%)
  - Completion of an initial public offering of Silvaco Group by end of Q3 2022 (20%)
  - Audit Readiness for 2019 if three years of audits are required by investors, and if not a runway plan for post IPO (5%).

**Sign on Bonus:**

5000 RSUs - time vested on your 6-month anniversary of your continued employment through such period.

5000 RSUs - time vested on your 9-month anniversary of your continued employment through such period

**RSUs / Stock Incentive Plan** Silvaco offers a stock incentive plan and intends to periodically issue Restricted Stock Units (RSU's) to employees as incentive and reward for performance pursuant to terms of its stock incentive plan. Subject to the approval of Silvaco's Board of Directors, you will be granted 90,000 RSUs. Such RSUs shall be subject to the restrictions set forth in the grant documentation including that the RSUs shall be subject to time-based vesting at a rate of 25% per year over a four year period which shall vest 25% following completion of the first year and the remainder quarterly over the remaining three years. The amount of RSU's awarded and terms thereof will be subject to the approval of Silvaco's board of directors. Subject to approval of the board, the RSUs shall including double-trigger acceleration of such vesting following up a change of control after the completion of a public offering or de-SPAC transaction.

**Severance Benefits:**

Your employment with the Company is at-will and may be terminated by you or by the Company at any time for any legal reason. This "at will" condition of employment cannot be modified except for in writing executed by both you and the Company. However, in the event that your employment is terminated by the Company without "Cause" as defined below (note the determination as to whether you are being terminated for Cause will be made in good faith by the Silvaco board of directors), you shall be entitled to receive the "Severance Benefits".

"Cause" shall mean termination of your employment as a result of (i) your material personal dishonesty, willful misconduct that results in harm to the Company while employed at the Company, (ii) failure to notify the company of events (past or future\_ that may case you or the Company in a negative light (including but not limited to SEC or IRS violations) (iii) breach of a fiduciary duty, (iv) intentional failure to perform stated duties, willful or reckless violation of any law, rule, or regulation (other than traffic violations or similar offenses), (v) material violation of any Company policy or breach of any written agreement with the Company (if not cured within 30 days following notice from the Company of such breach), or (vi) any willful failure to cooperate with an investigation authorized by the Company or initiated by a governmental or regulatory authority related to the Company or its business.

"Severance Benefits" shall mean all the following. (i) Company shall pay to Executive a cash payment equal to twelve (12) months of Executive's Base Salary and pro-rated amount of annual bonus at target level at the rate in effect immediately prior to Executive's date of termination payable in a lump sum within 60 days of the termination date, subject to withholdings and deductions; (ii) the Company shall offer COBRA coverage as required under applicable laws. Your right to receive your severance payment is expressly conditioned upon receipt by the Company, within forty-five (45) days following such qualifying termination date, of a written release executed by you, in form and substance provided by and satisfactory to the Company, of any and all claims or causes of action of any nature relating directly or indirectly to your employment or termination of employment, and the absence of any revocation thereof within the

seven (7) days following the date of your execution of such written release. While this letter is not a guarantee of employment for a definite amount of time, it is a contract between you and the Company, and may not be modified or amended except in writing signed by you and the CEO of the Company.

**Location** New Jersey/New York and Santa Clara, California as needed

### **Position Description and Responsibilities**

The CFO position is accountable for the administrative, financials, business processes, and risk management of company financials. The CFO will ensure that reported results comply with Generally Accepted Accounting Principles (GAAP - 606), and Audit (PCAOB). The CFO collaborates cross-functionally, providing financial and accounting expertise to help functional leaders in decision-making and regularly interfaces with the Board of Directors. The role is both strategic and operational and would like you to view the role as an active participant driving the business goals of the company.

