FORM S-1 · REGISTRATION STATEMENT

Silvaco Group Inc

IPO priced 2024-05-10 · $19.00 a share · SVCO



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As filed with the Securities and Exchange Commission on April 12, 2024.

REGISTRATION NO. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Silvaco Group, Inc.

(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

Delaware	7372	27-1503712
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(PRIMARY STANDARD INDUSTRIAL CLASSIFICATION CODE NUMBER)	(I.R.S. EMPLOYER IDENTIFICATION NUMBER)

Silvaco Group, Inc.

4701 PATRICK HENRY DRIVE, BUILDING #23

SANTA CLARA, CA 95054

(408) 567-1000

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

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CHIEF EXECUTIVE OFFICER

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(NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

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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	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

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 APRIL 12, 2024

PRELIMINARY PROSPECTUS

SHARES

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 HAVE APPLIED TO LIST OUR COMMON STOCK ON THE NASDAQ GLOBAL MARKET, OR NASDAQ, UNDER THE SYMBOL "SVCO."

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 18 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		$$
Underwriting discounts and commissions (1)		$$
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	TD Cowen	
B. RILEY SECURITIES	CRAIG-HALLUM CAPITAL GROUP	ROSENBLATT

, 2024

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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 , 2024 (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

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 aggregate EDA software market was valued at $11.1 billion in global revenue in 2022 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. Based on Electronic System Design Alliance's breakdown of the EDA market, including SIP, which was valued at $14.9 billion in global revenue in 2023, we believe Silvaco's solutions compete in portions of the EDA software market representing $3.1 billion of the current global aggregate EDA software 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 2023, by 8 of the 10 largest flat panel display companies by revenue in 2023, and by 4 of the 10 leading power semiconductor devices companies in 2023.

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 2023 and by 7 of the 10 largest flat panel display companies by revenue in 2023.

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 ten 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.

In 2021, we generated $47.3 million in bookings and recognized $42.0 million of revenue, a $1.8 million net loss and $2.6 million of negative cash flow from operating activities. We also had a U.S. generally accepted accounting principles ("GAAP") operating loss of $3.5 million and a non-GAAP operating loss of $1.3 million during 2021. During 2022, we generated $49.7 million in bookings and recognized $46.5 million of revenue, a $3.9 million net loss and $2.1 million of negative cash flow from operating activities. We also had a GAAP operating loss of $1.9 million and a non-GAAP operating income of $2.3 million during 2022. During 2023, we generated $58.1 million in bookings and recognized $54.2 million of revenue, a $0.3 million net loss and $1.2 million of positive cash flow from operating activities. We also had a GAAP operating income of $1.1 million and a non-GAAP operating income of $4.4 million during 2023. As of December 31, 2023, 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. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Indicators and Non-GAAP Financial Measures" for additional information on bookings and non-GAAP operating income, as well as the reconciliation of operating income (loss) to non-GAAP operating income (loss).

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 International Business Strategies, Inc. ("IBS"), the average cost of designing a 28nm chip is $40.0 million, a 7nm chip is $217.0 million, and a 5nm chip is $416.0 million and a 3nm chip will cost up to $590.0 million. The COVID-19 pandemic and subsequent semiconductor shortage have emphasized the need for supply chain optimization, further accelerating investments in semiconductor foundries. 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:

▪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. Since 2021, we have gained over one hundred 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.

▪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.

▪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 $124.1 billion in 2022 and is projected to reach $242.1 billion by 2032, representing a CAGR of 6.8% from 2023 to 2032. 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.

▪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 $59.7 billion in 2022 to a projected $153.9 billion by 2032, representing a CAGR of 10.1% from 2023 to 2032. 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 costly and time intensive 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 advance micro controller bus architecture, or AMBA, SIP Cores and Subsystem.

▪5G/6G and Mobile Communications Markets. IDC estimates that mobile phone semiconductor revenue will reach $191.9 billion in 2026, representing a CAGR of 4.0% from 2021 to 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.

▪High Performance Computing Market. According to Allied Market Research, the global HPC chipset market was valued at $5.7 billion in 2022 and is projected to reach $29.4 billion by 2032, representing a CAGR of 17.9% from 2023 to 2032. 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.

Industry Challenges

Design and manufacturing of SoCs is a time intensive and costly process. Complex AI-driven high performance computing, IoT class of SoCs, high performance memories, and Graphics Processing Unit, or GPU, class processors cost millions to billions of dollars to develop. The development, qualification, and manufacturing cycle for processors, memories and SoCs varies by market and may require lengthy development times. Similarly designing power systems utilizing new materials such as GaN and SiC adds additional costs, time to market and complexity to the systems that enable AI. 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. We are not part of the supply chain for semiconductor manufacturing process, rather part of the value chain, the process of enhancing the value of the products moving along the supply chain, particularly in the early stages of R&D and design of semiconductors. 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, including low-geometry CMOS, memory 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.

▪Enabling growth industries like AI, automotive, and high-performance computing: Our solutions enable our customers' memory devices, power devices and display technologies to play a crucial role in AI and other advanced applications. Our customers' power devices are used in designing power systems for things like computers, cars, and servers, enabling them to run smoothly and efficiently. Our display technologies make it easier to interact with technologies like AI, virtual reality ("VR"), and augmented reality ("AR"), improving user experiences.

▪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 including standard cells, memory and I/O SIP that is developed in-house. In addition, 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 Vienna University of Technology, 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 2022 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 power devices and display providers. These customers use our design software to address certain design challenges. We believe that our positions in the TCAD and power devices and displays 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. 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 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.

▪By increasing our Research and Development expenditures, we plan to expand our presence in established market segments, which include fin field-effect transistor ("FinFET"), low-geometry CMOS technology, new specialized SIP, fabrication technology process co-optimization, and photonics. Historically we have not participated materially in these markets.

▪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 power devices, display, 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, 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. 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 (IP Vault) helps teams of designers to manage (release, revision control and contracts) and collaborate amongst the internal team, the SIP providers, and customers. IP Vault 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.

Fab Technology Co-Optimization, or FTCOTM

We have combined our expertise in semiconductor technologies with machine learning and data analysis to develop an artificial intelligence-based solution named fab technology co-optimization, or FTCOTM, for wafer level fabrication facilities. FTCO utilizes manufacturing data to perform statistical and physics-based machine learning software simulations to create a computer model of a wafer, which we call the "digital twin" of the wafer, in order to simulate the fabrication of wafers.

Recent Developments

Preliminary Results for the Three Months Ended March 31, 2024 (Unaudited)

We have not yet completed our closing procedures for the three months ended March 31, 2024. Presented below are certain estimated preliminary unaudited financial results for the three months ended March 31, 2024. These ranges are based on the information available to us at this time. We have provided estimated ranges, rather than specific amounts, because these results are preliminary and subject to change. These ranges reflect our management's best estimate of the impact of events during the quarter.

These estimates should not be viewed as a substitute for our interim unaudited condensed consolidated financial statements prepared in accordance with GAAP. Accordingly, you should not place undue reliance on these preliminary financial results. For example, during the course of the preparation of the respective financial statements and related notes, additional items may be identified that would require material adjustments to be made to the preliminary estimated results presented below. There can be no assurance that these estimates will be realized and these estimates are subject to risks and uncertainties, many of which are not within our control. These estimated preliminary results should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Risk Factors," "Special Note Regarding Forward-Looking Statements" and our audited consolidated financial statements and the related notes thereto.

All of the data presented below has been prepared by and is the responsibility of management. Neither our independent registered public accounting firm, Moss Adams LLP, nor any other independent accountants, have audited, reviewed, compiled or performed any procedures with respect to the estimated preliminary financial results contained herein. Accordingly, Moss Adams LLP does not express an opinion or any other form of assurance with respect thereto.

The following includes our unaudited preliminary estimated selected financial results as of and for the three months ended March 31, 2024:

Three Months Ended			
March 31,			
2023 (Actual)	2024 (Estimated)		
		(Low)	(High)
	(unaudited)		
	(in millions)		
Revenue	$14.3		$ $
Gross Profit	$12.3		$ $
Operating Income	$1.5		$ $

We expect unaudited preliminary estimated revenue for the three months ended March 31, 2024 will be approximately $ million to $ million, as compared to $14.3 million for the same period in 2023. The unaudited preliminary estimated increase in revenue from the three months ended March 31, 2023 to the three months ended March 31, 2024 is primarily due to increased demand for TCAD and EDA tools partially offset by decrease in IP sales. We expect unaudited preliminary estimated gross profit will be approximately $ million to $ million, as compared to $12.3 million for the same period in 2023. The unaudited preliminary estimated increase in gross profit from the three months ended March 31, 2023 to the three months ended March 31, 2024 is primarily due to the estimated increase of TCAD and EDA tool sales partially offset by decrease in IP sales. We expect unaudited preliminary estimated operating income will be approximately $ million to $ million, as compared to $1.5 million for the same period in 2023. The unaudited preliminary estimated increase in operating income from the three months ended March 31, 2023 to the three months ended March 31, 2024 is primarily due to higher gross profit from the estimated increase of TCAD and EDA tool sales, partially offset by a preliminary unaudited estimated increase in operating expenses. The estimated increase in operating expenses was primarily due to higher sales and marketing expenses.

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 interim 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, including China, 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 and operations constitute a substantial portion of our revenue and business operations 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 we have significant operations in numerous international geographies. As such, 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, or those of third parties upon which we rely, or our data are or were compromised, we could experience adverse consequences resulting from such compromise, including but not limited to, regulatory investigations or actions, litigation, fines and penalties, disruptions of our business operations, reputational harm, loss of revenue or profits, and other adverse consequences.

▪Adverse developments affecting the financial services industry could adversely affect our liquidity, financial condition and results of operations, either directly or through adverse impacts on certain of our vendors and customers.

▪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, we could use significant amounts of cash.

▪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, prevent fraud or file our periodic reports in a timely manner and may incur additional costs to remediate, all of which may adversely affect investor confidence in us and our reported financial information 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 qualify as 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. 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	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. We intend to use the net proceeds from this offering primarily for general corporate purposes, including working capital, selling and marketing activities, research and product development, general and administrative matters, the repayment of outstanding debt, and capital expenditures. We also intend to use a portion of the net proceeds from this offering to repay (i) the outstanding balance of our $4.0 million line of credit, or the 2022 Credit Line, from which we have drawn down $2.0 million as of December 31, 2023, payable to Katherine S. Ngai-Pesic, our controlling stockholder and the chair of our board of directors, or Ms. Ngai-Pesic and (ii) the outstanding balance of our $5.0 million loan agreement with East West Bank, or the East West Bank Loan, for which $ million was outstanding as of , 2024. If we elect, at our option, to satisfy the anticipated tax withholding and remittance obligations pursuant to the Optional RSU Net Settlement (as defined below) and pay the anticipated tax withholding and remittance obligations in lieu of applicable holders of RSUs selling shares underlying such RSUs in the open market to cover such tax obligations, a portion of the proceeds would be used to make such payments. 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."
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	"SVCO"

Unless otherwise indicated, the number of shares of our common stock to be outstanding after this offering is based on shares of common stock (after giving effect to shares to be issued in connection with the RSU Settlement (as defined below)) outstanding as of December 31, 2023, and excludes:

▪ shares of our common stock subject to the settlement of restricted stock units, or RSUs, outstanding as of December 31, 2023 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 (i) was not satisfied on or before December 31, 2023, or (ii) has not accelerated prior to December 31, 2023 (the Time-Based Requirement for of these RSUs is anticipated to be satisfied or accelerated on or before, or in connection with, the closing of this offering but after December 31, 2023, as a result of which additional shares of our common stock are anticipated to be issued in connection with the Additional RSU Settlement, as defined below);

▪ shares of our common stock subject to the settlement of RSUs granted subsequent to December 31, 2023 under the 2014 Plan for which the Liquidity Event Requirement will be satisfied upon the completion of this offering (the Time-Based Requirement for of these RSUs is anticipated to be satisfied or accelerated in connection with the closing of this offering, as a result of which additional shares of our common stock are anticipated to be issued in connection with the Additional RSU Settlement, as defined below);

▪ shares of our common stock reserved for future issuance under our 2024 Stock Incentive Plan, or the 2024 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 2024 Plan and any reserved shares not issued or subject to outstanding awards under the 2014 Plan after the effective date of the 2024 Plan that are subsequently forfeited or terminated, all of which shares shall become available for issuance under the 2024 Plan; and ▪ shares of our common stock reserved for future issuance under our 2024 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- reverse split of our common stock, which we effected on , 2024;

▪no settlement or termination of unvested and outstanding RSUs after December 31, 2023, other than in connection with the RSU Settlement, as described below;

▪the issuance of shares of common stock upon the completion of this offering from the settlement of RSUs outstanding as of December 31, 2023 issued under the 2014 Plan for which the Liquidity Event Requirement will be satisfied upon the completion of this offering and the Time-Based Requirement (i) was satisfied on or before December 31, 2023 or (ii) will be accelerated in connection with the completion of this offering. We refer to this as the RSU Settlement;

▪in addition, for (a) RSUs outstanding as of December 31, 2023, for which the Liquidity Event Requirement will be satisfied upon the completion of this offering and for which the Time-Based Requirement is anticipated to be satisfied on or before the closing of this offering but after December 31, 2023 and (b) RSUs granted after December 31, 2023 for which the Liquidity Event Requirement will be satisfied upon the completion of this offering and for which the Time-Based Requirement will be satisfied or accelerated in connection with the closing of this offering, the issuance of an aggregate of shares of common stock upon the vesting and settlement of such RSUs. We refer to this as the Additional RSU Settlement. However, except as otherwise indicated, the information in this prospectus does not assume the vesting of these additional RSUs and the related issuance of these additional shares of common stock. See “Executive Compensation—Agreements with Our Named Executive Officers and Potential Payments Upon Termination or Change of Control—Executive Severance Plan” and “Management—Non-Employee Director Compensation” for additional information regarding the acceleration of the Time-Based Requirement for certain RSUs of executive officers, senior management and directors;

▪Further, we may, at our option, elect for the net settlement of any portion of the RSU Settlement or the Additional RSU Settlement to satisfy a portion or all of the applicable RSU holders’ associated estimated tax withholding and remittance obligations, which if net settled in full, after giving effect to the withholding of an aggregate of shares of common stock and of shares of common stock for the RSU Settlement and the Additional RSU Settlement, respectively (based on 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 an assumed blended % tax withholding rate), would result in the net issuance of an aggregate of shares of common stock and an aggregate of shares of common stock in connection with the RSU Settlement and the Additional RSU Settlement, respectively. We refer to this optional net settlement of any portion of the RSU Settlement and the Additional RSU Settlement as the Optional RSU Net Settlement. If we elect to net settle the RSU Settlement and the Additional RSU Settlement in full, the Optional RSU Net Settlement would result in an estimated cash payment of $ for the estimated tax withholding and remittance obligations. Except as otherwise indicated, the information in this prospectus does not assume the Optional RSU Net Settlement; 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, 2022 and 2023 and the summary balance sheet data as of December 31, 2023 presented below are derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statements of operations data presented below for the year ended December 31, 2021 are derived from our audited consolidated financial statements, which are not included in this prospectus. 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.

	Year Ended December 31,		
Consolidated Statements of Operations Data	2021	2022	2023
	(in thousands, except share and per share data)		
Revenue:			
Software license revenue	$29,687	$34,411	$39,331
Maintenance and service	12,276	12,063	14,915
Total revenue	41,963	46,474	54,246
Cost of revenue	8,653	8,887	9,354
Gross profit	33,310	37,587	44,892
Operating expenses:			
Research and development	13,539	12,447	13,170
Selling and marketing	10,331	10,222	12,707
General and administrative	12,976	16,231	17,881
Impairment charges	—	560	—
Total operating expenses	36,846	39,460	43,758
Operating income (loss)	(3,536)	(1,873)	1,134
Gain on debt extinguishment	2,278	—	—
Interest and other expense, net	(317)	(355)	(624)
Income (loss) before income tax provision	(1,575)	(2,228)	510
Income tax provision	270	1,700	826
Net loss	$(1,845)	$(3,928)	$(316)
Net loss per share attributable to common stockholders(1):			
Basic and diluted	$(0.05)	$(0.10)	$(0.01)
Weighted average shares used in computing per share amounts(1):			
Basic and diluted	40,000,000	40,000,000	40,000,000
Pro forma net loss attributable to common stockholders, basic and diluted (unaudited)(2):			$(0.34)
Weighted-average shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)(2):			44,470,786

(1)See Note 2 to our financial statements as of, and for the years ended December 31, 2022 and 2023 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, 2023 gives effect to the vesting and stock-based compensation expense related to RSUs subject to both the Time-Based Requirement and the Liquidity Event Requirement, for which the Liquidity Event Requirement will be satisfied in connection with this offering, as further described in Note 2 and Note 11 to our consolidated financial statements as of, and for the year ended December 2023. The following table summarizes our unaudited pro forma net loss per share for the year ended December 31, 2023:

	Year Ended December 31,
	2023
	(in thousands, except share and per share data)
Numerator:	
Net loss attributable to common stockholders	$(316)
Pro forma stock-based compensation expense related to RSUs for which the vesting conditions will be satisfied in connection with this offering (1)	14,715
Pro forma net loss attributable to common stockholders	$(15,031)
Denominator:	
Weighted average shares used to compute net loss per share attributable to common stockholders, basic and diluted	40,000,000
Pro forma adjustment to reflect vesting of RSUs for which the vesting conditions will be satisfied in connection with this offering(2)	
Weighted-average shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted(3)	
Pro forma net loss per share attributable to common stockholders, basic and diluted	

(1)Reflects stock-based compensation expense to be recognized related to RSUs for which the Liquidity Event Requirement will be satisfied upon the completion of this offering, and for which the Time-Based Requirement was satisfied by the end of the period presented or will be accelerated upon the completion of this offering. See “Executive Compensation—Agreements with Our Named Executive Officers and Potential Payments Upon Termination or Changeof Control—Executive Severance Plan” and “Management—Non-Employee Director Compensation.”

(2)Reflects the issuance of shares of our common stock in connection with the RSU Settlement as if such issuances had occurred on December 31, 2023.

(3)Excludes 2,326,351 RSUs with respect to which the Time-Based Requirement was not satisfied as of December 31, 2023, and would not be accelerated upon the completion of this offering, because their effect would have been anti-dilutive for the periods presented.

	As of December 31, 2023		
Consolidated Balance Sheet Data	Actual	Pro Forma (1)(4)	Pro Forma as Adjusted (1)(2)(3)(4)
	(in thousands)		
Cash	$4,421		$$
Accounts receivable, net of allowance for expected credit losses	4,006		
Contract assets, net of allowance for expected credit losses	14,999		
Working capital(5)	(4,105)		
Total assets	40,885		
Deferred revenue	12,953		
Total liabilities	31,483		

Additional paid-in capital	—
Retained earnings	11,390
Total stockholders' equity	9,402

(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 RSU Settlement, and (iii) stock-based compensation expense of approximately $ million related to RSUs subject to the RSU Settlement reflected as an $ million increase to additional paid-in capital and a $ million decrease to retained earnings, as further described in Note 12 to our consolidated financial statements included elsewhere in this prospectus.

(2)The pro forma as adjusted column gives effect to (i) the pro forma adjustment discussed in footnote (1) 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 2022 Credit Line following the completion of this offering. Excluded from the table above are borrowings on our East West Bank Loan, which was undrawn at December 31, 2023, but for which $ million has been drawn as of , 2024 and is expected to be outstanding at the time of the initial public offering. Such amounts are anticipated to be repaid from the proceeds raised from the initial public offering.

(3)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, working capital (deficit), total assets, additional paid-in capital and total stockholders' equity 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, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(4)The pro forma and pro forma as adjusted columns in the table above do not include the effects of the Additional RSU Settlement. The Additional RSU Settlement would result in an estimated additional stock-based compensation expense of $ million, reflected as an additional increase to additional paid-in capital and decrease to retained earnings. The Optional RSU Net Settlement, if utilized at our option in full, would result in a $ million decrease in cash and decrease in additional paid-in capital.

(5)Working capital is defined as current assets less current liabilities.