### **Chief Financial Officer responsibilities include:**

- Manage all Silvaco financial and accounting for operational integrity.
- Identify, recruit, motivate, coach, and develop the finance team.
- Work with the CEO, Marketing, and IR/PR team on roadshow collaterals for investors and bankers.
- Get 2020 and 2021 revenue recognition ready based on ASC 606.
- Complete 2020 financial audits to pass based on PCAOB.
- Provide systems and supports for a successful IPO through SPAC or IPO by Q3 2022.
- Provide expert counsel to the CEO and Board of Directors of Financial Matters.
- Assist in formulating the company's future M&A financials.
- Develop appropriate KPI's, reporting tools and dashboards for Revenue, AP, AR, Expenses.
- Responsible for Revenue, Expense, and Cash flow Forecasting.
- Participate in M&A opportunities, due diligence, execution, and post-acquisition integration.
- Establish internal controls, policies, procedures, and financial governance.
- Extensive experience with producing GAAP related financial statements and a sound understanding of the accounting principles that tie directly to the business operations.
- Ensures that the company maximizes cash flow through optimized operating performance worldwide.
- Drive continuous improvement in all processes.
- Able to develop and nurture effective relationships at all levels of the organizations.
- Oversee cash management and short-term investments.
- Supervise bank reconciliation worldwide.
- Summarize pertinent financial data related to revenue, collections, write-offs, and other financial elements for periodic presentation to the CEO and Board of Directors.
- Consistently support management team to achieve budget, revenue, and EBITDA goals.
- Protect company proprietary and confidential information.

- Interact with and bring departments and subsidiaries into line with CEO's plans, initiatives, and recommendations.
- Provide Quarterly P/L, Balance Sheet and Cash Flow statements.
- Develop and maintain sophisticated analytical models to forecast of cash, revenue, AP and AR.

In addition to salary, bonuses, and stock, Silvaco provides its employees with health benefits, vision benefits, dental benefits, flexible time off, 401(k)-retirement savings plan with a 1.5% company match and other benefits which will be described in more detail in the Silvaco, Inc. employee handbook and during orientation.

In addition, Silvaco will be providing health benefits, vision benefits, and dental benefits for your son who has special needs. This is part of your compensation.

This letter is not a contract or guarantee of employment for a definite amount of time.

We are excited to have you become a part of the Silvaco team and for you to bring your considerable expertise to this position. We would like for you to start work on **Friday, Feb 4th, 2022. Human Resources will arrange your first day orientation via zoom.**

If you have any questions, please let me know

To confirm your intention to join Silvaco, Inc., please sign and return this original no later than Saturday Jan 29th, 2022

Sincerely,

/s/ Babak Taheri

Babak Taheri, Ph.D.  
Chief Executive Officer

I hereby accept the Chief Financial Officer position.

/s/ Robert McMullan  
Robert McMullan

1/28/22  
Date



November 16, 2022

Robert McMullan

Dear Robert (Bob):

This letter amends the offer letter previously provided to you by Silvaco (the “Company”), signed January 28, 2022, as amended (the “Offer Letter”).

The following amendment corrects the corporate goal as stated in the original offer letter signed January 28, 2022.

- Corporate Goal: Company has more than \$2M of non-GAAP net income for the year 2022. If the company is not profitable, the bonuses are not paid, otherwise scaled if the non-GAAP net income is less than \$2M.

All other elements of the original signed offer letter shall remain in place.

If you have any questions, please contact Human Resources at

Sincerely,

/s/ Carrie Allegretti

Carrie Allegretti  
VP of Global Human Resources

I have read and understood the corrected corporate goal provided in my original offer of employment, and I accept the above amendment dated November 16, 2022. I understand that my employment with Silvaco remains at will, meaning that either the company or I may terminate this employment relationship at any time with or without cause or notice.

/s/ Robert McMullan  
Robert (Bob) McMullan

11/21/2022  
Date



November 23, 2021

Dr. Babak Taheri

**Offer Letter and Termination of Separation Agreement**

Dear Babak,

On behalf of Silvaco Group, Inc. (“Silvaco Group”) and Silvaco Inc., (collectively, the “Company”), we are pleased to offer you the position of **Chief Executive Officer (CEO) of each of Silvaco Group and Silvaco, Inc.** and a member of the Board of Directors (the “Position”) in **Santa Clara, CA**, reporting directly to **the Board of Directors of Silvaco Group**. We are excited about the opportunity to work with you. We believe that it is important to a healthy working relationship that both parties understand the terms and conditions of employment before commencing employment. In order to ensure that both you and the Company have a common understanding, we set forth below some of the fundamental premises.

The terms and conditions of your employment are as follows:

<b>COMMENCEMENT DATE</b>	It is understood that your start date will be Wednesday, November 24, 2021
<b>BASELINE SALARY</b>	Your salary will be \$33,333.33 per month (\$400,000.00 per annum) (the “Base Salary”), less deductions required by law, paid semi-monthly. The new Base salary will start on January 1, 2022.
<b>TARGET ANNUAL CASH BONUS</b>	Your annual bonus will be based on Silvaco Group Net profit, calculated according to ASC606 Net Profit recognition as follows: Your target bonus for the year 2021, and 2022 will be in line with the table below, with appropriate adjustments made for future years. Net profit numbers shall be rounded to the nearest tenth.

<b>Net Profit</b>	<b>Cash Bonus</b>
17.1% to 20%	\$800,000.00
15.1% to 17%	\$500,000.00
12.1% to 15%	\$350,000.00
10.1% to 12%	\$320,000.00
\$5 Million	\$292,000.00
\$4Million	\$232,000.00
\$3 Million	\$172,000.00

/s/ BT

\$2 Million	\$113,000.00
\$1 Million	\$62,000.00

The company will provide financial control per PCAOB no later than Q1 2022.

**TARGET RSU COMPENSATION** Subject to annual authorization from the Silvaco Group Board of Directors and entrance into an award agreement under the Silvaco Group, Inc. 2014 Stock Incentive Plan, you will be granted up to 200,000 restricted stock units (“RSUs”) annually based on the total amount of Company bookings. The target amounts (in US Dollars) for 2022 are listed below and will be revised yearly by the Silvaco Group Board of Directors. This Bookings Target is based on the assumption that company has accomplished \$45 million by end of calendar date of 2021 as baseline. If the 2021 booking is lower than \$45 million the table below will be adjusted accordingly and normalized to the 2021 bookings.

<b>Booking</b>	<b>RSUs Granted</b>
\$54 Million	\$200,000.00
\$53 Million	\$187,000.00
\$52 Million	\$175,000.00
\$51 Million	\$162,000.00
\$50 Million	\$150,000.00
\$49 Million	\$137,000.00
\$48 Million	\$125,000.00
\$47 Million	\$112,000.00
\$46 Million	\$100,000.00
\$45 Million	\$87,000.00

RSUs shall vest over a four-year period (25% per year) commencing on the Start Date and shall not be subject to any clawback provisions. Detailed terms related to your RSU grants can be found in your award agreement.

**TARGETED RSU DISTRIBUTION FOR IPO**

In the event that the Company, directly or indirectly (including through a “SPAC” transaction), undergoes an initial public offering (“IPO”) with the shareholder approval, you will be eligible for additional RSU grants.

When the Company completes such an IPO, you will be granted additional RSUs at the time of IPO according to the following schedule:

- 900,000 RSUs granted if an IPO is completed in 2022.
- 800,000 RSUs granted if an IPO is completed before July 1, 2023.
- 700,000 RSUs granted if an IPO is completed before December 31, 2023.

**Severance Package:** Your employment with the Company is at-will and may be terminated by you or by the Company at any time for any legal reason. However, in the event that your

employment is terminated by the Company without Cause or by you or for Good Reason, each as defined below) you shall be entitled to receive the "Severance Benefits".

"Cause" shall mean termination of your employment as a result of your material personal dishonesty, willful misconduct that results in harm to the Company, breach of a fiduciary duty involving personal profit, intentional failure to perform stated duties, willful violation of any law, rule, or regulation (other than traffic violations or similar offenses) or final cease-and-desist order "Good Reason" shall mean any one of the following that occurs without your written consent: (i) a material diminution in your responsibilities, authority, title or duties (which for the avoidance of doubt, shall include interference by the Company's Board of Directors in the day to day operating activities of the Company; (ii) a material diminution in your Base Salary; (iii) the Company requiring you to change your principal place of employment to a location more than 25 miles from your principal place of employment on your start date; and (iv) any other action or inaction that constitutes a material breach by the Company of this Agreement. In order to invoke a termination for Good Reason, you shall provide written notice to the Company of the existence of one or more of the events, circumstances or conditions described in clauses (i) through (iv) within 90 days following your knowledge of the initial existence of such events, circumstances or conditions, specifying in reasonable detail the events, circumstances or conditions constituting Good Reason, and the Company shall have 30 days following receipt of such written notice (the "Cure Period") during which it may remedy the events, circumstances or conditions if such events, circumstances or conditions are reasonably subject to cure. In the event that the Company fails to remedy the events, circumstances or conditions constituting Good Reason during the Cure Period (if applicable), your resignation from employment for Good Reason must occur, if at all, within 180 days following the initial existence of such events, circumstances or conditions in order for such termination as a result of such condition to constitute a termination of employment for Good Reason. Your mental or physical incapacity following the occurrence of an event described above in clauses (i) through (iv) shall not affect your ability to terminate employment for Good Reason and your death following delivery of a notice of termination for Good Reason shall not affect your estate's entitlement to the severance payments and benefits provided hereunder upon a termination of employment for Good Reason.