Key Operating Indicators and Non-GAAP Financial Measures

	Year Ended December 31,		
	2021	2022	2023
	(dollars in millions)		
Bookings	$47.3	$49.7	$58.1
Non-GAAP operating income (loss)	$(1.3)	$2.3	$4.4
Non-GAAP net income (loss)	$(1.7)	$0.4	$3.4

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. Reported bookings may be subject to adjustments and potential cancellations prior to the satisfaction of our customer obligations.

We report our financial results in accordance with U.S. generally accepted accounting principles, or GAAP. However, our management believes that non-GAAP operating income (loss) and non-GAAP net income (loss) provide investors with additional useful information in evaluating our performance. These financial measure are not required by or presented in accordance with GAAP. We believe, however, that these non-GAAP financial measures, when taken together with our financial results presented in accordance with GAAP, provide 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 operating income (loss) and non-GAAP net income (loss) provide 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 operating income (loss) and 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 operating income (loss) and net income (loss) for these items to arrive at non-GAAP operating income (loss) and 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. For further explanation of the uses and limitations of these measures and a reconciliation of our non-GAAP operating income (loss) and non-GAAP net income (loss) to the most directly comparable GAAP measure, operating income (loss) and net income (loss), please see “Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Indicators and Non-GAAP Financial Measures.”

This key performance indicator 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.

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

	Year Ended December 31,		
	2021	2022	2023
	(in thousands)		
Operating income (loss)	$(3,536)	$(1,873)	$1,134
Add:			
Acquisition-related litigation costs(1)	1,148	1,340	1,707
Executive severance(2)	280	—	—
Amortization of acquired intangible assets(3)	808	316	339
IPO preparation costs(4)	—	1,429	1,221
Regulatory compliance costs(5)	—	523	—
Impairment charges(6)	—	560	—
Non-GAAP operating income (loss)	$(1,300)	$2,295	$4,401

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

	Year Ended December 31,		
	2021	2022	2023
	(in thousands)		

Net loss	$(1,845)	$(3,928)	$(316)
Add:			
Acquisition-related litigation costs(1)	1,148	1,340	1,707
Executive severance(2)	280	—	—
Amortization of acquired intangible assets(3)	808	316	339
IPO preparation costs(4)	—	1,429	1,221
Regulatory compliance costs(5)	—	523	—
Impairment charges(6)	—	560	—
Change in fair value of contingent consideration(7)	295	(211)	325
Foreign exchange (gain) loss	(93)	525	335
Gain on debt(8)	(2,278)	—	—
Income tax effect of non-GAAP adjustments(9)	—	(137)	(169)
Non-GAAP net income (loss)	$(1,685)	$417	$3,442

(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)Reflects one-time costs including third-party professional services fees and costs incurred in connection with, and in preparation for, this offering. Such costs do not include those costs that were considered direct and incremental to the offering and therefore capitalized as deferred transaction costs.

(5)Represents certain legal fees and costs associated with export compliance that are considered non-recurring.

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

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

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

(9)Reflects the increase in income tax expenses due to Non-GAAP adjustments.

Risk Factors

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 51.

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., a Lam Research company, Cadence Design Systems, Inc., or Cadence, 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, including inflation and changes in currency valuations, could adversely affect us, 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 interim 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 interim 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 cyclicality 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, including China, 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 conflicts between Russia and Ukraine and Israel and Hamas, pandemics, including the COVID-19 pandemic, and natural disasters have, at times, contributed to widespread uncertainty and speculation in the semiconductor markets. For example, 60% and 60% of our revenue was derived from customers in Asia for the years ended December 31, 2022 and 2023, respectively.

For each of the years ended December 31, 2022 and 2023, 23% of our revenue was derived from our China-based operations. China has been recently experiencing an economic slowdown, which, if continued, could adversely impact our revenue derived from China-based operations in future periods. Further, 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 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.

From 2016 through 2023, we generated revenues from licensing a certain SIP to our customers, which we licensed from a third party. See "Business—Agreement with NXP." The license agreement relating to this SIP expired on October 30, 2023. During the years ended December 31, 2022 and 2023, we generated $4.2 million, and $4.5 million in software license revenue, respectively, from licensing this SIP to our customers. In connection with this license agreement, we recognized $2.1 million, and $2.0 million in royalty expense during the years ended December 31, 2022 and 2023, respectively. As of April 11, 2024, we amended the license agreement with NXP, which extended the term of the licensing agreement for an additional five years. However, during the period between October 30, 2023 and April 11, 2024, we experienced a decline in revenue associated with the expiration of the agreement with NXP. If in the future, we enter into additional licensing agreements with other third parties and are unable to extend the term of those licensing arrangements, 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 are 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 as a result 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 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 and operations constitute a substantial portion of our revenue and business operations 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, 2022 and 2023, 68%, and 70%, 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 or completely suspend our or their respective operations in the affected city or country;

▪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, sanctions 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 choose 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 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 each of the years ended December 31, 2022 and 2023, 23% of our revenue was derived from our China-based operations. Our operating expenses in China were $2.8 million, and $3.2 million, respectively, for the years ended December 31, 2022 and 2023.

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. In addition, in October 2023 the BIS tightened restrictions and compliance burdens on the transfer to China of certain advanced artificial intelligence chips, semiconductors and supercomputing items, software and technology subject to U.S. export controls, in addition to restricting sales to certain semiconductor fab facilities in China. Moreover, restrictions were implemented on U.S. persons' activities in support of the transfer of certain items not subject to U.S. export controls. The extraordinary complexity of these rules, combined with the likelihood of further amendments from BIS, significantly increases our risk of non-compliance, which could result in fines and other penalties, and could change how these rules impact us. While we continue to adjust our policies and practices to ensure compliance with these regulations, and we will seek to mitigate their impact, there can be no assurances that current or future regulations and tariffs will not have a material adverse effect on our business. We maintain policies and procedures reasonably designed to ensure compliance with applicable trade control requirements, laws, and restrictions, including prohibiting the export, re-export or transfer of technology to companies on the Entity List maintained by BIS or other governmental restricted party lists, as well as prohibiting the sale of our products in certain countries. However, due to our global operations, we cannot ensure that our policies and procedures, including related safeguards, will effectively prevent violations, including the unauthorized diversion of products to countries or persons that are the target of U.S. sanctions; the export, re-export, or transfer of technology to companies on BIS's Entity List or other governmental restricted party lists; failure to comply with rules related to import and export of products; appropriate import product classifications; or other trade accounting requirements, laws, and restrictions.

On August 9, 2023, President Biden issued an executive order addressing investments by U.S. persons in companies located in designated countries of concern, currently, China (including Hong Kong and Macau) that engage with certain categories of sensitive technology and products, including semiconductors and microelectronics, quantum information technologies and AI. The executive order requires regulations that would implement limits and potential notification requirements on such investments and was accompanied by an advance notice of proposed rule-making that outlines the intended scope of the program and solicits input from the public regarding the implementation of the executive order. There are no currently effective restrictions or notification requirements; further rule-making is needed to implement the executive order. While we believe it is possible that such regulations may impact our customers, our suppliers, or our business with respect to China, given the uncertainties with respect to the timing and ultimate requirements of these regulations, we are unable to assess the extent of any such impact.

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 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 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 customers may fail to pay us in accordance with the terms of their agreements.

If our customers fail to pay us in accordance with the terms of our agreements, we may be adversely affected both from the inability to collect amounts due and the cost of enforcing the terms of our agreements, including litigation and arbitration costs. The risk of these issues increases with the term length of our customer arrangements. Furthermore, some of our customers may seek bankruptcy protection or other similar relief and fail to pay amounts due to us, which we have experienced in the past, or may pay those amounts more slowly, either of which could adversely affect our results of operations, financial condition 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, in October 2023, following a series of attacks by Hamas on Israeli civilian and military targets, Israel declared war on Hamas in Gaza. While we do not currently consider the conflict between Israel and Hamas to have had a material impact on our business, the ongoing Israel-Hamas conflict could have a negative impact on the economy and business activity globally, and therefore could adversely affect our results of operations, financial condition and cash flow.

In addition, in February 2022, 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 Israel and Hamas and 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. During 2023, we generated $0.6 million in revenues from the Middle East, including Israel, and had one employee located in the Middle East. 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 in 2022,

an impairment charge of $0.6 million associated with intangible assets assumed in connection with our acquisition of PolytEDA, which is based in Ukraine. Unless and until the conflict in Ukraine is stabilized, we do not intend to reopen office locations in either country.

As of December 31, 2023, we had 2 employees and 2 contractors in Russia and 7 employees and 6 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 Privacy and Security–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 either Hamas' invasion of Israel or 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 situations remain uncertain, and while it is difficult to predict the impact of any of the foregoing, the conflict and actions taken in response to either 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.

A substantial portion of our revenue comes from our international sales channels, and we have significant operations in numerous international geographies. As such, any adverse fluctuations in exchange rates could adversely affect our performance.

For the years ended December 31, 2022 and 2023, 68%, and 70%, respectively, of our revenue was from international customers. 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, Chinese Yuan, and Japanese Yen. For example, our reported revenues for the years ended December 31, 2022 and 2023 were higher than they would have been if the exchange rate in effect on December 31, 2020 remained constant throughout 2022 and 2023. As exchange rates fluctuate in the future, this could adversely affect our reported revenues.

We currently do not hedge any of our foreign currency exposure. However, our financial strategies may include hedging practices aimed at mitigating risks associated with foreign exchange fluctuations. However, if our hedging strategies are not executed accurately or if market conditions evolve unpredictably, it could result in significant financial misjudgments. This misalignment in our hedging approach could adversely impact our financial performance.

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.

Risk Factors

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 bank loans, 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 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.

Adverse developments affecting the financial services industry could adversely affect our liquidity, financial condition and results of operations, either directly or through adverse impacts on certain of our vendors and customers.

Actual events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry or the financial services industry generally, or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. For example, on March 10, 2023, Silicon Valley Bank, or SVB, was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation, or FDIC, as receiver. Similarly, on March 12, 2023, Signature Bank and Silvergate Capital Corp. were each swept into receivership. Although a statement by the Department of the Treasury, the Federal Reserve and the FDIC indicated that all depositors of SVB would have access to all of their money after only one business day of closure, including funds held in uninsured deposit accounts, borrowers under credit agreements, letters of credit and certain other financial instruments with SVB, Signature Bank or any other financial institution that is placed into receivership by the FDIC may be unable to access undrawn amounts thereunder. Although we are not a borrower or party to any such instruments with SVB, Signature Bank or any other financial institution currently in receivership, if any of the banks which hold our cash deposits were to be placed into receivership, we may be unable to access such funds. As of December 31, 2023, $1.0 million, or 23%, of our cash on deposit was maintained with one financial institution in the United States,

and our current deposits are in excess of federally insured limits. In addition, if any of our customers, suppliers or other parties with whom we conduct business are unable to access funds pursuant to such instruments or lending arrangements with such a financial institution, such parties' ability to pay their obligations to us or to enter into new commercial arrangements requiring additional payments to us could be adversely affected.

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. Customers have in the past identified bugs or defects in our products, and there can be no assurance that bugs or defects will not be found in the future in new or enhanced products after commencement of commercial shipments. Product bugs or defects, including those resulting from third-party licensors, have in the past and may in the future 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. We are currently in receipt of a request from a customer for compensation as a result of alleged product bugs or defects, and there can be no assurance that we will resolve this matter, or any similar future complaint, in a manner that preserves the customer relationship and does not otherwise adversely affect our business or operating results. 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 ten 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. 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. We must also expand our reporting and compliance infrastructure to ensure that relevant information is shared with and among management and our board of directors, including with respect to actual or alleged wrongdoing within our Company. We have in the past experienced inadequate reporting and communication regarding wrongdoing, which resulted in delays and inefficiencies in taking appropriate action. Such expansions 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 or may face additional failures with respect to our reporting and compliance infrastructure. 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, improve our reporting and compliance infrastructure or effectively motivate and manage our new and future employees, it could harm our business.

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

The COVID-19 pandemic and efforts to control its spread 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.

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, the Electronic System Design Alliance's EDA market data may be inaccurate or incomplete. Further, Grand View Research's estimations for the size of the 2022 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 Privacy and Security

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. Additionally, defending our intellectual property rights might necessitate significant financial and legal resources. Any such expenditure could negatively impact our financial performance.

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.

Our technology is subject to the threat of piracy, unauthorized copying and other forms of intellectual property infringement.

We regard our technology as proprietary and take measures to protect our technology and other confidential information from infringement. Piracy and other forms of unauthorized copying and use of our technology may become persistent, and policing is difficult. Further, the laws of some countries in which our products are or may be distributed either do not protect our intellectual property rights to the same extent as the laws of the United States, or are poorly enforced. Legal protection of our rights may be ineffective in such countries. In addition, although we take steps to enforce and police our rights, we have in the past and may in the future experience piracy, as factors such as the proliferation of technology designed to circumvent the protection measures used by our business partners or by us, may expand the unauthorized copying and use of our technology.

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, or those of third parties upon which we rely, or our data are or were compromised, we could experience adverse consequences resulting from such compromise, including but not limited to, regulatory investigations or actions, litigation, fines and penalties, disruptions of our business operations, reputational harm, loss of revenue or profits, and other adverse consequences.

In the ordinary course of our business, we and the third parties upon which we rely, routinely receive, collect, store, process, generate, use, transfer, disclose, make accessible, protect, secure, dispose of, transmit, and share (collectively, process) personal data and other sensitive information, including proprietary technology, trade secrets and other confidential information about our business and our customers, suppliers, and business partners (collectively, sensitive data).

As a result, we and the third parties upon which we rely face a variety of evolving risks and threats that could cause security incidents. Cyber-attacks, malicious internet-based activity, online and offline fraud, and other similar activities threaten the confidentiality, integrity, and availability of our sensitive data and information technology systems, and those of the third parties upon which we rely. Such threats are prevalent and 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 through theft or misuse), sophisticated nation-states, and nation-state supported actors.

Some actors now engage, and are expected to continue to engage, in cyber-attacks, including without limitation, nation-state actors for geopolitical reasons and in connection with military conflicts and defense operations. During times of war and other major conflicts, we and the third parties upon which we rely may be vulnerable to a heightened risk of these attacks, including retaliatory cyber-attacks that could materially disrupt our systems, supply chain and operations and ability to provide our services.

We and the third parties upon which we rely are subject to a variety of evolving threats, including but not limited to social-engineering attacks (including through deep fakes, which may be increasingly more difficult to identify as fake, and phishing attacks), malicious code (such as viruses and worms), malware (including as a result of advanced persistent threat intrusions), denial-of-service attacks (credential stuffing), credential harvesting, personnel misconduct or error, ransomware attacks, supply chain attacks, software bugs, server malfunctions, software or hardware failures, loss of data or other information technology assets, adware, attacks enhanced or facilitated by AI, telecommunications failures, earthquakes, fires, floods, and other similar threats.

In particular, severe ransomware attacks are becoming increasingly prevalent and can lead to significant interruptions in our operations, ability to provide our services, loss of sensitive data and income, reputational harm, and diversion of funds. Extortion payments may alleviate the negative impact of a ransomware attack, but we may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments.

Remote work has become more common and has increased risks to our information technology systems and data, as more of our employees utilize network connections, computers, and devices outside our premises or network, including working at home, while in transit and in public locations. Additionally, future or past business transactions (such as acquisitions or integrations) could expose us to additional cybersecurity risks and vulnerabilities, as our systems could be negatively affected by vulnerabilities present in acquired or integrated entities' systems and technologies. Furthermore, we may discover security issues that were not found during due diligence of such acquired or integrated entities, and it may be difficult to integrate companies into our information technology environment and security program.

In addition, our reliance on third-party service providers could introduce new cybersecurity risks and vulnerabilities, including supply chain attacks, and other threats to our business operations. We rely on third-party service providers and technologies to operate critical business systems to process sensitive data in a variety of contexts, including, without limitation, cloud-based infrastructure, data center facilities, encryption and authentication technology, employee email, content delivery to customers, and other functions. We also rely on third-party service providers to provide other products, services, parts, or otherwise to operate our business. Our ability to monitor these third parties' information security practices is limited and these third parties may not have adequate information security measures in place. If our third-party service providers experience a security incident or other interruption, we could experience adverse consequences. While we may be entitled to damages if our third-party service providers fail to satisfy their data privacy or security-related obligations to us, any award may be insufficient to cover our damages, or we may be unable to recover such award. In addition, supply-chain attacks have increased in frequency and severity, and we cannot guarantee that third parties' infrastructure in our supply chain or our third-party partners' supply chains have not been compromised.

While we have implemented security measures designed to protect against security incidents, there can be no assurance that these measures will be effective. We take steps to detect, mitigate and remediate vulnerabilities in our information systems (such as our hardware and/or software, including that of third parties upon which we rely). We may not, however, detect and remediate all such vulnerabilities on a timely basis. Further, we may experience delays in developing and deploying remedial measures designed to address any such identified vulnerabilities. Such vulnerabilities could be exploited and result in a security incident.

Any of the previously identified or similar threats could cause a security incident or other interruption that could result in unauthorized, unlawful, or accidental acquisition, modification, destruction, loss, alteration, encryption, disclosure of, or access to our sensitive data or our information technology systems, or those of the third parties upon whom we rely. A security incident or other interruption could disrupt our ability (and that of third parties upon whom we rely) to provide our services.

We may expend significant resources or modify our business activities to try to protect against security incidents. Additionally, certain data privacy and security obligations may require us to implement and maintain specific security measures or industry-standard or reasonable security measures to protect our information technology systems and sensitive data.

Additionally, applicable data privacy and security obligations may require us to notify relevant stakeholders, including affected individuals, customers, regulators and investors, of security incidents. Such disclosures are costly, and the disclosure or the failure to comply with such requirements could lead to adverse consequences.

If we (or a third party upon whom we rely) experience a security incident or are perceived to have experienced a security incident, we may experience adverse consequences, such as government enforcement actions (for example, investigations, fines, penalties, audits, and inspections); additional reporting requirements and/or oversight; restrictions on processing sensitive data (including personal data); litigation (including class claims); indemnification obligations; negative publicity; reputational harm; monetary fund diversions; diversion of management attention; interruptions in our operations (including availability of data); financial loss; and other similar harms. Security incidents and attendant consequences may prevent the use of our services or cause customers to stop using our services, deter new customers from using our services, and negatively impact our ability to grow and operate our business.

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, we cannot be sure that our cyber insurance policies will be adequate or sufficient to protect us from or to mitigate liabilities arising out of our privacy and security practices, that such coverage will continue to be available on commercially reasonable terms or at all, or that such coverage will pay future claims.

In addition to experiencing a security incident, third parties may gather, collect, or infer sensitive data about us from public sources, data brokers, or other means that reveals competitively sensitive details about our organization and could be used to undermine our competitive advantage or market position. Additionally, our sensitive data or our customers' sensitive data could be leaked, disclosed, or revealed as a result of or in connection with our employees', personnel's, or vendors' use of generative AI technologies.

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 rights to use and employ software and other intellectual property that has been licensed to us, including our rights to develop, manufacture, or sell products covered by claims in licensed patents that are a subject of these licenses, are and will be subject to the continuation of and compliance with the terms of those licenses. We have and may in the future be in breach of a license, which may lead to the termination of rights granted to us under such license. This could result in competitors being able to enter our target markets and compete with us. We also may not be able to further develop, manufacture, or sell the affected products. 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 evolving U.S. and foreign laws, regulations, and rules, contractual obligations, industry standards, policies and other obligations related to data privacy and security. Our actual or perceived failure to comply with such obligations could lead to regulatory investigations or actions, litigation (including class claims) and mass

arbitration demands, fines and penalties, disruptions of our business operations, reputational harm, loss of revenue or profits, and other adverse business consequences.

As a regular part of our business, we process sensitive data and these processing activities subject us to numerous data privacy and security obligations, such as various laws, regulations, guidance, industry standards, external and internal privacy and security policies, contractual requirements, and other obligations relating to data privacy and security.

In the United States, federal, state, and local governments, have enacted numerous data privacy and security laws, including data breach notification laws, personal data privacy laws, consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), and other similar laws (e.g., wiretapping laws).