"Severance Benefits" shall mean all the following. (i) Company shall pay to Executive a cash payment equal to fifteen (15) months of Executive's Base Salary and annual bonus at target level at the rate in effect immediately prior to Executive's date of termination (ignoring any reductions that would give rise to Good Reason) payable in a lump sum within 30 days of the termination date; (ii) the Company shall pay your COBRA premiums for you and your eligible dependents for a period of twelve (12) months following your termination date and (iii) Each outstanding and unvested equity award held by you that would have become vested during the twelve (12) month period following the date of termination shall automatically become vested (with respect to any time-based vesting requirement, and any forfeiture restrictions or rights on repurchase thereon shall lapse.

In addition, if you are terminated without Cause or for Good Reason within three (3) months prior to or twelve months following a Change in Control, then each outstanding and unvested equity award held by Executive on Executive's date of termination shall automatically become

/s/ BT



fully vested and, if applicable, exercisable, and any forfeiture restrictions or rights on repurchase thereon shall lapse, in each case, with respect to one hundred percent (100%) of the then-unvested shares

**Prior Severance Package:** You and Silvaco Group entered into a Separation Agreement and Release dated September 1, 2021 (the “Separation Agreement”). By signing this letter, Both Company and you agree and acknowledge that neither party is in material violation of any covenant in the Separation Agreement, and the Separation Agreement shall be considered null and void as of the Commencement of this offer letter.

In connection with your taking of the Position and the termination of the Separation Agreement, unvested RSUs granted to you prior to August of 2021 shall be treated as having been granted to you as of their original grant date and shall resume progress toward vesting in accordance with the original vesting schedule for each such grant. For the purposes of calculating such vesting, time between the effective date of the Separation Agreement and the Commencement Date shall be treated as time employed with the Company.

**Benefits:** You will be eligible to receive certain employee benefits per the Company’s policy as follows:

- **Medical, Dental, Vision & Life Insurance Benefits.** Silvaco, Inc. offers Cigna PPO Plans or Kaiser HMO, dental and VSP vision coverage to employees and their eligible dependents. The company pays 100% of the employee’s insurance premium and a portion of the eligible dependent’s premium. Coverage begins the 1st day of the month following your date of hire. The Company also provides \$200,000 of Life insurance and AD&D coverage at no cost to the employee.
- **401(k) Retirement Savings Plan.** You will become eligible to participate in the Company’s 401(k) Plan on the first day of the calendar quarter following 90 days of continuous employment. All eligible employees may receive a 1.5% company match.
- **Flexible Time Off.** You will accrue flexible time-off (FTO) according to the following:

<b>Length of employment</b>	<b>Number of Days of FTO</b>	<b>Number of Hours of FTO</b>	<b>Accrual rate of hours per pay period</b>
<b>Hire Date to 5 years</b>	<b>13</b>	<b>103.92</b>	<b>4.33</b>
<b>5 but less than 10 years</b>	<b>16</b>	<b>127.92</b>	<b>5.33</b>
<b>10 or more years</b>	<b>18</b>	<b>144</b>	<b>6</b>

/s/ BT

Starting end of Q1 2022

- Company Car Allowance: The company will provide up to \$1000 / month toward lease of a car chosen by the you.
- You have the option of choosing business class (International) and/or first class (Domestic) for travel related to the Company business.
- The Company shall contribute an amount equal to \$20,000 annually towards a whole life insurance chosen by you under your name.

#### **Other Matters**

The CEO will hire a professional executive coach with the board approval by Q1 2022.

Both the board and CEO agree that no Silvaco source code or software IP will be transferred to China without the board approval.

For purposes of federal immigration law, you will be required to provide the Company documentary evidence of your identity and eligibility for employment in the United States. Such documentation must be provided to us within three (3) business days of your date of hire, or our employment relationship with you may be terminated.

By your signature below, you acknowledge that you have disclosed to the Company any and all agreements relating to your prior employment that may affect your eligibility to be employed by the Company or limit the manner in which you may be employed, and you represent that the signing of this offer and commencement of employment with the Company will not violate any such agreement.