In the past few years, numerous U.S. states, including California, Virginia, Colorado, Connecticut, and Utah, have enacted comprehensive privacy laws that impose certain obligations on covered businesses, including providing specific disclosures in privacy notices and affording residents with certain rights concerning their personal data. As applicable, such rights may include the right to access, correct, or delete certain personal data, and to opt-out of certain data processing activities, such as targeted advertising, profiling, and automated decision-making. The exercise of these rights may impact our business and ability to provide our products and services. Certain states also impose stricter requirements for processing certain personal data, including sensitive information, such as conducting data privacy impact assessments. These state laws allow for statutory fines for noncompliance. For example, the California Consumer Privacy Act of 2018, as amended by the California Privacy Rights Act of 2020 ("CPRA") (collectively, "CCPA") applies to personal data of consumers, business representatives, and employees who are California residents, and requires businesses to provide specific disclosures in privacy notices and honor requests of such individuals to exercise certain privacy rights. The CCPA provides for fines of up to $7,500 per intentional violation and allows private litigants affected by certain data breaches to recover significant statutory damages.

Similar laws are being considered in several other states, as well as at the federal and local levels, and we expect more states to pass similar laws in the future. These developments may further complicate compliance efforts and increase legal risk and compliance costs for us and the third parties upon whom we rely.

Outside the United States, an increasing number of laws, regulations, and industry standards may govern data privacy and security. For example, the EU General Data Protection Regulation ("GDPR"), the UK's GDPR, and China's Personal Information Protection Law ("PIPL") impose strict requirements for processing personal data. For example, under the GDPR, companies may face temporary or definitive bans on data processing and other corrective actions, fines of up to 20 million Euros under the EU GDPR, 17.5 million pounds sterling under the UK GDPR or, in each case, up to 4% of annual global revenue, whichever is greater, or private litigation related to processing of personal data brought by classes of data subjects or 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 Japan's Act on the Protection of Personal Information, and Singapore's Personal Data Protection Act.

Our employees and personnel use generative AI technologies to perform their work, and the disclosure and use of personal data in generative AI technologies is subject to various privacy laws and other privacy obligations. Governments have passed and are likely to pass additional laws regulating generative AI. Our use of this technology could result in additional compliance costs, regulatory investigations and actions, and consumer lawsuits. If we are unable to use generative AI, it could make our business less efficient and result in competitive disadvantages.

In addition, we may be unable to transfer personal data from the EU, the UK and other jurisdictions to the United States or other countries due to data localization requirements or limitations on cross-border data flows. The EU, UK, and other jurisdictions have enacted laws requiring data to be localized or limiting the transfer of personal data to other countries. In particular, the EU and UK have significantly restricted the transfer of personal data to the United States and other countries whose privacy laws it generally believes are inadequate. Other jurisdictions may adopt similarly stringent interpretations of their data localization and 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 in compliance with law,

such as the EU standard contractual clauses, the UK's International Data Transfer Agreement / Addendum, and the EU-U.S. Data Privacy Framework and UK extension thereto (which allows for transfers to relevant U.S.-based organizations who self-certify compliance and participate in the Framework), 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, or if the requirements for a legally-compliant transfer are too onerous, we could face significant adverse consequences, including the interruption or degradation of our operations, the need to relocate part of or all of our business or data processing activities to other jurisdictions (such as the EU) at significant expense, increased exposure to regulatory actions, substantial fines and penalties, the inability to transfer data and work with partners, vendors and other third parties, and injunctions against our processing or transferring of personal data necessary to operate our business. Additionally, companies that transfer personal data out of the EEA and UK to other jurisdictions, particularly to the United States, are subject to increased scrutiny from regulators, individual litigants, and activist groups. Some European regulators have ordered certain companies to suspend or permanently cease certain transfers of personal data out of Europe for allegedly violating the GDPR's cross-border data transfer limitations.

In addition to data privacy and security laws, we are contractually subject to industry standards adopted by industry groups and may become subject to such obligations in the future. We are also bound by other contractual obligations related to data privacy and security, and our efforts to comply with such obligations may not be successful. We publish privacy policies, marketing materials, and other statements, such as compliance with certain certifications or self-regulatory principles, regarding data 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.

Obligations related to data privacy and security (and consumers' data privacy expectations) are quickly changing, becoming increasingly stringent, and creating uncertainty. Additionally, these obligations may be subject to differing applications and interpretations, which may be inconsistent or conflict among jurisdictions. Preparing for and complying with these obligations requires us to devote significant resources and may necessitate changes to our services, information technologies, systems, and practices and to those of any third parties that process personal data on our behalf.

We may at times fail (or be perceived to have failed) in our efforts to comply with our data privacy and security obligations. Moreover, despite our efforts, our personnel or third parties on whom we rely may fail to comply with such obligations, which could negatively impact our business operations. If we or the third parties on which we rely fail, or are perceived to have failed, to address or comply with applicable data privacy and security obligations, we could face significant consequences, including but not limited to: government enforcement actions (e.g., investigations, fines, penalties, audits, inspections, and similar); litigation (including class-action claims) and mass arbitration demands; additional reporting requirements and/or oversight; bans on processing personal data; and orders to destroy or not use personal data. In particular, plaintiffs have become increasingly more active in bringing privacy-related claims against companies, including class claims and mass arbitration demands. Some of these claims allow for the recovery of statutory damages on a per violation basis, and, if viable, carry the potential for monumental statutory damages, depending on the volume of data and the number of violations. Any of these events could have a material adverse effect on our reputation, business, or financial condition, including but not limited to: loss of customers; inability to process personal data or to operate in certain jurisdictions; limited ability to develop or commercialize our products; expenditure of time and resources to defend any claim or inquiry; adverse publicity; or substantial changes to our business model or operations.

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, of which Ms. Ngai-Pesic and members of her immediate family are beneficiaries, 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, 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, our amended and restated certificate of incorporation and amended and restated bylaws to be effective upon completion of this offering will provide that, after Ms. Ngai-Pesic, Iliya Pesic, and Yelena Pesic, and each of their respective affiliates, (collectively voting together as a single entity, the "Pesic Family") cease to beneficially own, in the aggregate, at least 50% of the voting power of the outstanding shares of our common stock, all stockholder actions must be effected at a duly called meeting of stockholders and not by written consent. 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.

Further, for so long as the Stockholders Agreement (as defined below) remains in effect and the Pesic Family owns in the aggregate, at least 25% of the voting power of the then outstanding shares of our capital stock, our amended and restated certificate of incorporation to be effective upon completion of this offering will provide that the prior written approval or consent of the Pesic Family shall be required for us to (i) implement any amendments to our amended and restated certificate of incorporation that would adversely affect the Pesic Family's rights thereunder, (ii) effect or consummate a change of control or approve another merger, consolidation, business combination, sale or acquisition that results in changes in the rights and privileges of holders of equity securities, and (iii) effect the liquidation or dissolution or winding up of our business operations.

Additionally, the Stockholders Agreement provides the Pesic Family and the SMIK Trust together have the ability to designate up to four nominees for our board of directors and one non-voting board observer, depending on ownership levels.

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.

In 2022, we entered into the 2022 Credit Line with Ms. Ngai-Pesic. As of December 31, 2023, 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 $0.4 million, and $0.5 million during the years ended December 31, 2022 and 2023,

respectively. 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.

Risk Factors—Risks Related to Legal, Regulatory, Accounting and Tax Matters

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 and sanctions 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 and January 2023, 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. In October 2023, we also filed voluntary disclosures with OFAC regarding certain banking transactions made by our third party service provider in Russia on our behalf, through a bank that was sanctioned by OFAC. 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 us.

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.

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.

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 a trial date has been set for May 2024. 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. On March 17, 2023, the Second Amended Complaint was dismissed on all counts, subject to a right of appeal. Aldini has filed a notice of appeal.

Changes in our tax rates 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.

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

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.

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.

In the United States, the Tax Cuts and Jobs Act enacted in 2017, the Coronavirus Aid, Relief, and Economic Security Act enacted in 2020, and the Inflation Reduction Act enacted in 2022 made many significant changes to U.S. tax laws. For example, the Tax Cuts and Jobs Act of 2017 eliminated the option to deduct research and experimental expenditures in the year incurred in tax years beginning after December 31, 2021, and taxpayers are instead required to capitalize and amortize such expenditures over five years for research activities conducted in the United States and fifteen years for research activities conducted outside the United States. Although there have been legislative proposals to repeal or defer the capitalization requirement, there can be no assurance that such changes will be made. Future guidance from the Internal Revenue Service and other tax authorities with respect to any tax legislation may affect us, and certain aspects of such legislation could be repealed or modified in future legislation.

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.

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 and pursuant to the Selling Stockholder Resale Prospectus 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.

In addition, we do not anticipate satisfying the anticipated tax withholding and remittance obligations as a result of the RSU Settlement and the Additional RSU Settlement. In such case, applicable holders of RSUs will be able to sell shares underlying their RSUs into the open market to the extent needed to satisfy the anticipated tax withholding and remittance obligations, subject to the restrictions set forth in the lock-up agreements discussed in "Underwriting." If we make such an election, the sales of shares underlying RSUs into the open market could cause the market price of our common stock to decline significantly. The market's expectation that such sales could occur (even if they do not) could also cause the market price of our common stock to decline significantly. Any of the aforementioned 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 to use a portion of the proceeds of this offering to repay (i) the 2022 Credit Line, from which we have drawn $2.0 million as of December 31, 2023, payable to Ms. Ngai-Pesic and (ii) the East West Bank Loan, from which $ million was drawn as of , 2024. Until the net proceeds we receive are used, they may be placed in investments that do not produce income or that lose value. Additionally, we will have broad discretion in the use of the net proceeds from this offering when determining whether to satisfy the anticipated tax withholding and remittance obligations related to RSU Settlement and the Additional RSU Settlement or whether to elect to allow RSU holders to sell into the open market shares underlying RSUs to the extent needed to satisfy tax obligations associated with RSU settlement.

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.

Risk Factors

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

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, prevent fraud or file our periodic reports in a timely manner and may incur additional costs to remediate, all of 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, 2024. 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 ("ICFR"). The material weakness as of December 31, 2023, identified in connection with the preparation of our consolidated financial statements, related to a lack of formalized accounting processes over ICFR and 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 are working to remediate the material weakness and are taking steps to strengthen our internal control over financial reporting through the enhancement and formalization of our accounting processes over ICFR and 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 formalization of accounting policies and controls and retention of appropriate expertise for complex accounting transactions. We are also reviewing and documenting our accounting and financial processes and internal controls, building out our financial management and reporting systems infrastructure, and further developing and formalizing our accounting policies and financial reporting procedures, which includes ongoing senior management reviews. While we are 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.

Risk Factors—General Risk Factors

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 (ii) 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 $1.2 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

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: Global Opportunity Analysis and Industry Forecast, 2023-2032, August 2023.

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, 2023-2032, August 2023.

4.Allied Market Research, High Performance Computing (HPC) Chipset Market: Global Opportunity Analysis and Industry Forecast, 2023-2032, August 2023.

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.Display Supply Chain Consultants, Quarterly Display Supply Chain Financial Health Report, Fourth Quarter 2022 through Third Quarter 2023 Report, January 2024.

7.Electronic Design Market Data Annual Report, Electronic System Design Alliance, July 2023.

8.Electronic Design Market Data Third Quarter Report, Electronic System Design Alliance, December 2023.

9.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, 2023-2030.

10.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.

11.Handel Jones, Chief Executive Officer of IBS, as cited in “The cost of a 3nm chip is nearly $600 million. Where is it?”, iMedia.

12.Semiconductor Industry Association World Fab Forecast Report, March 2024.

13.FACT.MR, SiC & GaN Power Semiconductor Market Report (Worldwide), December 2023.

14.IDC, Worldwide Mobile Phone Semiconductor Forecast, May 2022, #US47829222.

Use of Proceeds

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 currently intend to use the net proceeds from this offering for general corporate purposes, including working capital, selling and marketing activities, research and 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.

Additionally, we intend to use a portion of the offering proceeds to repay the 2022 Credit Line, from which we have drawn $2.0 million as of December 31, 2023, payable to Ms. Ngai-Pesic, our controlling stockholder and the chair of our board of directors, and any amount drawn under the East West Bank Loan, from which $ was drawn as of , 2024. Any amounts due under the 2022 Credit Line is subordinated to the amounts due under the East West Bank Loan. The interest rate on the 2022 Credit Line is the prime rate 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 December 31, 2023. The total outstanding balance of the 2022 Credit Line was due in full upon the earlier of (i) June 13, 2024 or (ii) 10 days following the date that we secure financing in an amount equal to or greater than the 2022 Credit Line. Concurrent with entering into the East West Bank Loan agreement, Ms. Ngai-Pesic agreed to (i) extend the repayment term of the 2022 Credit Line to be the later of (a) the expiration or termination date of the East West Bank Loan or (b) June 13, 2024, and (ii) subordinate the right of repayment of any outstanding amount under the 2022 Credit Line to any amount outstanding under the East West Bank Loan. See “Certain

Relationships and Related Party Transactions—Related Party Loans and Lines of Credit" for more information regarding the 2022 Credit Line. The East West Bank Loan bears interest at a per annum rate equal to one half of one percent (0.5%) above the greater of (i) the prime rate or (ii) four and one half percent (4.5%) and terminates on December 14, 2025.

We may use a portion of the net proceeds we receive from this offering, if we so elect, to satisfy the anticipated tax withholding and remittance obligations pursuant to the Optional RSU Net Settlement. We may elect to utilize the Optional RSU Net Settlement in full, in part or not at all. If we elect to utilize the Optional RSU Net Settlement in full, the estimated tax withholding and remittance obligations that we would pay on behalf of applicable RSU holders would be approximately $ million.

The estimated portion of the net proceeds we may elect to use to satisfy any anticipated tax withholding and remittance obligations is based on the initial public offering price. Accordingly, the amount of the proceeds we use will vary depending on the market price of our common stock on the date we elect to settle the applicable RSUs. For example, each $1.00 increase or decrease in the assumed initial public offering price per share of $, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the amount we would be required to pay to satisfy our tax withholding and remittance obligations related to the Optional RSU Net Settlement by approximately $ million.

We may, at our discretion, elect not to satisfy the anticipated tax withholding and remittance obligations as a result of the RSU Settlement and the Additional RSU Settlement. Upon such election, applicable holders of RSUs will be required to sell shares underlying their RSUs into the open market to the extent needed to satisfy the anticipated tax withholding and remittance obligations, subject to the restrictions set forth in the lock-up agreements discussed in "Underwriting."

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

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. In addition, the East West Bank Loan contains certain negative covenants affecting our ability to pay certain dividends. 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

Capitalization

The following table sets forth our cash and cash equivalents, and our capitalization as of December 31, 2023:

▪on an actual basis (reflecting a -for- reverse split of our common stock, which we effected on , 2024);

▪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, and (iii) stock-based compensation expense of approximately $ million related to RSUs subject to the RSU Settlement reflected as a $ million increase to additional paid-in capital and a $ million decrease to retained earnings; 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 2022 Credit Line following the completion of this offering. Excluded from the table below are borrowings on our East West Bank Loan, which were undrawn at December 31, 2023, but for which $ million has been drawn as of , 2024 and are expected to be outstanding at the time of the initial public offering. Such amounts are anticipated to be repaid from the proceeds raised from the initial public 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 December 31, 2023		
	Actual	Pro Forma(1)	Pro Forma As Adjusted (1) (2)
	(unaudited)		
	(in thousands, except for per share data)		
Cash	$4,421		$$
Debt:			
2022 Credit Line (3)	2,000		
Stockholders' equity:			
Preferred stock, $0.0001 par value per share; no shares authorized, issued and outstanding, actual; shares authorized, no shares issued and outstanding pro forma and pro forma as adjusted	—		
Common stock, $0.0001 par value; 50,000,000 shares authorized; 40,000,000 shares issued and outstanding, actual; shares authorized, shares issued and outstanding pro forma; shares authorized, shares issued and outstanding pro forma as adjusted	4		
Additional paid-in capital	—		
Retained earnings	11,390		
Accumulated other comprehensive loss	(1,992)		
Total stockholders' equity	9,402		
Total capitalization	$11,402		$$

(1)The pro forma and pro forma as adjusted columns in the table above do not include the effects of the Additional RSU Settlement and the Optional RSU Net Settlement. The Additional RSU Settlement would result in (i) the issuance of an aggregate of shares of common stock and (ii) an estimated additional stock-based compensation expense of $ million,

reflected as an additional increase to additional paid-in capital and decrease to retained earnings. The Optional RSU Net Settlement, if utilized at our option in full, would result in a $ million decrease in cash and decrease in additional paid-in capital.

(2)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.

(3)Reflects the repayment of the 2022 Credit Line following the completion of this offering.

The number of shares of our common stock to be outstanding on a pro forma and a pro forma as adjusted basis in the table above is based on shares of common stock (after giving effect to shares to be issued in connection with the RSU Settlement) outstanding as of December 31, 2023, and excludes:

▪ shares of our common stock subject to the settlement of RSUs, outstanding as of December 31, 2023 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 (i) was not satisfied on or before December 31, 2023, or (ii) has not accelerated prior to December 31, 2023 (the Time-Based Requirement for of these RSUs is anticipated to be satisfied or accelerated on or before, or in connection with, the closing of this offering but after December 31, 2023, as a result of which additional shares of our common stock are anticipated to be issued in connection with the Additional RSU Settlement);

▪ shares of our common stock subject to the settlement of RSUs granted subsequent to December 31, 2023 under the 2014 Plan for which the Liquidity Event Requirement will be satisfied upon the completion of this offering, (the Time-Based Requirement for of these RSUs is anticipated to be satisfied or accelerated in connection with the closing of this offering, as a result of which additional shares of our common stock are anticipated to be issued in connection with the Additional RSU Settlement);

▪ shares of our common stock reserved for future issuance under the 2024 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 2024 Plan and any reserved shares not issued or subject to outstanding awards under the 2014 Plan after the effective date of the 2024 Plan that are subsequently forfeited or terminated, all of which shares shall become available for issuance under the 2024 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

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 December 31, 2023, 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 December 31, 2023, after giving effect to a -for- reverse split of our common stock, which we effected on , 2024.

Our pro forma net tangible book value as of December 31, 2023, 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 December 31, 2023, after 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, and (iii) stock-based compensation expense of approximately $ million related to RSUs subject to the RSU Settlement reflected as an $ million increase to additional paid-in capital and a $ million decrease to retained earnings.

Our pro forma as adjusted net tangible book value as of December 31, 2023 was $, or $ per share of common stock. Pro forma as adjusted net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of shares of common stock outstanding as of December 31, 2023, after giving effect to the pro forma adjustment discussed above and after giving further effect to (i) 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, (ii) the repayment of the 2022 Credit Line following the completion of this offering and (iii) the repayment of the outstanding balance on the East West Bank Loan following the completion of this offering, from which $ was drawn as of , 2024, our pro forma as adjusted net tangible book value as of December 31, 2023 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.

Our pro forma and pro forma as adjusted net tangible book values do not include the effects of the Additional RSU Settlement. The Additional RSU Settlement would result in an estimated additional stock-based compensation expense of $ million, reflected as an additional increase to additional paid-in capital and a decrease to retained earnings. The Optional RSU Net Settlement, if utilized at our option in full, would result in a $ million decrease in cash and decrease in additional paid-in capital.

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 December 31, 2023	$
Pro forma increase in net tangible book value per share as of December 31, 2023 before giving effect to this offering	
Pro forma net tangible book value per share as of December 31, 2023	
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 December 31, 2023, 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					
Total		100 %		$100 %	

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.

Except as otherwise indicated, the discussion and tables above are based on shares of our common stock (after giving effect to shares to be issued in connection with the RSU Settlement) outstanding as of December 31, 2023, and excludes:

▪ shares of our common stock subject to the settlement of RSUs, outstanding as of December 31, 2023 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 (i) was not satisfied on or before December 31, 2023, or (ii) has not accelerated prior to December 31, 2023 (the Time-Based Requirement for of these RSUs is anticipated to be satisfied or accelerated on or before, or in connection with, the closing of this offering but after December 31, 2023, as a result of which additional shares of our common stock are anticipated to be issued in connection with the Additional RSU Settlement);

▪ shares of our common stock subject to the settlement of RSUs granted subsequent to December 31, 2023 under the 2014 Plan for which the Liquidity Event Requirement will be satisfied upon the completion of this offering he Time-Based Requirement for of these RSUs is anticipated to be satisfied or accelerated in connection with the closing of this offering, as a result of which additional shares of our common stock are anticipated to be issued in connection with the Additional RSU Settlement);

▪ shares of our common stock reserved for future issuance under the 2024 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 2024 Plan and any reserved shares not issued or subject to outstanding awards

under the 2014 Plan after the effective date of the 2024 Plan that are subsequently forfeited or terminated, all of which shares shall become available for issuance under the 2024 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.

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 or other equity or convertible debt securities 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

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 74% and 73% of our revenue for the years ended December 31, 2022 and 2023, respectively, and associated maintenance and services accounted for 26% and 27% of our revenue for the years ended December 31, 2022 and 2023, respectively. For the years ended December 31, 2022 and 2023, approximately 83% and 81% of our bookings came from existing customers and 17% and 19% came from new customers, respectively. 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 $46.5 million, and $54.2 million for the years ended December 31, 2022 and 2023, respectively. Our bookings were $49.7 million, and $58.1 million for the years ended December 31, 2022 and 2023, respectively. Partially attributable to increased operating expenses in connection with our preparation for this offering, we had a net loss of $3.9 million and $0.3 million for the years ended December 31, 2022 and 2023, respectively.

Acquisitions

Since 2015, we have acquired ten 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 $2.0 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.

In our mergers and acquisitions, or M&A, process, we identify a large pool of potential targets and assess them based on their technology, talent and financial situation. After this initial evaluation, we narrow the universe of potential M&A target candidates to a smaller group for a detailed due diligence review process. This helps us thoroughly understand the operations, finances, and any potential risks involved with acquiring a given candidate. Ultimately, we believe our process allows us to make well-informed decisions about which companies, if any, to pursue further in our M&A efforts. When we engage in M&A, we aim to retain the customers of our acquired companies due to our expanded offerings or improved services. As a result, acquiring target companies may allow us to access and serve a broader range of customers, which ultimately may lead to more bookings, increased revenue growth and expansion in our market share presence.

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.

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.

Geopolitical Conflicts

In October 2023, following a series of attacks by Hamas on Israeli civilian and military targets, Israel declared war on Hamas in Gaza. While we derived $0.5 million and $0.6 million of our revenue during the years ended December 31, 2022 and 2023, respectively, from countries in the Middle East, including Israel, we do not currently consider the conflict between Israel and Hamas to have had a material impact on our business.

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 subsidiary in the years ended December 31, 2022 and 2023. In addition, neither our Russian nor Ukrainian subsidiary comprises, or is expected to comprise, a material portion of our net assets which consist primarily of computers, laptops and audio/visual equipment. We do have an aggregate of 7 employees and 6 contractors in Ukraine and 2 employees and 2 contractors in Russia, as of December 31, 2023. As a result of economic uncertainties and disruption created by the initiation of war, we recorded, during the year ended December 31, 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 6, Goodwill and Intangible Assets and Note 16, Fair Value of Financial Instruments, of our consolidated financial statements for the year ended December 31, 2023.

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

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 17% from $49.7 million in fiscal year 2022 to $58.1 million in fiscal year 2023. Over time, we expect that existing customers will choose to upgrade and purchase additional products, particularly as we de-emphasize our lower margin products, which we expect will over the long term drive margin expansion. 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 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 be required to remove, delete and return all software, related documentation and confidential information furnished under the license agreement.

Our Ability to Expand Our Product Offerings

To meet the increasing complexity of semiconductor designs, the introduction of new advanced materials, and the increased costs associated with more advanced semiconductor technology nodes, we will need to continually enhance our product offerings through our own in-house research and development efforts, acquisitions, or strategic partnerships with third parties. The in-house development of new product offerings or enhancements to our existing product offerings requires significant research and development activities and time and may or may not result in offerings we can successfully market and sell to customers. For example, we have developed an artificial intelligence-based solution named fab technology co-optimization or FTCOTM for wafer level fabrication facilities. FTCO utilizes manufacturing data to perform statistical and physics-based machine learning software simulations to create a computer model of a wafer, which we call the "digital twin" of the wafer, in order to simulate the fabrication of wafers. We may also seek to acquire companies or assets for products or solutions which we believe are complementary to our existing products or solutions. See "—Our Ability to Successfully Identify, Complete and Integrate Acquisitions." Additionally, we have in the past, and may in the

future, partner with third parties to expand our product offerings to our customers. Since 2016, we have generated revenues from licensing to our customers a certain SIP which we have licensed from a third party vendor. The license agreement with the third party vendor relating to this SIP expired on October 30, 2023. During the twelve months ended December 31, 2022 and 2023, we generated $4.2 million, and $4.5 million, respectively, in software license revenue from licensing this SIP to our customers. In connection with this license agreement, we recognized $2.1 million and $2.0 million in royalty expense during the years ended December 31, 2022 and 2023, respectively. If in the future, we enter into additional licensing agreements with other third parties and are unable to extend the term of those licensing arrangements, we will experience an associated decline in revenue relating to those products.

Our 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 $11.1 billion in potential revenue in 2022 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 27% and 24% of revenue for the years ended December 31, 2022 and 2023, 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 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. When we engage in M&A, we aim to retain the customers of our acquired companies due to our expanded offerings or improved services. As a result, acquiring target companies is a key part of our growth strategy and may allow us to access and serve a broader range of customers, which ultimately may lead to more bookings, increased revenue growth and expansion in our market share presence.

Our Ability to Calibrate Our Product Mix to Enhance Margin Expansion

We anticipate that our results will be impacted by the increase or decrease of a given product or service as a percentage of total revenue relative to our other products and services. If and as higher margin products become a larger part of our product mix, or conversely as low margin products become a smaller part of our product mix, our gross margin will expand.

While we may enter into agreements with third parties for lower margin product solutions, we anticipate our focus on higher margin solutions will continue to lead our other products and services within our product mix, which we anticipate may lead to gross margin and operating margin expansion. Our future ability to shape our product mix with higher margin products making up a larger percentage of our total revenue will impact our results of operations.

Our Ability to Scale While Mitigating Increases in Expenses

If we can execute on our growth strategy and grow our revenue through a combination of new customer growth, upgrades and increased usage of our products by existing customers, as well as accretive acquisitions, our results will be impacted by our ability to reduce the rate at which our expenses increase in proportion with a rise in revenue. We believe this is possible in a number of expense line items, which may provide for additional gross margin and operating margin expansion. For example, we anticipate as our existing customers choose to upgrade to newer software solutions, our costs related to the support of legacy software decreases, outpacing any increases in cost related to supporting the upgraded software. Additionally, we have incurred increased general and administrative expenses in connection with preparing to become a public company, including increased staff costs and professional services fees, including legal and accounting fees. While we anticipate the increased level of costs to remain, we do not anticipate those costs scaling proportionally with our revenue. Finally, we may be able to gain sales efficiencies as our revenue grows, such that our sales and marketing expenses will decrease as a percentage of revenue. In the aggregate, our ability to keep these expenses from growing proportionally with our revenue may provide for meaningful gross margin and operating margin expansion.

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. The following table sets forth our quarterly revenue and the components of revenue, along with operating income (loss) for each of the last eight quarters through the period ended December 31, 2023. The unaudited quarterly data below has been prepared on the same basis as the audited consolidated financial statements included elsewhere in this prospectus and, in the opinion of management, reflect all necessary adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of this information. The results of historical quarters are not necessarily indicative of the results of operations for any future period. You should read the following unaudited quarterly data in conjunction with our consolidated financial statements and related notes included elsewhere in this prospectus.

	Three Months Ended							
	Mar 31, 2022	Jun 30, 2022	Sep 30, 2022	Dec 31, 2022	Mar 31, 2023	Jun 30, 2023	Sep 30, 2023	Dec 31, 2023
	(in thousands)							
Revenue:								
Software license revenue	$10,803	$7,882	$9,261	$6,465	$10,665	$8,845	$11,083	$8,738
Maintenance and service	2,748	3,493	2,486	3,336	3,626	3,680	3,861	3,748
Total revenue	$13,551	$11,375	$11,747	$9,801	$14,291	$12,525	$14,944	$12,486
Operating income (loss)	$1,359	$(644)	$(1,137)	$(1,451)	$1,533	$(205)	$1,742	$(1,936)

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 in house, and we offer licenses to our SIP developed in partnership with a third party vendor. See “Business—Agreement with NXP.” 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 a third party vendor, we generally acted as a principal to the transaction because we controlled the promised SIP that we delivered to the customer. Consistent with our role as the principal, we recognized SIP revenue of our SIP developed in partnership with the third party vendor on a gross basis. Any royalty fees based upon unit sales, revenue or flat fees which were paid to the third party vendor were 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 recognized an immaterial portion of our revenue from device characterization and modeling services for the years ended 2022 and 2023. Revenue is recognized upon the completion of the requested services and, as applicable, satisfaction of customer acceptance terms. Revenue from these services 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 the 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, costs of facilities, information technology, depreciation and amortization. We expect our operating expenses to fluctuate as a percentage of revenue over time. Historically, we have not recognized stock-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 general and administrative expense, research and development expense, selling and marketing expense and cost of revenue, and any such amounts could be significant. As of December 31, 2023, we had $24.5 million in deferred stock-based compensation expense, of which $11.8 million relates to awards that have met the Time-Based Requirement but not the Liquidity Event Requirement, and the remaining $12.7 million in deferred stock-based compensation expense relates to awards that have not met either requirement. In the period in which the Liquidity Event Requirement is satisfied, we will record cumulative stock-based compensation expense for the service period through such date using the straight-line attribution method, net of actual forfeitures, based on the grant-date fair value of the RSU awards. Had the initial public offering, a qualifying Liquidity Event, occurred on December 31, 2023, the Time Based Requirement would have been accelerated, in accordance with their terms, for an additional 348,899 RSUs, and we would have recognized cumulative combined stock-based compensation expense of $14.7 million for active employees, terminated employees, executive officers and directors.

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 fluctuate as a percentage of revenue from period to period depending on the timing of these expenses.

Management's Discussion and Analysis of Financial Condition and Results of Operations—Components of Results of

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 year ended December 31, 2022 in order to reduce the carrying value of intangible assets associated with our Ukrainian subsidiary, which management determined would not be recoverable.

Interest and Other Expense, Net

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.

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, 2022 and 2023:

	Year Ended December 31,	
	2022	2023
	(in thousands)	
Revenue:		
Software license revenue	$34,411	$39,331
Maintenance and service	12,063	14,915
Total revenue	46,474	54,246
Cost of revenue	8,887	9,354
Gross profit	37,587	44,892
Operating expenses:		
Research and development	12,447	13,170
Selling and marketing	10,222	12,707
General and administrative	16,231	17,881

Impairment charges	560	—
Total operating expenses	39,460	43,758
Operating income (loss)	(1,873)	1,134
Interest and other expense, net	(355)	(624)
Income (loss) before income tax provision	(2,228)	510
Income tax provision	1,700	826
Net loss	$(3,928)	$(316)

The following table summarizes our results of operations as a percentage of total revenue for years ended December 31, 2022 and 2023:

	Year Ended December 31,	
	2022	2023
	(as a percentage of total revenue)	
Revenue:		
Software license revenue	74 %	73 %
Maintenance and service	26 %	27 %
Total revenue	100 %	100 %
Cost of revenue	19 %	17 %
Gross profit	81 %	83 %
Operating expenses:		
Research and development	27 %	24 %
Selling and marketing	22 %	23 %
General and administrative	35 %	33 %
Impairment charges	1 %	— %
Total operating expenses	85 %	81 %
Operating income (loss)	(4)%	2 %
Interest and other expense, net	(1)%	(1)%
Income (loss) before income tax provision	(5)%	1 %
Income tax provision	4 %	2 %
Net loss	(8)%	(1)%

Comparison of the Years Ended December 31, 2022 and 2023

Revenue

	Year Ended December 31,	
	2022	2023
	(in thousands)	
Revenue:		
Software license revenue	$34,411	$39,331
Maintenance and service	12,063	14,915
Total revenue	$46,474	$54,246

Total revenue increased $7.8 million, or 17%, from $46.5 million for the year ended December 31, 2022 to $54.2 million for the year ended December 31, 2023. The growth in total revenue was driven by $2.0 million of revenue from new customers and an increase in revenue from customer renewals of $5.8 million. Software license revenue increased $4.9 million, or 14%, from $34.4 million for the year ended December 31, 2022 to $39.3 million for the year ended December 31, 2023. Software license revenue generated from the licensing of a product licensed from a third party vendor increased $0.3 million from $4.2 million for the year ended December 31, 2022 to $4.5 million for the year ended December 31, 2023. Maintenance and service revenue increased $2.9 million, or 24%, from $12.1 million for the year ended December, 2022 to $14.9 million for the year ended December 31, 2023, driven by an increase in support services as a result of an increase in software license deliveries on new sales and customer renewals during fiscal 2023.

Gross Profit and Cost of Revenue

	Year Ended December 31,	
	2022	2023
	(in thousands)	
Total revenue	$46,474	$54,246
Cost of revenue	8,887	9,354
Gross profit	$37,587	$44,892
Gross profit margin	81 %	83 %

Gross profit increased $7.3 million, or 19%, from $37.6 million for the year ended December 31, 2022 to $44.9 million for the year ended December 31, 2023. Gross profit margin increased from 81% for the year ended December 31, 2022 to 83% for the year ended December 31, 2023, driven by an increase in the contribution of software license revenue to total revenue and a decline in the U.S. dollar value of personnel costs associated with our international subsidiaries. Royalty expense to a third party vendor from whom we licensed a SIP declined $0.1 million from $2.1 million for the year ended December 31, 2022 to $2.0 million for the year ended December 31, 2023.

Operating Expenses

	Year Ending December 31,	
	2022	2023
	(in thousands)	
Operating expenses		
Research and development	$12,447	$13,170
Selling and marketing	10,222	12,707
General and administrative	16,231	17,881
Impairment charges	560	$—
Total operating expenses	$39,460	$43,758

Research and Development Expenses Research and development expenses were $12.4 million and $13.2 million for the years ended December 31, 2022 and 2023, respectively. The increase of $0.8 million, or 6%, was primarily due to higher compensation of $0.4 million and benefits of $0.4 million primarily related to increased headcount.

Selling and Marketing Expenses Selling and marketing expenses were $10.2 million and $12.7 million for the years ended December 31, 2022 and 2023, respectively. The increase of $2.5 million, or 24%, was primarily due to higher compensation of $1.2 million and benefits of $0.4 million primarily related to increased headcount, a $0.7 million increase in sales and marketing related travel, conferences, trade shows and advertising, and a $0.2 million increase in sales commissions during the year ended December 31, 2023.

General and Administrative Expenses General and administrative expenses were $16.2 million and $17.9 million for the years ended December 31, 2022 and 2023, respectively. The increase of $1.7 million, or 10%, reflects higher compensation of $1.1 million and benefits of $0.3 million primarily related to increased headcount and a $0.8 million increase in software maintenance and license fees associated with expansion of our financial reporting and compliance systems; partially offset by a $0.3 million decline in facilities and equipment rental expense and a $0.2 million decline in our allowance for credit losses.

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 consolidated financial statements for further discussion. See Notes 6 and 16 of our consolidated financial statements for the years ended December 31, 2022 and 2023 appearing elsewhere in this prospectus for additional information.

Interest and Other Expense, Net

Interest and other expense, net, was $0.4 million and $0.6 million for the years ended December 31, 2022 and 2023, 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 primarily the result of foreign exchange rate fluctuations.

Income Tax Provision

Income tax provision was $1.7 million and $0.8 million for the years ended December 31, 2022 and 2023, respectively. See Note 12 of our consolidated financial statements for the years ended December 31, 2022 and 2023 appearing elsewhere in this prospectus further discussion.

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.

–Key Operating Indicators and Non-GAAP Financial Measures– Bookings

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. Reported bookings may be subject to adjustments and potential cancellations prior to the satisfaction of our customer obligations. For the years ended December 31, 2022 and 2023, we recorded $49.7 million and $58.1 million in bookings, respectively.

The following table sets forth our bookings for each of the quarterly periods during the years ended December 31, 2022 and 2023.

	Three Months Ended							
	Mar 31, 2022	Jun 30, 2022	Sep 30, 2022	Dec 31, 2022	Mar 31, 2023	Jun 30, 2023	Sep 30, 2023	Dec 31, 2023
	(in thousands)							
Bookings	$14,111	$11,201	$11,967	$12,416	$15,667	$14,362	$12,487	$15,565

Non-GAAP Operating Income (Loss) and Non-GAAP Net Income (Loss)

We report our financial results in accordance with GAAP. However, our management believes that non-GAAP operating income (loss) and non-GAAP net income (loss) provide investors with additional useful information in evaluating our performance. These financial measures are not required by or presented in accordance with GAAP. We believe, however, that these non-GAAP financial measures, when taken together with our financial results presented in accordance with GAAP, provide 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 and provide a useful measure for period-to-period comparisons of our business performance.

We define non-GAAP operating income (loss) as our GAAP operating income (loss) adjusted to exclude certain costs, including acquisition-related litigation costs, executive severance, amortization of acquired intangible assets, IPO preparation costs, regulatory compliance costs and impairment charges. We define non-GAAP net income (loss) as our GAAP net income (loss) adjusted to exclude certain costs, including acquisition-related litigation costs, executive severance, amortization of acquired intangible assets, IPO preparation costs, regulatory compliance costs, impairment charges, change in fair value of contingent consideration, foreign exchange (gain) loss, and gain on extinguishment of debt. We monitor non-GAAP operating income (loss) and non-GAAP net income (loss) as non-GAAP financial measures to supplement the financial information we present in accordance with GAAP to provide investors with additional information regarding our financial results.

Certain items are excluded from our non-GAAP operating income (loss) and 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 GAAP operating income (loss) and net income (loss) for these items to arrive at non-GAAP operating income (loss) and 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 operating income (loss) to non-GAAP operating income (loss).

	Year Ended December 31,		
	2021	2022	2023
	(in thousands)		
Operating income (loss)	$(3,536)	$(1,873)	$1,134
Add:			
Acquisition-related litigation costs(1)	1,148	1,340	1,707
Executive severance(2)	280	—	—
Amortization of acquired intangible assets(3)	808	316	339
IPO preparation costs(4)	—	1,429	1,221
Regulatory compliance costs(5)	—	523	—
Impairment charges(6)	—	560	—
Non-GAAP operating income (loss)	$(1,300)	$2,295	$4,401

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

	Year Ended December 31,		
	2021	2022	2023
	(in thousands)		
Net loss	$(1,845)	$(3,928)	$(316)
Add:			
Acquisition-related litigation costs(1)	1,148	1,340	1,707
Executive severance(2)	280	—	—
Amortization of acquired intangible assets(3)	808	316	339

IPO preparation costs(4)	—	1,429	1,221
Regulatory compliance costs(5)	—	523	—
Impairment charges(6)	—	560	—
Change in fair value of contingent consideration(7)	295	(211)	325
Foreign exchange (gain) loss	(93)	525	335
Gain on extinguishment of debt(8)	(2,278)	—	—
Income tax effect of non-GAAP adjustments(9)	—	(137)	(169)
Non-GAAP net income (loss)	$(1,685)	$417	$3,442

(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)Reflects one-time costs including third-party professional services fees and costs incurred in connection with, and in preparation for, this offering. Such costs do not include those costs that were considered direct and incremental to the offering and therefore capitalized as deferred transaction costs.

(5)Represents certain legal fees and associated cost associated with export compliance that are considered non-recurring.

(6)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."

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

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

(9)Reflects the increase in income tax expenses due to Non-GAAP adjustments.

Management's Discussion and Analysis of Financial Condition and Results of Operations

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 December 31, 2023, we had $4.4 million in cash, of which $3.3 million was held by our foreign subsidiaries.