Moreover, you agree that, during the term of your employment with the Company, you will not engage in any other employment, occupation, consulting or other business activity directly related to the business in which the Company is now involved or becomes involved during the term of your employment, nor will you engage in any other activities that conflict with your obligations to the Company. You confirm that you are not bound by any other lawful agreement with any prior or current employer, person or entity that would prevent you from fully performing your duties with the Company, and that you will not during your employment with the Company, or have not during the pre-hire process, use or disclose any proprietary or confidential information, or trade secrets, of your former or concurrent employers or companies.

As a Company employee, you will be expected to abide by the Company's rules and standards. Specifically, you will be required to sign an acknowledgement that you have read and that you understand the Company's rules of conduct which are included in the Company Handbook.

As a condition of your employment, you are also required to sign and comply with the Company's standard Employee Invention Assignment and Confidentiality Agreement which

/s/ BT

requires, among other provisions, the assignment of patent rights to any invention made during your employment at the Company, and non-disclosure of Company proprietary information.

You and the Company agree to submit to mandatory binding arbitration any and all claims arising out of or related to your employment with the Company and the termination thereof, including, but not limited to, claims for unpaid wages, wrongful termination, torts, stock or stock options or other ownership interest in the Company, and/or discrimination (including harassment) based upon any federal, state or local ordinance, statute, regulation or constitutional provision except that each party may, at its, his or her option, seek injunctive relief in court related to the improper use, disclosure or misappropriation of a party's proprietary, confidential or trade secret information. All arbitration hearings shall be conducted in California. The parties hereby waive any rights they may have to trial by jury in regard to such claims. This Agreement does not restrict your right to file administrative claims you may bring before any government agency where, as a matter of law, the parties may not restrict the employee's ability to file such claims (including, but not limited to, the National Labor Relations Board, the Equal Employment Opportunity Commission and the Department of Labor). However, the parties agree that, to the fullest extent permitted by law, arbitration shall be the exclusive remedy for the subject matter of such administrative claims.

To accept the Company's offer, please sign and date this letter in the space provided below. This letter, along with any agreements relating to proprietary rights between you and the Company, set forth the terms of your employment with the Company and supersede any prior representations or agreements including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral.

If you have any questions, please feel free to contact me at \_\_\_\_\_.

Sincerely,

/s/ Katherine Pesic

Katherine Pesic  
Director / Founder  
Silvaco Group, Inc.

I hereby accept the Chief Executive Officer (CEO) of each of Silvaco Group and Silvaco, Inc. Position.

/s/ Babak Taheri

\_\_\_\_\_  
Babak Taheri

11/24/2021

\_\_\_\_\_  
Date



November 16, 2022

Dr. Babak Taheri

Dear Babak:

This letter amends the offer letter previously provided to you by Silvaco (the “Company”), signed November 24, 2021, as amended (the “Offer Letter”).

The following amendment corrects the target annual cash bonus as stated in the original offer letter signed November 24, 2021.

**TARGET ANNUAL CASH BONUS** Your annual bonus will be based on Silvaco Group Net profit, calculated according to ASC606 Net Profit (non-GAAP) recognition as follows: Your target bonus for the year 2021, and 2022 will be in line with the table below, with appropriate adjustments made for future years. Net profit numbers shall be rounded to the nearest tenth.

<b>Net Profit</b>	<b>Cash Bonus</b>
17.1% to 20%	\$800,000.00
15.1% to 17%	\$500,000.00
12.1% to 15%	\$350,000.00
10.1% to 12%	\$320,000.00
\$5 Million	\$292,000.00
\$4 Million	\$232,000.00
\$3 Million	\$172,000.00
\$2 Million	\$113,000.00
\$1 Million	\$62,000.00

All other elements of the original signed offer letter shall remain in place. If you have any questions, please contact Human Resources at HR@silvaco.com.

Sincerely,

/s/ Carrie Allegretti

Carrie Allegretti  
VP of Global Human Resources

I have read and understood the corrected corporate goal provided in my original offer of employment, and I accept the above amendment dated November 16, 2022. I understand that my

employment with Silvaco remains at will, meaning that either the company or I may terminate this employment relationship at any time with or without cause or notice.

/s/ Babak Taheri

11/16/2022

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Babak Taheri

Date

4701 Patrick Henry Drive, Building 23 | Santa Clara, California | 408.567.1000