In December 2023, we entered into the East West Bank Loan which provides for borrowings of up to $5.0 million (the "Revolving Line") bearing interest at a per annum rate equal to one half of one percent (0.5%) above the greater of (i) the prime rate as reported in The Wall Street Journal or (ii) four and one half percent (4.5%). In addition, if any payment required of us under the East West Bank Loan is not made within ten (10) days after such payment is due, we are required to pay East West Bank a late fee equal to the lesser of (i) six (6%) of such unpaid amount or (ii) the maximum amount permitted to be charged under applicable law, not in any case to be less than $5.00. The East West Bank Loan is secured by certain of our assets, including without limitation, certain of our intellectual property and the equity of certain of our subsidiaries. In addition, the East West Bank Loan contains representations and warranties and customary affirmative, financial and negative covenants. The negative covenants include restrictions on, among other things, indebtedness, liens, investments, mergers, dispositions, transactions with affiliates, and dividends and other distributions. Additionally, each extension of credit under the Revolving Facility is subject to us satisfying certain conditions, including East West Bank

concluding that there has not been any material impairment to certain of our affairs, financial results, operations and our ability to repay obligations or material deviation from the most recent Financial Plan (as defined in the East West Bank Loan) presented to East West Bank. As of December 31, 2023, there were no outstanding borrowings under the East West Bank Loan.

The East West Bank Loan matures on December 14, 2025 (the "Revolving Maturity Date"), or if there are any outstanding Credit Extensions at such time (as defined in the East West Bank Loan), for so long as any Obligations (as defined in the East West Bank Loan) under the East West Bank Loan remain outstanding or East West Bank has any obligation to make Credit Extensions under the East West Bank Loan, or we can terminate it prior to the Revolving Maturity Date on 10 business days' notice and if all outstanding Obligations under the East West Bank Loan have been repaid.

In accordance with the East West Bank Loan, we paid $25,000 to East West Bank on the closing date and for so long as the East West Bank Loan is in place, we are required to pay East West Bank (i) a renewal facility fee equal to one half of one percent (0.5%) of the Revolving Line on each anniversary of the Closing Date and (ii) an annual fee of 0.20% of the difference between the Revolving Line and the average daily balance of the outstanding Credit Extensions (as defined in the East West Bank Loan).

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. On May 25, 2023, we amended the business financing agreement to extend the maturity date of the 2022 Credit Line to June 13, 2024. 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 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 December 31, 2023. The total outstanding balance of the 2022 Credit Line was due in full upon the earlier of (i) June 13, 2024 or (ii) 10 days following the date that we secure financing in an amount equal to or greater than the 2022 Credit Line. Concurrent with entering into the East West Bank Loan agreement, Ms. Ngai-Pesic agreed to (i) extend the repayment term of the 2022 Credit Line to be the later of (a) expiration or termination date of the East West Bank Loan or (b) June 13, 2024, and (ii) subordinate the right of repayment of any outstanding amount under the 2022 Credit Line to any amount outstanding under the East West Bank Loan.

On March 30, 2022, we entered into a promissory note in the principal amount of $0.5 million which accrues interest at a rate of 3.25% per annum, or the March 2022 Loan, from Ms. Ngai-Pesic. The March 2022 Loan was repaid in full in December 2022.

On December 8, 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 repaid in full in July 2022.

We believe our cash and remaining available borrowing capacity of $2.0 million under our 2022 Credit Line and $5.0 million under our East West Bank Loan 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.

As of December 31, 2023, $1.0 million, or 23%, of our cash was maintained with one financial institution in the United States, where our current deposits are in excess of federally insured limits. Past macroeconomic conditions have resulted in the actual or perceived financial distress of many financial institutions, including the recent failures of Silicon Valley Bank, Signature Bank, First Republic Bank and the UBS takeover of Credit Suisse. If the financial institutions with whom we do business were to become distressed or placed into receivership, we may be unable to access the cash we have on deposit with such institutions. If we are unable to access our cash as needed, our financial position and ability to operate our business could be adversely affected. If our cash and remaining available borrowing capacity under our 2022 Credit Line or the East West Bank Loan 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,	
	2022	2023
	(in thousands)	
Cash provided by (used in):		
Net cash (used in) provided by operating activities	$(2,097)	$1,180
Net cash used in investing activities	(89)	(339)
Net cash provided by (used in) financing activities	624	(1,652)
Effect of exchange rate changes	336	(246)
Net decrease in cash	$(1,226)	$(1,057)

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, office 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 year ended December 31, 2022 was $2.1 million compared to $1.2 million of net cash provided by operating activities for the year ended December 31, 2023. The $3.3 million increase in net cash provided by operating activities reflects a $3.6 million decline in our net loss, partially offset by a $0.4 million decline in net working capital, driven by changes in contract assets during the year ending December 31, 2023.

Investing Activities

Net cash used for investing activities for the years ended December 31, 2022 and 2023 reflects purchases of property and equipment of $0.1 million and $0.3 million, respectively.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2022, was $0.6 million and reflects our $2.0 million drawdown on the 2022 Credit Line, partially offset by our $0.5 million repayment of the December 2021 Loan and $0.9 million of contingent consideration paid in connection with our Nangate and PolytEDA acquisitions. Net cash used by financing activities for the year ended December 31, 2023, was $1.7 million and reflects $1.0 million of contingent consideration paid in connection with our Nangate and PolytEDA acquisitions and $0.7 million of transaction costs incurred in connection with our anticipated offering.

Effects of Exchange Rate Fluctuations on Cash

The effects of exchange rate fluctuations on cash was $0.3 million and $(0.2) million at December 31, 2022 and 2023, respectively.

Contractual Obligations

The following table summarizes our financial commitments for contractual obligations as of December 31, 2023:

Year Ending December 31,	Operating Lease Liabilities	Contingent Consideration	2022 Credit Line	Total

	(in thousands)			
2024	$749	$103	$2,000	$2,852
2025	$510	$9	$—	$519
2026	$235	$—	$—	$235
2027	$196	$—	$—	$196
2028	$196	$—	$—	$196
Thereafter	$196	$—	$—	$196
Total contractual obligations	$2,082	$112	$2,000	$4,194

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.

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 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 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 was developed in partnership with a third party vendor, we have entered into various renewable license agreements under which we have the right to sell the technology we license from the third party vendor. 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. Our licensing arrangement with this third party vendor terminated on October 30, 2023.

We also recognized an immaterial portion of our revenue from device characterization and modeling services for the years ended December 31, 2022 and 2023. Revenue is recognized upon the completion of the requested services and, as applicable, satisfaction of customer acceptance terms. Revenue from these services is classified as maintenance and service revenue.

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, we record deferred revenue. When timing of revenue recognition precedes invoicing or collections, we record a contract asset. In instances where the timing of revenue recognition differs from the timing of invoicing, we have determined our 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 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.

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 of five 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 during the fiscal years ended December 31, 2022 and 2023.

In connection with Russia's invasion of Ukraine in February of 2022, we recorded an impairment charge of $0.6 million associated with intangibles held by our Ukrainian subsidiary which management determined would not be recoverable. See also Note 6, Goodwill and Intangible Assets and Note 16, Fair Value of Financial Instruments of our consolidated financial statements for the year ended December 31, 2023 appearing elsewhere in this prospectus for additional information.

No indicators of impairment or impairment charges were identified or recorded to intangibles during the fiscal year ended December 31, 2023.

Stock-Based Compensation

We account for stock-based payments in accordance with the authoritative guidance issued by the FASB on stock-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, stock-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 stock-based payment awards that contain performance criteria, stock-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 stock-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, 2022 and 2023. See Note 11 to our consolidated financial statements for the year ended December 31, 2023 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 stock-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 ("ICFR"). The material weakness, identified in fiscal year 2021, in connection with the preparation of our consolidated financial statements, related to a lack of formalized accounting processes over ICFR and 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. The material weakness was unremediated as of December 31, 2023.

We are working to remediate the material weakness and are taking steps to strengthen our internal control over financial reporting through the enhancement and formalization of our accounting processes over ICFR and 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 formalization of accounting policies and controls and retention of appropriate expertise for complex accounting transactions. We are also reviewing and documenting our accounting and financial processes and internal controls, building out our financial management and reporting systems infrastructure, and further developing and formalizing our accounting policies and financial reporting procedures, which includes ongoing senior management reviews. While we are taking measures and plan to continue to take measures to design and implement an effective control environment, 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, prevent fraud or file our periodic reports in a timely manner and may incur additional costs to remediate, all of which may adversely affect investor confidence in us and our reported financial information and, as a result, impact the value of our common stock."

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.

Qualitative and Quantitative Disclosures about Market Risk

Interest Rate Risk

We had cash of $4.4 million as of December 31, 2023, 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 June 13, 2022, we entered into the up to $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 December 31, 2023. As of December 31, 2023, the balance of the 2022 Credit Line was $2.0 million. The interest rate paid on these borrowings is variable, indexed to the prime rate. In December 2023, we entered the East West Bank Loan which provides for borrowings of up to $5.0 million bearing interest at a per annum rate equal to one half of one percent (0.5%) above the greater of (i) the prime rate or (ii) four and one half percent (4.5%). As of December 31, 2023, there were no outstanding borrowings under the East West Bank Loan. A hypothetical 10% change in interest rates would not result in a material impact on our consolidated financial statements.

Foreign Currency Exchange Risk

The effects of foreign exchange on net cash was $0.3 million and $0.2 million for the years ended December 31, 2022 and 2023, respectively. The change was primarily due to the strength of the U.S. dollar against the local currencies which we price and collect accounts receivable, primarily the Korean Won and the Japanese Yen, and convert to U.S. dollars to support our operations. If foreign currency exchange rates were to change adversely by 10% from the levels at December 31, 2023, the effect on our results before taxes from foreign currency fluctuations on our balance sheet would be approximately $1.0 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

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 aggregate EDA software market was valued at $11.1 billion in global revenue in 2022 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. Based on Electronic System Design Alliance's breakdown of the EDA market, including SIP, which was valued at $14.9 billion in global revenue in 2023, we believe Silvaco's solutions compete in portions of the EDA software market representing $3.1 billion of the current global aggregate EDA software 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, and 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 2023, by 8 of the 10 largest flat panel display companies by revenue in 2023, and by 4 of the 10 leading power semiconductor devices companies in 2023.

In addition, we have combined our expertise in semiconductor technologies with machine learning and data analysis to develop an artificial intelligence-based solution named fab technology co-optimization, or FTCOTM, for wafer level fabrication facilities. FTCO utilizes manufacturing data to perform statistical and physics-based machine learning software simulations to create a computer model of a wafer, which we call the "digital twin" of the wafer, in order to simulate the fabrication of wafers. As a virtual representation of the manufacturing process and the wafer, this "digital twin" serves as a platform through which customers can run experiments and tests to understand the impact on the yield of a wafer due to any variations in the parameters of the manufacturing process, predict the yield for further research on new products, and reduce the time to market for products, without the need to run physical wafers which can be time-consuming and expensive. According to data from the Semiconductor Industry Association, it is estimated there are over 75 companies capable of producing 300mm semiconductor wafers and over 125 companies facilities involved in power-related semiconductor fabrication. We believe these facilities represent potential customers for our FTCO product. We are strategically focusing our marketing efforts on 20 leading companies within each category, totaling 40 potential customers. We estimate that the addressable market for these targeted potential customers could represent an opportunity exceeding $500 million. We have partnered with a memory-focused IDM for the development of FTCO and expect to begin licensing this new product in the second quarter of 2024.

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 2023 and by 7 of the 10 largest flat panel display companies by revenue in 2023.

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 ten 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 approximately 3 years per TBL for the years ended December 31, 2022 and 2023. 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."

In 2021, we generated $47.3 million in bookings and recognized $42.0 million of revenue, a $1.8 million net loss and $2.6 million of negative cash flow from operating activities. We also had a GAAP operating loss of $3.5 million and a non-GAAP operating loss of $1.3 million during 2021. During 2022, we generated $49.7 million in bookings and recognized $46.5 million of revenue, a $3.9 million net loss and $2.1 million of negative cash flow from operating activities. We also had a GAAP operating loss of $1.9 million and a non-GAAP operating income of $2.3 million during 2022. During 2023, we generated $58.1 million in bookings and recognized $54.2 million of revenue, a $0.3 million net loss and $1.2 million of positive cash flow from operating activities. We also had a GAAP operating income of $1.1 million and a non-GAAP operating income of $4.4 million during 2023. As of December 31, 2023, 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. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Indicators and Non-GAAP Financial Measures" for additional information on bookings and non-GAAP operating income and the reconciliation of operating income (loss) to non-GAAP operating income (loss).

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 $40.0 million, a 7nm chip is $217.0 million, and a 5nm chip is $416.0 million and a 3nm chip will cost up to $590.0 million. The COVID-19 pandemic and subsequent semiconductor shortage have emphasized the need for supply chain optimization, further accelerating investments in semiconductor foundries. 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	✔	✔	✔	----	----	✔	----

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.

Since 2021, we have gained over one hundred 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. According to FACT.MR SiC & GaN Power Semiconductor Market Report (Worldwide), the SiC and GaN power semiconductor market specifically is expected to grow at a CAGR of 28.8% until 2033. 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.

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 stepping stone for many leading-edge ICs in this market, and we provide a targeted DTCO solution for the memory market.

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 $124.1 billion in 2022 and is projected to reach $242.1 billion by 2032, representing a CAGR of 6.8% from 2023 to 2032. 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 8 of the top 10 largest display manufacturers by revenue from the fourth quarter of 2022 to the third quarter of 2023 according to Display Supply Chain Consulting.

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 $59.7 billion in 2022 to a projected $153.9 billion by 2032, representing a CAGR of 10.1% from 2023 to 2032.

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 can 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 19% 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, AMBA 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, representing a CAGR of 4.0% from 2021 to 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.

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 was valued at $5.7 billion in 2022 and is projected to reach $29.4 billion by 2032, representing a CAGR of 17.9% from 2023 to 2032.

Industry Challenges

Design and manufacturing of SoCs is a time intensive and costly process. Complex AI-driven high performance computing, IoT class of SoCs, high performance memories, and GPU class processors cost millions to billions of dollars to develop. The development, qualification and manufacturing cycle for processors, memories and SoCs varies by market and may require lengthy development times. Similarly designing power systems utilizing new materials such as GaN and SiC adds additional costs, time to market and complexity to the systems that enable AI. 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 (including memory systems and power systems) 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 to 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. We are not part of the supply chain for semiconductor manufacturing process, rather part of the value chain, the process of enhancing the value of the products moving along the supply chain, particularly in the early stages of R&D and design of semiconductors. 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 including low-geometry CMOS, memory 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, machine learning and AI is capable of DTCO flow that can optimize manufacturing of memory devices, low-geometry CMOS, power devices and photonics devices such as image sensors, quantum dots, micro-LEDs and displays.

▪Enabling growth industries like AI, automotive, and high-performance computing. Our solutions enable our customers' memory devices, power devices and display technologies to play a crucial role in high performance advanced settings in exciting and growing industries. Our customers' memory devices help computers and servers store and access data quickly, which is crucial for AI and other advanced applications. Our customers' power devices are used in designing power systems for things like computers, cars, and servers, enabling them to run smoothly and efficiently. Our display technologies make it easier to interact with technologies like AI, virtual reality (VR), and augmented reality (AR), improving user experiences.

▪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, and the significant costs in developing our software solutions, have not only prepared us for tailoring solutions for new vertical markets including the photonics and memory markets, but have created a significant barrier for new market entrants looking to compete with our products.

▪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, including standard cells, memory and I/O SIP that is developed in-house. In addition, 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 Vienna University of Technology, 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 SmartSpice, while larger circuits generate block level SIP with our analog custom suite of tools (Gateway, Expert, SmartSpice, 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 2022 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 power devices and display providers. These customers use our design software to address certain design challenges. We believe that our positions in the TCAD and power devices and displays 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 University, the University of Vienna and

Stanford University, 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. 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, hence not incurring the EDA tool costs that non-EDA SIP providers incur. Further, 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 6.8%, 10.1%, 5.9%, 17.9% 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. For example, our revenue was $46.5 million and $54.2 million for the years ended December 31, 2022 and 2023, respectively. Our bookings were $49.7 million and $58.1 million, for the years ended December 31, 2022 and 2023, respectively.

▪By increasing our Research and Development expenditures, we plan to expand our presence in established market segments. We plan to expand our addressable market in established market segments, which include low-geometry CMOS technology, new specialized SIP, fabrication technology process co-optimization, and photonics. Historically we have not participated materially in these markets. We have established beta and strategic customers and generated revenue in 2022 and 2023 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 ten companies that have enhanced and expanded our product portfolio. For example, we acquired PolytEDA 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 EdXact in France and Invarian 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 power devices, display 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, and in 2023 we generated revenue from such 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. Our strategic accounts, which we define as customers that achieved bookings in excess of an aggregate of $1.0 million over the three-year period ended December 31, 2023, contributed $23.0 million of our total bookings in 2023, and the bookings received from strategic accounts grew at a 32% CAGR over the past two years. In addition, we gained 14 new customers in the power end-market and four new customers in the memory end-market in 2023.

▪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. 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.

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. 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 (IP Vault) helps teams of designers to manage (release, revision control and contracts) and collaborate amongst the internal team, the SIP providers, and customers. IP Vault 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 foundry partners.

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 December 31, 2023, we had over 800 customers that relied on our solutions worldwide, of which over 200 are academic institutions.

As of December 31, 2023, our customers were geographically distributed as follows: 54%in Asia, 29% in North America, and 14% in Europe. During 2022 and 2023, in addition to growth within our existing customer base, we added 60 and 59 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 December 31, 2023, our sales and marketing team included 29 regional sales representatives positioned across these geographies. As of December 31, 2023, 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 December 31, 2023, we had 181 engineers worldwide, representing approximately 67% of our total employee base, and approximately 79% 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 December 31, 2023, we had 19 issued U.S. patents expiring generally between 2028 and 2039, 4 pending U.S. patent applications, 3 issued foreign patents (including 2 French patents and 1 Taiwanese patent) expiring generally between 2032 and 2036, 5 pending foreign patents (including 1 pending Taiwanese application, 2 pending European patent applications, and 2 pending Japanese patent applications) 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 December 31, 2023, we have obtained registered U.S. federal trademarks for SILVACO, VIRTUAL WAFER FAB, FAB TECHNOLOGY CO-OPTIMIZATION (FTCO) and IPEXTREME (Stylized).

Competition

Within the TCAD software segment, we compete against several other vendors, including Synopsys, Ansys, Inc. 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 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 Limited 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 Limited, Synopsys, Cadence, and CEVA, Inc.

Business

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 expired on October 30, 2023. On April 11, 2024, we amended the Agreement to extend its term for an additional five years.

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 is 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 and security, including, without limitation, the EU GDPR and the UK GDPR, the CCPA and other U.S. state laws. These privacy and security 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 December 31, 2023, we had 267 employees worldwide, including 93 full-time equivalent employees located in the United States, consisting of 46 in research and development, 19 in sales and marketing, and 28 in general and administrative. 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 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", Refer to note 14 to our consolidated financial statements as of, and for the years ended, December 31, 2022 and 2023 appearing elsewhere in this prospectus.

Management

Management

Executive Officers and Directors

The following table sets forth information regarding our executive officers and directors as of March 31, 2024:

Name	Age	Position
Executive Officers		
Dr. Babak A. Taheri		Chief Executive Officer and Director
Ryan Benton		Chief Financial Officer
Dr. Raul Camposano		Chief Technology Officer
Dr. Eric Guichard	56	Senior Vice President and General Manager of TCAD
Non-Employee Directors		
Katherine S. Ngai-Pesic		Chair of the Board and Director
Dr. Hau L. Lee		Lead Independent Director
Anita Ganti		Director
William H. Molloie, Jr.	59	Director
Anthony K. K. Ngai		Director
Dr. Walden C. Rhines		Director
Jodi L. Shelton		Director

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, and 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.

Ryan Benton has served as our Chief Financial Officer since August 2023. Prior to joining Silvaco, Mr. Benton served as Chief Financial Officer and Board Member of Tempo Automation Holdings, Inc. (Nasdaq: TMPO), a software-accelerated electronics manufacturer, from July 2020 to August 2023. Prior to that from September 2018 to July 2020, Mr. Benton served as Chief Financial Officer of Revasum, Inc. From August 2017 to September 2018, Mr. Benton served as Senior Vice President and Chief Financial Officer for BrainChip Holdings Ltd. From 2012 to August 2017, Mr. Benton held multiple positions at Exar Corporation, a fabless semiconductor chip manufacturer (Exar), including as Senior Vice President and Chief Financial Officer from 2012 through 2016 and Chief Executive Officer and Executive Board Member from 2016 until the sale of Exar to Maxlinear, Inc. in May 2017. From 1993 to 2012, Mr. Benton worked at several technology companies including ASMI and eFunds Corporation. Mr. Benton has served on several public company boards, including serving as an Independent Director and Audit Committee Chair. He started his career as an auditor at Arthur Andersen & Company in 1991. Mr. Benton received a B.A. of Business Administration in Accounting from the University of Texas at Austin, and he passed the State of Texas Certified Public Accountancy exam.

Raul 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 University 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 served 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.

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. From September 2002 to May 2023, Dr. Lee served as an Operations, Information and Technology Professor at the Graduate School of Business at Stanford University, where he had been a professor since 1983. Since February 2012, Dr. Lee has also served on the board of directors of TD SYNNEX 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) and its chairman since June 2023. 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 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.

Anita Ganti has served as a member of our board of directors since March 2024 and as the chair of our compensation committee since April 2024. From 2015 to October 2019, Ms. Ganti served as senior vice president of the product engineering services organization of Wipro Limited, a leading global information technology, consulting and business process services company. From 2013 to 2015, she was vice president of global technology at Flex Ltd. (formerly Flextronics), a global electronics manufacturing services company. Since 2020, Ms. Ganti has served as member of the board of director and the audit committee of Power Integrations Inc. (Nasdaq: POWI), which is a fabless semiconductor company. In addition, since June 2023 she has served as a director and the chairperson of the compensation committee and member of the audit committee of Exro Technologies (TSX: EXRO), a power-control electronics company. Ms. Ganti has a B.S. in electrical engineering from Veermata Jijabai Technological Institute in India, an M.S.E.E. from Virginia Polytechnic Institute and State University, and an M.B.A. from the Wharton School, University of Pennsylvania. We believe Ms. Ganti is qualified to serve on our board of directors due to her extensive operating experience and executive leadership and her deep knowledge of the technology industry.

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 as a member of our nominating and corporate governance, compensation and audit committees since May 2021. 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 November 2021 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.

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. Since 2015, Dr. Rhines has also 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 and its chairman since November 2023. 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. From October 1993 to March 2017, Dr. Rhines served as President and Chief Executive Officer of Mentor Graphics Corporation, an EDA company, and chairman of its board of directors from 2000 until its acquisition by Siemens in March 2017, pursuant to which the company was renamed Mentor Graphics, a Siemens Business. Following the acquisition, Dr. Rhines served as President and Chief Executive Officer of Siemens EDA (formerly Mentor Graphics, a Siemens Business), from March 2017 to October 2018, after which he served as its Chief Executive Officer Emeritus until

September 2020. 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 and our compensation committee since April 2024. 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 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 elected annually and will continue to serve as directors until their resignation, removal or successor is duly elected.

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.

Management—Director Independence and Controlled Company Exemption

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 Dr. Hau L. Lee, Anita Ganti, 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 interim 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 Anita Ganti, Hau L. Lee, Ms. Ngai-Pesic, Jodi Shelton and Anthony K. K. Ngai. Ms. Ganti serves 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 (other than for our chief executive officer, which is approved by the Board of Directors);

▪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, and Jodi L. Shelton. Mr. Ngai serves 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 served as chair of our compensation committee from December 2021 through August 2022. 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 and Anthony K. K. Ngai, see "Certain Relationships and Related Party Transactions—Consulting and Employment Arrangements."

Management—Limitation on Liability and Indemnification of Directors and Officers

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. 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.

Management—Non-Employee Director Compensation

Non-Employee Director Compensation

We have paid cash retainers, RSU awards and 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 non-employee members of our board of directors for the fiscal year ended December 31, 2023.

Name	Fees Earned or Paid in Cash ($)(1)	RSU Awards ($)(2)	All Other Compensation ($)(3)	Total ($)
Katherine S. Ngai-Pesic	82,500	—	15,000	97,500
Dr. Hau L. Lee	85,000(4)	72,806	—	157,806
Anita Ganti(5)	—	—	—	—
William H. Molloie, Jr.	55,000	106,306	—	161,306
Anthony K. K. Ngai	65,000	229,495	—	294,495
Michael E. Paolucci(6)	38,653	110,340	—	148,993
Iliya I. Pesic(7)	38,409	298,462	53,397	390,268
Dr. Walden C. Rhines	50,000(4)	72,806	—	122,806
Jodi L. Shelton	50,000(4)	72,806	—	122,806

(1)Amounts shown in this column include applicable annual retainers for the individual's service on our board of directors and committees thereof; pro-rated for their length of service for directors who were not directors for the full fiscal year ended December 31, 2023, except for Mr. Pesic. Refer to reference note number 5 to this table.

(2)Amounts shown in this column represent the aggregate grant date fair value of RSU awards made during 2023, calculated in accordance with Accounting Standards Codification, or ASC, Topic 718. See Notes 2 and 11 to the notes to our consolidated financial statements as of, and for the years ended December 31, 2022 and 2023 for a discussion of the relevant assumptions used in calculating these amounts. No non-employee director holds stock options or stock awards other than RSUs. As of December 31, 2023, the aggregate number of outstanding RSUs subject to awards held by each of our non-employee directors are set forth in the table below:

Name	RSU Awards (#)
Katherine S. Ngai-Pesic	—
Dr. Hau L. Lee	26,877
Anita Ganti	—
William H. Molloie, Jr.	32,342
Anthony K. K. Ngai	59,938
Michael E. Paolucci	18,000
Iliya I. Pesic	—
Dr. Walden C. Rhines	26,877
Jodi L. Shelton	26,877

(3)Amounts shown in this column represent the amount paid to the director for serving as a consultant to the company in 2023.

(4)Includes annual retainer for the individual's service in our business enhancement and strategy group.

(5)Ms. Ganti was appointed to the board in March of 2024; accordingly no compensation has been reflected for the fiscal year ended December 31, 2023.

(6)Mr. Paolucci resigned as a director on April 11, 2024.

(7)Mr. Pesic resigned as a director on October 4, 2023. On December 1, 2023, we granted Mr. Pesic 10,000 liquidity-contingent RSU awards in connection with his consulting agreement to provide service to the chairperson of the Board. 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 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 on December 1, 2024, subject to Mr. Pesic's continuous service through such date.

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:

Committee	Chair(1)	Member
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.

In addition, the board of directors approved the payment of a $5,000 annual retainer for Dr. Hau Lee, Dr. Walden Rhines and Jodi Shelton for their service in our business enhancement and strategy group. 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 2024 Plan following the conclusion of each regular annual meeting of our stockholders. 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 2024 Plan.

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

Executive Compensation

Executive Compensation

Our named executive officers, who consist of our principal executive officer, all individuals serving as our principal financial officer, and up to two of our most highly compensated executive officers, for the year ended December 31, 2023 were:

▪Dr. Babak A. Taheri, Chief Executive Officer and Director;

▪Ryan Benton, Chief Financial Officer;

▪Robert McMullan, Former Chief Financial Officer; and ▪Dr. Raul Camposano, Chief Technology Officer.

Summary Compensation Table

The following table presents summary information regarding total compensation for the years ended December 31, 2022 and 2023 for each of our named executive officers for the year ended December 31, 2023.

Name and Principal Position	Year	Salary ($)(1)	Bonus ($)(2)	Stock Awards ($)(3)	Nonequity Incentive Plan Compensation ($)(4)	All Other Compensation ($)(5)	Total ($)
Dr. Babak A. Taheri	2023	454,168	—	554,686	174,000	22,550(6)	1,205,404
Chief Executive Officer and Director	2022	391,642	50,091	568,400	113,000	11,188(6)	1,134,321
Ryan Benton	2023	122,348	—	2,737,967	49,000	3,760	2,913,075
Chief Financial Officer(7)							

Robert McMullan	2023	161,093	—	285,000	—	8,583	454,676
Former Chief Financial Officer(8)	2022	217,292	—	404,400	125,000	—	746,692
Dr. Raul Camposano	2023	291,000	—	171,000	57,000	9,630	528,630
Chief Technology Officer	2022	247,958	—	406,000	30,000	3,944	687,902

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

(2)The amounts in this column represent discretionary cash bonuses granted with respect to 2022 performance.

(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 Notes 2 and 11 to our audited consolidated financial statements as of, and for the years ended December 31, 2022 and 2023 for a discussion of the assumptions we made in determining the grant-date fair value of our equity awards. Such grant-date fair values do not take into account any estimated forfeitures related to service-vesting conditions. The amounts reported in this column reflect the accounting cost for these equity awards and do not correspond to the actual economic value that may be received by the named executive officers in connection therewith.

(4)The amounts in this column represent the applicable service provider's total annual performance-based cash bonus for the years ended December 31, 2022 and 2023, as applicable.

(5)The amounts in this column represent Company contributions in connection with a Company-sponsored 401(k) matching arrangement.

(6)The amount includes payments to Mr. Taheri of $12,650 and $6,613 and for the years ended December 31, 2023 and 2022, respectively, in connection with Mr. Taheri's car lease payment.

(7)Mr. Benton was hired as our Chief Financial Officer in August 2023.

(8)Mr. McMullan was hired as our Chief Financial Officer on January 27, 2022 and served as our Chief Financial Officer until July 5, 2023.

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 employment agreements with our named executive officers. The employment agreements generally provide for at-will employment and set forth the executive officer's initial base salary and eligibility for employee benefits. Our named executive officers are also eligible for severance and change in control benefits under our Executive Severance Plan, as further described below. Furthermore, each of our executive officers has executed a form of our standard proprietary information and inventions assignment agreement.

Agreements with Dr. Babak A. Taheri On February 29, 2024, we entered into an Amended and Restated Employment Agreement with Dr. Taheri (the "A&R Employment Agreement of Dr. Taheri"), effective as of January 1, 2024. The A&R Employment Agreement of Dr. Taheri amended and restated Dr. Taheri's offer letter agreement with us dated November

23, 2021 to serve in the position of Chief Executive Officer. The A&R Employment Agreement of Dr. Taheri provides that Dr. Taheri is entitled to receive an annual base salary of $485,000 effective as of December 1, 2023. Such base salary shall be evaluated annually by the Board beginning in early 2025, with any Board-approved adjustments effective retroactively as of January 1 of such adjustment year. Additionally, beginning with the fiscal year 2024, Dr. Taheri shall be eligible to earn an annual cash incentive bonus of 60% of his then-current base salary subject to the satisfaction of certain performance targets. Further pursuant to the terms A&R Employment Agreement of Dr. Taheri, Dr. Taheri shall receive a grant for 700,000 RSUs, which shall be cancelled if we fail to close an initial public offering by December 31, 2024. In addition, the 700,000 RSUs shall be subject to time-based vesting where (i) 350,000 of these RSUs will vest on the business day after the closing of the initial public offering and (ii) 350,000 RSUs will vest over a two-year period following the IPO, with 50% of these RSUs vesting on the one-year anniversary of the closing of the initial public offering and 1/8th of these RSUs vesting in equal quarterly installments during the next 4 quarters thereafter.

Dr. Taheri is eligible to participate in Company benefits generally available to Company executives. In addition, the Company shall provide Dr. Taheri the additional benefits: (1) up to $20,000 annually toward whole life insurance policy premium, which will be treated as additional income and not grossed-up; (2) car lease reimbursement up to $1,000 per month, which will be treated as additional income and not grossed-up; (3) attorney's fees up to $30,000 for review and negotiation related to the A&R Employment Agreement of Dr. Taheri; and (4) relocation reimbursement up to $15,000 if the Company requests a relocation of Dr. Taheri's place of work to the Company headquarters.

2021 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 our director, Chief Technology Officer and Chief Executive Officer. In consideration of Dr. Taheri's execution of a release in our 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.

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 Dr. Raul Camposano We entered into an offer letter agreement with Dr. Camposano, dated December 25, 2021, to serve in the position of Chief Technology Officer. This offer letter provides for an annual base salary of $283,000 and eligibility to participant in our annual bonus plan, with his bonus awarded quarterly based on the achievement of corporate and individual goals. Dr. Camposano's offer letter also provides for an initial grant of 100,000 RSUs, 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 Dr. Camposano's continuous service with us through each such vesting date, and subject to acceleration in connection with the Executive Severance Plan.

Agreement with Ryan Benton We entered into an offer letter agreement with Mr. Benton, dated July 20, 2023, to serve in the position of Chief Financial Officer. This offer letter provides for an annual base salary of $340,000 and eligibility to receive an annual bonus with an estimated value equal to 35% of his annual salary based upon the achievement of individual and corporate goals.

In addition, Mr. Benton's offer letter agreement provides grants of up to an aggregate of 460,000 RSUs. Mr. Benton's offer letter provides for an initial grant of 150,000 RSUs 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. Benton's continuous service with us through each such vesting date, with 50% of the unvested portion accelerating upon the completion of a liquidity event or initial public offering (which will include this offering) and subject to acceleration in connection with the Executive Severance Plan. In addition, Mr. Benton's offer letter agreement provides for a grant of 100,000 RSUs which shall be awarded within 30 days following an initial public offering (which will include this offering) which will vest over four years from the grant date, vesting as 25% after one year with the remaining 75% vesting quarterly over the following three years, subject to (i) the company consummating an initial public offering of its stock prior to June 30, 2024 and (ii) Mr. Benton's continuous service with us through each such vesting date. Mr. Benton's offer letter agreement also provides that he will be granted up to an aggregate of 60,000 RSUs, based on the total amount of our revenue during a consecutive twelve month period during the four year period after he joined us, subject to continued employment with the Company through each such date. Lastly, Mr. Benton's offer letter agreement provides that he will be granted up to an aggregate of 150,000 RSUs within 30 days following an initial public offering with such RSUs subject to performance-based vesting based on the volume weighted average price of our stock price as measured over a four-year period, subject to Mr. Benton's continuous service with us through each such vesting date.

xecutive Compensation

Executive Severance Plan

We believe that reasonable severance benefits for our executive officers, including our named 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 February 2024, our board of directors approved an executive plan, or the Executive Severance Plan, which became effective on February 20, 2024, for our executive officers and other senior management, including the Chief Executive Officer, Chief Financial Officer (but excluding our former Chief Financial Officer, Robert McMullan, who terminated employment with us in July 2023) and Chief Technology Officer. The Executive Severance Plan will provide for vesting acceleration benefits in the event of a qualifying initial public offering, which includes this offering, and severance benefits upon a qualifying termination of employment prior to or in connection with a change of control, as described below. The Executive Severance Plan also provides for severance benefits for a qualifying termination not in connection with a change in control, as further 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 Severance Plan, then the Executive Severance Plan will supersede and replace in their entirety such other severance benefits.

IPO Benefits under the Executive Severance Plan Upon the closing of an initial public offering which occurs prior to a "change in control," including this offering, each named executive officer will be entitled to accelerated time-based vesting of 50% of the unvested portion of the executive officer's restricted stock unit awards outstanding as of the closing of the offering, provided the named executive officer remains employed through the closing of the offering.

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.

Severance Benefits under the Executive Severance Plan Under the Executive Severance Plan, if a named executive officer's employment is terminated by the executive officer due to "non-CIC good reason" or by us without "cause" (as such terms are defined in the Executive Severance Plan) not during the period that begins three months prior to and ends 12 months

following a change in control, in each case provided that the executive delivers and allows to become effective a signed release of claims in our favor, the named executive officer will be entitled to (i) a cash severance payment equal to the sum of the executive's then-current monthly based salary, multiplied by 15 for our Chief Executive Officer, 12 for our Chief Financial Officer and 6 for our Chief Technology Officer, plus a pro-rated target bonus for the year in which the termination occurs based on the period employed during such year, paid in two equal installments on the first payroll date following the date the release of claims is effective and the first payroll date following the six month anniversary of the release effective date, but not later than March 15th of the year following the year in which the termination occurs, (ii) payment by us of the premiums for continued group health coverage for up to 15 months for our Chief Executive Officer, 12 months for our Chief Financial Officer, and 3 months for our Chief Technology Officer, and (iii) for our Chief Executive Officer and Chief Financial Officer only, accelerated time-based vesting of the unvested portion of the 25% of their then outstanding equity incentive awards.

Change in Control Severance Benefits under the Executive Severance Plan Under the Executive Severance Plan, if a named executive officer's employment is terminated by the executive officer due to "CIC good reason" or by us without "cause" (as such terms are defined in the Executive Severance Plan) during the period that begins three months prior to and ends 12 months following a change in control, in each case provided that the executive delivers and allows to become effective a signed release of claims in our favor, the named executive officer will be entitled to (i) a cash severance payment equal to the sum of the executive's then-current monthly based salary, multiplied by 18 for our Chief Executive Officer and 15 for our Chief Financial Officer and Chief Technology Officer, plus a pro-rated target bonus for the year in which the termination occurs based on the period employed during such year, paid in a single lump sum on the first payroll date following the date the release of claims is effective, but not later than March 15th of the year following the year in which the termination occurs, (ii) payment by us of the premiums for continued group health coverage for up to 18 months for our Chief Executive Officer and 15 months for our Chief Financial Officer and Chief Technology Officer, and (iii) for all of the named executive officers accelerated time-based vesting of the unvested portion of the 100% of their then outstanding equity incentive awards.

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 2014 Plan was amended and restated in March 2024 in order to increase the number of shares available for issuance and to extend the term of the 2014 Plan an additional ten years. 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, 9,200,000 shares of common stock have been authorized for issuance under the 2014 Plan. As of December 31, 2023, a total of 6,797,137 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 stock-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 2024 Plan, and shares subject to outstanding awards under the 2014 Plan on the effective date of the 2024 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 2024 Plan.

2024 Stock Incentive Plan

On , 2024, our board of directors approved and adopted, subject to stockholder approval, the 2024 Plan, and our stockholders approved the 2024 Plan on , 2024. The 2024 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 2024 Plan and is qualified in its entirety by reference to the 2024 Plan, which will be filed as an exhibit to the registration statement of which this prospectus is a part.

Stock Awards. The 2024 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 2024 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 2024 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, 2025 and ending on (and including) January 1, 2034, 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 2024 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 2024 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 2024 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 2024 Plan, and the balance (including any shares withheld to cover taxes) will again become available for awards under the 2024 Plan.

Shares issued under the 2024 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 2024 Plan.

Incentive Stock Option Limit. The maximum number of shares that may be issued upon the exercise of ISOs under the 2024 Plan is equal to five times the number of shares specified in subpart (w) of the 2024 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 2024 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 2024 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 2024 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 2024 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 2024 Plan. Subject to the terms of the 2024 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 2024 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 2024 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 2024 Plan vest at the rate specified by the Compensation Committee.

Stock options granted under the 2024 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 us or our 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 2024 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 2024 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 2024 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 2024 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 2024 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 2024 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.

2024 Employee Stock Purchase Plan

On , 2024, our board of directors approved and adopted, subject to stockholder approval, the ESPP, and our stockholders approved the ESPP on , 2024. 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, 2025, 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 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. Such Rule 10b5-1 plans must comply with Rule 10b5-1 of the Exchange Act, (as amended from time to time, "Rule 10b5-1") and the terms of our insider trading policy. 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 or terminate a Rule 10b5-1 plan in some circumstances, subject to compliance with the terms of our insider trading policy and the requirements of Rule 10b5-1. 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 Rule 10b5-1 plans 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, 2023. All awards in the table below are subject to the terms and conditions of the Executive Severance Plan as described above.

In accordance with the rules promulgated by the SEC, certain columns relating to information that is not applicable have been omitted from this table.

		Stock Awards	
Name	Grant Date	Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested ($)
Dr. Babak A. Taheri	10/1/2018(1)	100,000	221,000
	8/1/2019(2)	20,000	50,800
	8/12/2020(1)	50,000	203,000
	8/18/2020(2)	20,000	70,600
	1/8/2021(2)	15,000	53,250
	2/3/2021(2)	15,000	54,525
	5/24/2021(1)	80,000	324,800
	4/22/2022(1)	125,000	507,500
	5/25/2022(1)	15,000	60,900
	1/26/2023(1)	145,970	554,686

Ryan Benton	11/30/2023(1)	150,000	1,034,500
	11/30/2023(3)	100,000	689,667
	11/30/2023(4)	20,000	137,933
	11/30/2023(4)	20,000	137,933
	11/30/2023(4)	20,000	137,933
	11/30/2023(5)	150,000	600,000
Robert McMullan	4/22/2022	90,000	365,400
	8/26/2022	5,000	20,300
	12/2/2022	5,000	20,300
	1/26/2023	75,000	285,000
Dr. Raul Camposano	9/21/2016(1)	5,000	8,350
	4/22/2022(1)	100,000	406,000
	1/26/2023(1)	45,000	171,000

(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.

(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.

(3)Award vests over four years, vesting as 25% after one year with the remaining 75% vesting quarterly over the following three years, subject to (i) the company consummating an initial public offering of its stock prior to June 30, 2024 and (ii) the executive's continuous service through each such vesting date.

(4)Award vests upon which both the Time-Based Requirement and Revenue Requirement are satisfied with respect to the award. The "Revenue Requirement" will be satisfied with respect to different numbers of RSUs, subject to the recipient's continuous service through such date, when our revenues within the four-year period commencing from the vesting commencement date, exceeds certain amounts, and is comprised of three tranches: (i) the Revenue Requirement will be satisfied with respect to 20,000 RSUs if our revenues exceed $75 million during any consecutive twelve-month period during the four-year period commencing the vesting commencement date; (ii) the Revenue Requirement will be satisfied with respect to an additional 20,000 RSUs if our revenues exceed $90 million during any consecutive twelve-month period during the four-year period commencing the vesting commencement date; and (iii) the Revenue Requirement will be satisfied with respect to an additional 20,000 RSUs if our revenues exceed $120 million during any consecutive twelve-month period during the four-year period commencing the vesting commencement date.

(5)Award consists of three tranches of RSUs. The first tranche of 40,000 of RSUs will vest on the first date following the vesting commencement date upon which each of (i) the Time-Based Requirement and (ii) the Market Price Requirement are satisfied with respect to that particular RSU award. The Market Price Requirement for this award will be satisfied on

the first date our volume-weighted average stock price (based on the price at the close of market as reflected on Bloomberg.com) for 50 out of 60 consecutive trading days exceeds 125% of the price at which we sell our common stock to the underwriters in the IPO, subject to the grantee's continued service through such date. The second tranche of 50,000 of RSUs will vest on the first date following the vesting commencement date upon which each of (i) the Time-Based Requirement and (ii) the Market Price Requirement are satisfied with respect to that particular RSU award. The Market Price Requirement for this award will be satisfied on the first date our volume-weighted average stock price (based on the price at the close of market as reflected on Bloomberg.com) for 50 out of 60 consecutive trading days exceeds 150% of the price at which we sell our common stock to the underwriters in the IPO, subject to the grantee's continued service through such date. The third tranche of 60,000 RSUs will vest on the first date following the vesting commencement date upon which each of (i) the Time-Based Requirement and (ii) the Market Price Requirement are satisfied with respect to that particular RSU award. The Market Price Requirement for this award will be satisfied on the first date our volume-weighted average stock price (based on the price at the close of market as reflected on Bloomberg.com) for 50 out of 60 consecutive trading days exceeds 200% of the price at which we sell our common stock to the underwriters in the IPO within four years from the date of grant, subject to the grantee's continued service through such date.

Certain Relationships and Related Party Transactions

Certain Relationships and Related Party Transactions

The following includes a summary of transactions since January 1, 2021 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."

Certain Relationships and Related Party Transactions—Related Party Loans and Lines of Credit

Related Party Loans and Line of Credit

In February 2012, Gu-Guide LP, a real estate entity controlled by Ms. Ngai-Pesic, Bank of the West (subsequently acquired by BMO) and Silvaco Group, Inc. entered into a loan agreement (the "BMO Loan Agreement") pursuant to which Bank of the West agreed to lend Gu-Guide LP approximately $1.0 million, together with unpaid interest from a prior loan (the "Loan"). The BMO Loan Agreement has an interest rate of 3.88% per annum. In May 2018, we provided an absolute and unconditional guaranty of any outstanding indebtedness of Gu-Guide LP under the BMO Loan Agreement. The Loan is secured by a building representing a total of 9,000 square feet located at 4701 Patrick Henry Drive, Santa Clara, California 95054. In the event there is a default under the Loan and foreclosure proceedings occur, if the proceeds from the foreclosure of the foregoing collateral are insufficient to repay the outstanding amounts under the Loan, we have guaranteed the repayment of the outstanding amounts under the Loan. As of December 31, 2023, $0.8 million is outstanding under the Loan.

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. As of December 31, 2022, these loans were all 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. We repaid the March 2022 Loan in full in December 2022. From January 1, 2019 through December 31, 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 $3.5 million in principal and $0.2 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. These notes receivable were settled in fiscal year 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 up to $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 December 31, 2023, the largest aggregate amount outstanding under the 2022 Credit Line was $2.5 million, and during that period, we paid $0.2 million in interest. As of December 31, 2023, $2.0 million remained outstanding under the 2022 Credit Line. The total outstanding balance of the 2022 Credit Line was due in full upon the earlier of (i) June 13, 2024 and (ii) 10 days following the date that we secure financing in an amount equal to or greater than the 2022 Credit Line. Concurrent with entering into the East West Bank Loan agreement, Ms. Ngai-Pesic agreed to (i) extend the repayment term of the 2022 Credit Line to be the later of (a) the expiration or termination date of the East West Bank Loan or (b) June 13, 2024, and (ii) subordinate the right of repayment of any outstanding amount under the 2022 Credit Line to any amount outstanding under the East West Bank Loan. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources.”

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 and $0.2 million during the years ended December 31, 2022 and 2023, respectively. Our future minimum lease commitment under this three-year arrangement, which commenced on May 1, 2022 and expires on March 31, 2025, is $0.3 million as of December 31, 2023. 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 $0.4 million, $0.4 million and $0.5 million during the years ended December 31, 2021, 2022 and 2023, respectively.

Certain Relationships and Related Party Transactions—Consulting and Employment

Consulting and Employment Arrangements; Board Membership Fees

During the year ended December 31, 2021, Ms. Ngai-Pesic earned $96,000 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 during the years ended December 31, 2022 and 2023.

During the year ended December 31, 2021, Mr. Pesic earned $190,000 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 (the “2022 Advisory Agreement”) with Mr. Pesic, under which he received

$50,000 annually for strategic advisory services and reimbursement for certain expenses. On December 1, 2023, we amended the 2022 Advisory Agreement, and accordingly, Mr. Pesic will receive $75,000 annual for such services and be entitled to reimbursement for health, dental and vision benefit plan fees. We also reimbursed Mr. Pesic for his monthly car payments of approximately $600 per month. On December 1, 2023, we entered into a consulting advisory agreement with Mr. Pesic, under which he receives $40,000 annually and an award of 10,000 RSUs, for providing consulting services to the chairperson of the Board.

During the year ended December 31, 2021, neither Ms. Ngai-Pesic nor Mr. Pesic earned annual cash retainers for their service on our board of directors and committees thereof. During the year ended December 31, 2022, Ms. Ngai-Pesic and Mr. Pesic earned $90,000 and $50,000, respectively, as an annual cash retainer for their service on our board of directors and committees thereof. During the year ended December 31, 2023, Ms. Ngai-Pesic and Mr. Pesic earned $82,500 and $38,000, respectively, as an annual cash retainer for their service on our board of directors and committees thereof. Mr. Pesic resigned as a director of the company in October 2023.

We also 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

On April 19, 2021, we entered into indemnification agreements with each of our directors. These agreements will be superseded by further indemnification agreements described below. During the year ended December 31, 2023, we recorded $359,000 in legal expenses pursuant to the indemnification agreement for attorneys' fees incurred by a former member of the board of directors.

Upon completion of this offering, we intend to enter into new indemnification agreements with each of 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.

Registration Rights Agreement

On April 12, 2024, we entered into a Registration Rights Agreement (the "Registration Rights Agreement") with Ms. Katherine Ngai-Pesic, Mr. Iliya Pesic, Ms. Yelena Pesic and SMIK Trust (together, the "Stockholders") pursuant to which such Stockholders have certain demand registration rights, short-form registration rights and piggyback registration rights in respect of any shares of common stock and related indemnification rights from us, subject to customary restrictions and exceptions. All fees, costs and expenses of registrations, other than underwriting discounts and commissions, are expected to be borne by us.

Stockholders Agreement

On April 12, 2024, we entered into a Stockholders Agreement (the "Stockholders Agreement") with the Stockholders, pursuant to which (i) at any time the Stockholders together beneficially owns in the aggregate fifty percent or more of our issued and outstanding shares of common stock, the Stockholders shall be entitled to designate for nomination four director nominees; (ii) at any time the Stockholders beneficially owns in the aggregate less than fifty percent but at least forty percent or more of all issued and outstanding shares of common stock, the Stockholders shall be entitled to designate for nomination three director nominees; (iii) at any time the Stockholders beneficially owns in the aggregate less than forty percent but at least twenty percent or more of all issued and outstanding shares of our common stock, the Stockholders shall be entitled to designate for nomination two director nominees; and (iv) at any time the Stockholders beneficially owns in the aggregate less than twenty percent but at least ten percent or more of all issued and outstanding shares of Common Stock, the Stockholders shall be entitled to designate for nomination one director nominee. Further, the Stockholders Agreement provides that so long as the Pesic Family has the right to nominate two directors, they will be entitled to designate a non-voting board observer, with the rights to receive board notices and materials, without the ability to vote on matters brought before our board. In addition, the Stockholders Agreement provides that so long as the Pesic Family has the right to nominate two directors, to the fullest extent possible under applicable laws and regulations, they will be entitled to designate one individual to serve as a member of each committee of the Board, other than the audit committee. The Stockholders Agreement additionally contains provisions with respect to vacancies and replacements.

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 March 31, 2024 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 40,000,000 shares of common stock outstanding as of March 31, 2024. 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 (i) the issuance of shares upon the RSU Settlement, (ii) no exercise by the underwriters of their option to purchase additional shares of common stock from us and (iii) no 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 computing the number of shares beneficially owned by a person, we deemed to be outstanding all shares of our common stock issuable pursuant to RSUs that are subject to vesting and settlement conditions expected to occur within 60 days of March 31, 2024, including the Liquidity Event Requirement, which will be satisfied upon completion of this offering and, if applicable, the satisfaction or acceleration of the Time-Based Requirement, which may be satisfied or accelerated in connection with the closing of this offering. 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.

		Percentage of Shares Beneficially Owned	
Name and Address of Beneficial Owner	**Number of Shares Beneficially Owned**	Prior to this Offering	After this Offering
Greater than 5% Stockholder:			
SMIK Trust(1)	16,445,772	41.1 %	%
Iliya Pesic(2)	2,330,618	5.8 %	
Named Executive Officers and Directors:			
Katherine S. Ngai-Pesic(3)	20,354,228	50.9 %	
Dr. Babak A. Taheri(4)	923,949	2.3 %	
Dr. Raul Camposano(5)	122,656	*	
Ryan Benton(6)	82,500	*	
Dr. Hau L. Lee(7)	5,625	*	
Anita Ganti	—	*	
William H. Molloie, Jr.(8)	7,500	*	
Anthony K. K. Ngai(9)	16,406	*	
Dr. Walden C. Rhines(10)	5,625	*	

Jodi L. Shelton(11)	5,625	*
All current executive officers and directors as a group (11 persons)(12)	21,663,584	52.4 %

*Represents beneficial ownership of less than 1% of the outstanding shares of our common stock.

(1)Consists of 16,445,072 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 330,618 RSUs that vest within 60 days of March 31, 2024.

(3)Consists of 20,354,228 shares of common stock held of record by Ms. Ngai-Pesic. In addition, 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.

(4)Consists of 923,949 RSUs that vest within 60 days of March 31, 2024 or for which vesting will be accelerated in connection with this offering.

(5)Consists of 122,656 RSUs that vest within 60 days of March 31, 2024 or for which vesting will be accelerated in connection with this offering.

(6)Consists of 82,500 RSUs that vest within 60 days of March 31, 2024 or for which vesting will be accelerated in connection with this offering.

(7)Consists of 5,625 RSUs that vest within 60 days of March 31, 2024. An additional 21,252 RSUs will vest on June 30, 2024 if Dr. Lee remains a director as of such date.

(8)Consists of 7,500 RSUs that vest within 60 days of March 31, 2024. An additional 24,842 RSUs will vest on June 30, 2024 if Mr. Molloie remains a director as of such date.

(9)Consists of 16,406 RSUs that vest within 60 days of March 31, 2024. An additional 43,532 RSUs will vest on June 30, 2024 if Mr. Ngai remains a director as of such date.

(10)Consists of 5,625 RSUs that vest within 60 days of March 31, 2024. An additional 21,252 RSUs will vest on June 30, 2024 if Dr. Rhines remains a director as of such date.

(11)Consists of 5,625 RSUs that vest within 60 days of March 31, 2024.An additional 21,252 RSUs will vest on June 30, 2024 if Ms. Shelton remains a director as of such date.

(12)Represents 20,354,228 shares of common stock and 1,309,356 RSUs beneficially owned by our current directors and executive officers that vest within 60 days of March 31, 2024.

Description of Capital Stock

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- reverse split of our common stock, which we effected on , 2024.

Common Stock

Outstanding Shares

As of December 31, 2023, 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 December 31, 2023, 6,797,137 RSUs were outstanding. As of December 31, 2023, there were 1,202,863 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." Upon the consummation of this offering, shares of our common stock may be granted under our 2024 Plan, which may be increased by up to shares that remained available for grant under our 2014 Plan upon its termination or that are subject to RSUs granted under our 2014 Plan that may expire or terminate without having been exercised or settled in full and may be added to the reserve under the 2024 Plan.

Registration Rights

Our existing stockholders have certain registration rights with respect to our common stock pursuant to the Registration Rights Agreement. See "Certain Relationships and Related Person Transactions—Registration Rights Agreement."

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, after Pesic Family. cease to beneficially own, in the aggregate, at least 50% of the voting power of the outstanding shares of our common stock, all stockholder actions must be effected at a duly called meeting of stockholders and not by written consent. Further, for so long as the Stockholders Agreement remains in effect and the Pesic Family owns in the aggregate, at least 25% of the voting power of the then outstanding shares of our capital stock, the prior written approval or consent of the Pesic Family shall be required for us to (i) implement any amendments to our charter that would adversely affect the Pesic Family's rights thereunder, (ii) effect or consummate a change of control or approve another merger, consolidation, business combination, sale or acquisition that results in changes in the rights and privileges of holders of equity securities, and (iii) effect the liquidation or dissolution or winding up of our business operations. 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. 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 have applied to list our common stock on Nasdaq under the symbol "SVCO."

Transfer Agent and Registrar

Upon the closing of this offering, the transfer agent and registrar for our common stock will be Equiniti Trust Company, LLC (f/k/a American Stock Transfer & Trust Company, LLC). The transfer agent and registrar's address is and the telephone number is .

Shares Eligible for Future Sale

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 December 31, 2023, upon completion of this offering, shares of common stock will be outstanding (after giving effect to a -for- reverse split of our common stock, which we effected on , 2024), 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 of December 31, 2023, a total of 6,797,137 shares of common stock were subject to outstanding RSUs under the 2014 Plan. In addition, following the completion of this offering shares of our common stock may be granted under our 2024 Plan, which may be increased by up to shares that remained available for grant under our 2014 Plan upon its termination or that are subject to awards granted under our 2014 Plan that may expire or terminate without having been exercised or settled in full and may be added to the reserve under the 2024 Plan, and shares of our common stock may be granted under our ESPP, which amounts may be subject to annual adjustment. 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 2014 Plan, the 2024 Plan and the ESPP. These registrations 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

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 consequences of 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 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 pursuant to the exercise of employee stock options or otherwise in connection with services provided; a former citizen or long-term resident of the United States; 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 person that owns, or is deemed to own, more than 5% of such common stock (other than as specifically provided below); a "controlled foreign corporation;" or a "passive foreign investment company."

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, the special tax accounting rules applicable to certain accrual method taxpayers under Section 451(b) of the Code, or any state, local, foreign, gift, estate, 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 who is a 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, ANY APPLICABLE INCOME TAX TREATIES, 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 or fixed base, then although the non-U.S. holder generally will 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 our common stock through a financial institution or other agent acting on the holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to such agent. Such non-U.S. 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. federal withholding tax pursuant to an income tax treaty and such non-U.S. holder 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, as defined in applicable U.S. Treasury Regulations. 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 a non-U.S. holder's gain on disposition of our common stock is taxable because we are a United States real property holding corporation and such non-U.S. holder's ownership of our common stock exceeds 5%, such non-U.S. holder will be taxed on such disposition generally in the manner applicable to U.S.

persons and in addition, a purchaser of such non-U.S. holder's 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. Non-U.S. holders are urged to consult their tax advisors about any applicable income tax treaties that may provide for different rules.

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. Holders should consult their own tax advisers 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

Underwriting

Subject to the terms and conditions set forth in the underwriting agreement, dated , among us, Jefferies LLC and TD Securities (USA) 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	
TD Securities (USA) LLC	
B. Riley Securities, Inc.	
Craig-Hallum Capital Group LLC	
Rosenblatt Securities Inc.	
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 have applied to list our common stock on Nasdaq under the trading symbol "SVCO."

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 during the Restricted Period 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 us 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;

▪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; and ▪the establishment or amendment of a written trading plan meeting the requirements or Rule 10b5-1 under the Exchange Act relating to the transfer of shares or securities convertible into or exercisable or exchangeable for shares of common stock, provided that such plan does not provide for any transfers of shares or securities convertible into or exercisable or exchangeable for shares of common stock during the Restricted Period and any required public disclosure, announcement or filing under the Exchange Act made by us or any person regarding the establishment or amendment of such plan during the Restricted Period shall include a statement that the undersigned is not permitted to transfer, sell or otherwise dispose of securities under such plan during the Restricted Period in contravention of the restrictions set forth in the lock-up agreement, and no public announcement, report or filing under the Exchange Act, or any other public filing, report or announcement, shall be voluntarily made regarding the establishment or amendment of such plan during the Restricted Period.

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

Legal Matters

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by DLA Piper LLP (US), Palo Alto, California. Cooley LLP, Palo Alto, California is representing the underwriters in this offering.

Experts

Experts

The consolidated financial statements of Silvaco Group, Inc. as of December 31, 2022 and 2023, 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 (which report expresses an unqualified opinion and includes an explanatory paragraph relating to a change in method for accounting for credit losses on financial instruments due to the adoption of ASC 326). Such consolidated financial statements are included in reliance upon the report of such firm given their authority as experts in accounting and auditing.

Where You Can Find Additional Information

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. 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, 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.

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SILVACO GROUP, INC.

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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. and subsidiaries (the “Company”) as of December 31, 2022 and 2023, the related consolidated statements of loss, comprehensive loss, stockholders’ equity and cash flows for the years then ended, and the related notes (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, 2022 and 2023, 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.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for allowances for credit losses in 2023 due to the adoption of Accounting Standards Codification Topic No. 326.

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. Those standards require that we plan and perform the audit 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

Campbell, California March 15, 2024 We have served as the Company's auditor since 2021.

Consolidated Balance Sheets

SILVACO GROUP, INC.

Consolidated Balance Sheets

(in thousands except share and par value amounts)

	As of December 31,	
	2022	**2023**
ASSETS		
Current assets:		
Cash	$5,478	$4,421
Accounts receivable, net	5,998	4,006
Contract assets	7,659	8,749
Prepaid expenses and other current assets	2,466	2,549
Deferred transaction costs	—	1,163
Total current assets	21,601	20,888
Long-term assets:		
Property and equipment, net	559	591
Operating lease right-of-use assets, net	2,393	1,963
Intangible assets, net	681	342
Goodwill	9,026	9,026
Long-term portion of contract assets	2,877	6,250
Other assets	1,581	1,825
Total assets	$38,718	$40,885
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$1,864	$2,495
Accrued expenses	9,017	10,180
Accrued income taxes	1,527	1,626
Operating lease liabilities, current	966	735
Deferred revenue	7,478	7,882
Related party line of credit	2,000	2,000
Other current liabilities	—	75
Total current liabilities	22,852	24,993
Long-term liabilities:		
Long-term portion of deferred revenue	4,075	5,071
Operating lease liabilities, non-current	1,427	1,198
Other long-term liabilities	341	221
Total liabilities	28,695	31,483
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	11,926	11,390
Accumulated other comprehensive loss	(1,907)	(1,992)
Total stockholders' equity	10,023	9,402
Total liabilities and stockholders' equity	$38,718	$40,885

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Loss

SILVACO GROUP, INC.

Consolidated Statements of Loss

(in thousands except share and per share amounts)

	Year Ended December 31,	
	2022	**2023**
Revenue:		
Software license revenue	$34,411	$39,331
Maintenance and service	12,063	14,915
Total revenue	46,474	54,246
Cost of revenue	8,887	9,354
Gross profit	37,587	44,892
Operating expenses:		
Research and development	12,447	13,170
Selling and marketing	10,222	12,707
General and administrative	16,231	17,881
Impairment charges	560	—
Total operating expenses	39,460	43,758
Operating income (loss)	(1,873)	1,134
Interest and other expense, net	(355)	(624)
Income (loss) before income tax provision	(2,228)	510
Income tax provision	1,700	826
Net loss	$(3,928)	$(316)
Net loss per share attributable to common stockholders:		
Basic and diluted	$(0.10)	$(0.01)
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.

Consolidated Statements of Comprehensive Loss

SILVACO GROUP, INC.

Consolidated Statements of Comprehensive Loss

(in thousands)

	Year Ended December 31,	
	2022	2023
Net loss	$(3,928)	$(316)
Other comprehensive loss:		
Foreign currency translation adjustments	(419)	(85)
Comprehensive loss	$(4,347)	$(401)

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Stockholders' Equity

SILVACO GROUP, INC.

Consolidated Statements of Stockholders' Equity

(in thousands except share amounts)

	Common Stock		Retained Earnings	Accumulated OtherComprehensive Loss	Total Stockholders' Equity
	Shares	Amount			
Balance, January 1, 2022	40,000,000	$4	$15,854	$(1,488)	$14,370
Other comprehensive loss	—	—	—	(419)	(419)
Net loss for the year	—	—	(3,928)	—	(3,928)
Balance, December 31, 2022	40,000,000	$4	$11,926	$(1,907)	$10,023
ASC 326 Transition Adjustment	—	—	(220)	—	(220)
Balance, January 1, 2023	40,000,000	$4	$11,706	$(1,907)	$9,803
Other comprehensive loss	—	—	—	(85)	(85)
Net loss for the year	—	—	(316)	—	(316)
Balance, December 31, 2023	40,000,000	$4	$11,390	$(1,992)	$9,402

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows

SILVACO GROUP, INC.

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,	
	2022	2023
Cash flows from operating activities:		
Net loss	$(3,928)	$(316)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization	551	601
Impairment charges	560	—
Provision for credit losses	424	220
Loss on disposal of fixed assets	—	46

Change in fair value of contingent consideration	(211)	325
Changes in operating assets and liabilities:		
Accounts receivable	(2,201)	1,378
Contract assets	(1,589)	(5,208)
Prepaid expense and other current assets	(501)	133
Other assets	(480)	(267)
Accounts payable	(168)	156
Accrued expenses	1,612	1,875
Accrued income taxes	937	(23)
Deferred revenue	1,210	2,268
Other current liabilities	2,237	94
Other long-term liabilities	(550)	(102)
Net cash (used in) provided by operating activities	(2,097)	1,180
Cash flows from investing activities:		
Purchases of property and equipment	(89)	(339)
Net cash used in investing activities	(89)	(339)
Cash flows from financing activities:		
Contingent consideration	(876)	(1,002)
Deferred transaction costs	—	(650)
Proceeds from related party financing	2,500	1,000
Repayments of related party financing	(1,000)	(1,000)
Net cash provided by (used in) financing activities	624	(1,652)
Effect of exchange rate fluctuations on cash	336	(246)
Net decrease in cash	(1,226)	(1,057)
Cash, beginning of period	6,704	5,478
Cash, end of period	$5,478	$4,421
Supplemental disclosures of cash flow information:		
Income taxes paid	$655	$1,334
Interest paid	$71	$194
Noncash investing and financing activities:		
Deferred offering costs incurred, not yet paid	$—	$513
Operating lease liability arising from the adoption of ASC 842	$2,600	$—
Right of use assets obtained in exchange for lease obligations	$—	$452

The accompanying notes are an integral part of these consolidated financial statements.

Notes to the Consolidated Financial Statements

SILVACO GROUP, INC.

Notes to the Consolidated Financial Statements

For the Years Ended December 31, 2022 and 2023

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.

Note 2

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 subsidiaries with operations in North America, Europe, Asia and South America. All intercompany transactions and balances have been eliminated upon consolidation.

Reclassifications

The Company reclassified its presentation of cash flows from operating activities and financing activities in the Consolidated Statements of Cash Flows for the year ending December 31, 2022 to conform to the current year’s presentation. Such reclassifications had no effect on the previously reported consolidated financial position, consolidated results of operations or consolidated operating or financing cash flows of the Company.

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 in 2022, the Company recorded an impairment charge of $560,000 associated with goodwill and intangible assets held by Silvaco's Ukrainian subsidiary which management determined would not be recoverable. See also Note 6, Goodwill and Intangible Assets.

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 most significant estimates relates to revenue recognition. Other use of estimates include, but are not limited to, accounts receivable allowances, share-based payment compensation, valuation of goodwill and other intangible assets, contingent consideration, 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.

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. 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. 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. Royalties are generally recognized as revenue during the period in which the customer sells its solutions which incorporate the Company's SIP. 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.

In connection with the Company's SIP, which was developed in partnership with a third party vendor, Silvaco has entered into various renewable license agreements under which the Company has the right to sell the technology it licenses from the third party vendor. When the Company licenses these particular SIP to a customer, Silvaco generally acts as a principal to the transaction because the Company controls the promised SIP that it delivers to the customer. Consistent with its role as principal, the Company recognizes SIP revenue on a gross basis. Royalty costs are reported in cost of revenue upon delivery pursuant to the terms and conditions of the Company's contractual obligations with the licensors. The Company's licensing arrangement with this third party vendor terminated on October 30, 2023.

The Company recognized an immaterial portion of its revenue from device characterization and modeling services for the years ended December 31, 2022 and 2023. Revenue is recognized upon the completion of the requested services and, as applicable, satisfaction of customer acceptance terms. Revenue from these services is classified as maintenance and service revenue.

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 the 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 years ended December 31, 2022 and 2023, the Company capitalized sales commissions of $829,000 and $1.4 million, respectively. Amortization of sales commissions during the years ended December 31, 2022 and 2023 was $719,000 and $848,000, 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	Shorter of remaining life of lease, including option to renew that is expected to be exercised, or useful life of improvement.
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 within general and administrative expenses in consolidated statements of loss.

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.

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

Goodwill is not amortized but is 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.

During the year ended December 31, 2022, the Company recorded an impairment charge of $560,000 to reduce the carrying value of intangible assets associated with Silvaco's Ukrainian subsidiary which management determined would not be recoverable. No impairments charges were recorded to goodwill.

No indicators of impairment or impairments charges were identified or recorded to goodwill or intangible assets during the year ended December 31, 2023.

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. As a result of local economic uncertainties and disruption created by Russia's invasion of Ukraine in February of 2022, the Company recorded an impairment charge of $560,000 during the year ended December 31, 2022 associated with intangible assets held by Silvaco's Ukrainian subsidiary which management determined would not be recoverable. No impairment charge was recorded for the year ended December 31, 2023

Deferred transaction costs

Deferred offering costs are capitalized and consist of fees and expenses incurred in connection with the Company's anticipated initial public offering ("IPO"), including the legal, accounting, printing, and other IPO-related costs. Upon completion of the IPO, these deferred transaction costs will be reclassified to stockholders' equity and recorded against the proceeds from the offering. If the Company terminates its planned IPO or if there is a significant delay, all of the deferred offering costs will be immediately written off to operating expenses in the consolidated statements of operations. The balance of deferred offering costs as of December 31, 2023 was $1,163,000 which is included in total current assets on the consolidated balance sheets. No balance was outstanding as of December 31, 2022.

Concentrations of credit risk

As of December 31, 2022, customer A represented 28% of the Company's accounts receivable. As of December 31, 2023, customer A represented 20% and customer B represented 15% 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, 2022 and December 31, 2023 exceeded insured limits.

As of December 31, 2023, $1.0 million, or 23%, of the Company's cash was maintained with one financial institution in the United States, where the Company's current deposits are in excess of federally insured limits. On March 10, 2023, Silicon Valley Bank ("SVB") was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver. If the financial institutions with whom the Company does business were to become distressed or to be placed into receivership, the Company may be unable to access the cash it has on deposit with such institutions. If the Company is unable to access its cash as needed, the Company's financial position and ability to operate its business could be adversely affected.

Since 2016, Silvaco has generated revenues from licensing to the Company's customers, a certain SIP which the Company has licensed from a third party vendor. The license agreement with the third party vendor relating to this SIP expired on October 30, 2023. During the years ended December 31, 2022 and 2023, the Company generated $4.2 million and $4.5 million in software license revenue, respectively, from licensing this SIP to its customers. In connection with this license agreement with the vendor, the Company recognized $2.1 million and $2.0 million in royalty expense during years ended December 31, 2022 and 2023, respectively.

Allowance for credit losses

Effective January 1, 2023, the Company adopted ASU 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("CECL"), which replaces the legacy incurred loss impairment methodology with an expected credit loss model that requires consideration of a broader range of reasonable and supportable information to estimate expected credit losses over the lifetime of a financial asset. The Company adopted CECL using the modified retrospective approach which required the Company to recognize the cumulative effect of adoption as an adjustment to retained earnings. Accordingly, the Company's comparative financial statements of December 31, 2022, have not been adjusted. As of January 1, 2023, the Company recorded cumulative-effect opening balance sheet adjustment to an allowance for estimated credit losses on the Company's contract asset portfolio and accounts receivable of $220,000, with an offsetting entry to decrease the opening balance of retained earnings.

The Company assesses its ability to collect outstanding receivables and contract assets and provides customer-specific allowances for credit losses and general allowances for the portion of receivables and contract assets that are estimated to be uncollectible. Allowances for credit losses are based on historical collection experience and expected credit losses, customer specific financial condition, current economic trends in the customer's industry and geographic region, changes in customer demand and the overall economic climate in the market the Company serves. Provisions for the allowance for expected credit losses attributable to bad debt are recorded as general and administrative expenses. Account balances deemed uncollectible are written off, net of actual recoveries. If circumstances related to specific customers or the market the Company serves change, the Company's estimate of the recoverability of its accounts receivable and contract assets could be further adjusted. The Company does not have any material account receivable or contract asset balances that are past due and has not written off any significant balances in its portfolio against the allowance for credit losses for the periods presented. The following table presents the Company's allowance for credit losses during the years ended December 31, 2022 and 2023:

	Year Ended December 31,

	2022	2023*
	(in thousands)	
Beginning balance – January 1*	$252	$762
Provision for credit losses	424	220
Accounts written off	(134)	(442)
Ending balance – December 31	$542	$540

*Opening balance as of January 1, 2023 includes a cumulative-effect adjustment of $220,000 for expected credit losses on financial assets in connection with the Company's adoption of CECL.

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 provision 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, 2022 and 2023, the Company recorded foreign currency translation adjustments of $(419,000) and $(85,000), respectively, within accumulated other comprehensive 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 net foreign exchange losses of $525,000 and $335,000 for the years ended December 31, 2022 and 2023, respectively, which is included in interest and other expense, net, in the consolidated statements of loss.

Accumulated other comprehensive loss

Accumulated other comprehensive loss is composed entirely of foreign currency translation adjustments.

Stock-based compensation

The Company accounts for stock-based payments in accordance with the authoritative guidance issued by the FASB on stock-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, stock-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 stock-based payment awards that contain performance criteria, stock-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. For awards with market and service conditions, the Company recognizes stock-based compensation on a straight-line basis for all awards for which the service conditions are met, regardless of whether the market condition is achieved.

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, 2022 and 2023, 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 related party line of credit 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.

Leases

The Company determines if an arrangement is a lease at inception of the contract, which is the date on which the terms of the contract are agreed to, and the agreement creates enforceable rights and obligations. A contract is or contains a lease when the Company has the right to control the use of an identified asset for a period of time. The commencement date of the lease is the date that the lessor makes an underlying asset available for use by the lessee. On the commencement date, leases are evaluated for classification and assets and liabilities are recognized based on the present value of lease payments over the lease term. 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 has elected the practical expedient to account for the lease and non-lease components as a single lease component for all asset classes.

The lease term used to calculate the lease liability includes options to extend or terminate the lease when it is reasonably certain that the option will be exercised. The right of use (ROU) asset is initially measured as the amount of lease liability, adjusted for any initial lease costs, prepaid lease payments and any lease incentives. Variable lease payments, consisting primarily of reimbursement of costs incurred by lessors for common area maintenance, real estate taxes and insurance, are not included in the lease liability and are recognized as they are incurred.

As most of the Company's leases do not provide an implicit rate, the Company uses the incremental secured borrowing rate at lease commencement to measure ROU assets and lease liabilities. The discount rate used for operating leases is primarily determined based on an analysis of 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 has no finance leases. See Note 4 for further information.

Advertising

Advertising costs are expensed as incurred and were $19,000 and $28,000 for the years ended December 31, 2022 and 2023, respectively.

Net Loss per Share

Basic net loss per share is computed based on the weighted average number of shares of common stock outstanding. Diluted net loss per share 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, 2022 and 2023 were excluded from the computation of diluted net 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,	
	2022	2023
RSU Grants	5,286,496	6,797,137

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.

Recently Adopted Accounting Pronouncements

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 ("CECL"), which required the establishment of an allowance for estimated credit losses on financial assets, including trade and other receivables, including contract assets, at each reporting date. Silvaco adopted the new standard on January 1, 2023, the first day of fiscal 2023, and recorded a cumulative-effect adjustment to decrease retained earnings in the amount of $220,000 for expected credit losses on financial assets at the adoption date. See the Company's accounting policy note above regarding allowance for credit losses for further discussion.

Accounting Guidance Issued and Not Yet Adopted

In November 2023, the FASB issued Accounting Standards Update ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which requires disclosure of incremental segment information on an interim and annual basis. This ASU is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal periods beginning after December 15, 2024, and requires retrospective application to all prior periods presented in the financial statements. The Company is currently evaluating the impact of the guidance on the consolidated financial statements and disclosures.

In December 2023, the FASB issued ASU No. 2023-09 ("ASU 2023-09"), Income Taxes (Topic 740): Improvement to Income Tax Disclosures to enhance the transparency and decision usefulness of income tax disclosures. ASU 2023-09 is effective for annual periods beginning after December 15, 2024 on a prospective basis. Early adoption is permitted. The Company is currently evaluating the impact of this accounting standard update on its consolidated financial statements and related disclosures.

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 is recorded upon invoicing. Deferred revenue is recorded 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.

The contract balances of the Company's accounts receivable and contract assets, net of allowance for expected credit losses, and deferred revenue as of January 1, 2022, December 31, 2022 and December 31, 2023 were as follows:

	Contract Balances		
	January 1, 2022	December 31, 2022	December 31, 2023
	(in thousands)		
Accounts receivable, net	$4,466	$5,998	$4,006

Contract Assets, net	$9,442	$10,536	$14,999
Deferred revenue	$8,956	$11,553	$12,953

The short-term and long-term components of the Company’s contract assets, net of allowance for expected credit losses, was as follows as of December 31, 2022 and 2023.

	December 31,	
	2022	2023
	(in thousands)	
Short-term portion of contract assets, net	$7,659	$8,749
Long-term portion of contract assets, net	2,877	6,250
Total contract assets, net	$10,536	$14,999

Transaction Price Allocated to the Remaining Performance Obligations

As of December 31, 2023, approximately $29.8 million of revenue is expected to be recognized from remaining performance obligations. This figure represents contracted revenue that has not yet been recognized, which includes both deferred revenue and backlog, net of cancellations and adjustments. The Company's backlog represents installment billings for periods beyond the current billing cycle. The Company expects to recognize revenue on approximately 55% 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, 2022 and 2023 was as follows:

	December 31,	
	2022	2023
	(in thousands)	
Short-term portion of deferred revenue	$7,478	$7,882
Long-term portion of deferred revenue	4,075	5,071
Total deferred revenue	$11,553	$12,953

During fiscal year 2022 and 2023, the Company recognized revenue of $5.8 million and $7.2 million, respectively, that was included in the deferred revenue balance at the beginning of fiscal year 2022 and 2023, respectively. All other activity in deferred revenue is due to the timing of invoices in relation to the timing of revenue during fiscal years 2022 and 2023 as described above. Approximately 61% of the Company's deferred revenue as of December 31, 2023 is expected to be recognized over the next 12 months with the remainder recognized thereafter.

Note 4

4. Leases

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 in Duluth, Georgia, and abroad, in Japan, France, China, the United Kingdom, Taiwan, Singapore, and Korea, among other countries. The expiration dates for

these operating leases range from 2024 through 2029. As of December 31, 2022 and 2023, the Company's operating lease right-of-use assets and operating lease liabilities were as follows:

	December 31,	
	2022	2023
	(in thousands)	
Operating lease right-of-use assets, net	$2,393	$1,963
Operating lease liabilities, current	966	735
Operating lease liabilities, non-current	$1,427	$1,198

The components of operating lease cost were as follows:

	Year Ended December 31,	
	2022	2023
	(in thousands)	
Operating lease cost	$1,065	$1,003
Variable lease cost(1)	330	223
Total operating lease cost	$1,395	$1,226

(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 years ended December 31, 2022 and 2023 was as follows:

	Year Ended December 31,	
	2022	2023
	(in thousands)	
Cash paid for operating lease liabilities	$1,081	$1,028
Right-of use assets obtained in exchange for operating lease liabilities	$—	$452
Operating lease liability arising from the adoption of ASC 842	$2,600	$—
	December 31,	
	2022	2023
Weighted average remaining lease term (in years)	4.45	4.09
Weighted average discount rate	4.13 %	3.84 %

As of December 31, 2023 maturities of operating lease liabilities were as follows:

Year Ending December 31,	Amount
	(in thousands)
2024	749
2025	510
2026	235
2027	196
2028	196
Thereafter	196
Total lease payments	2,082
Less: imputed interest	(149)

Total operating lease liabilities	$1,933
Current portion of lease liability	$735
Non-current portion of lease liability	$1,198

Rent expense for the years ended December 31, 2022 and 2023 was $1.4 million and $1.2 million, respectively.

5. Property and Equipment, Net

The Company's property and equipment at December 31, 2022 and 2023 consisted of the following:

	December 31,	
	2022	2023
	(in thousands)	
Computer software	$5,596	$5,547
Equipment	707	545
Buildings and improvements	172	167
Leasehold improvements	145	186
Furniture and fixtures	196	156
Total property and equipment	6,816	6,601
Less accumulated depreciation	(6,257)	(6,010)
Total property and equipment, net	$559	$591

During the year ended December 31, 2023, the Company recorded a $46,000 noncash loss on the disposal of fixed assets. No fixed asset disposals were recorded during the year ended December 31, 2022. Depreciation expense was $235,000 and $262,000 for the years ended December 31, 2022 and 2023, respectively.

Note

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.

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 $560,000 to reduce the carrying value of $284,000 of developed technology and $276,000 of customer relationships associated with the Company's Ukrainian subsidiary which management determined would not be recoverable.

There were no changes to goodwill during the years ended December 31, 2022 and 2023.

For the years ended December 31, 2022 and 2023, intangible assets were classified as follows:

		December 31, 2022		
Intangible assets:	Weighted Average Amortization Period	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
		(in thousands)		

Developed technology	5	$2,660	$(2,193)	$467
Customer relationships	5	2,416	(2,213)	203
Non-compete agreements	5	179	(168)	11
Total intangible assets		$5,255	$(4,574)	$681

		December 31, 2023		
	Weighted Average Amortization Period	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Intangible assets:		(in thousands)		
Developed technology	5	$2,660	$(2,367)	$293
Customer relationships	5	2,416	(2,374)	42
Non-compete agreements	5	179	(172)	7
Total intangible assets		$5,255	$(4,913)	$342

Amortization expense for the intangible assets reflected above was $316,000 and $339,000 for the years ended December 31, 2022 and 2023, respectively.

As of December 31, 2023, estimated future amortization expense for the intangible assets reflected above was as follows:

For Years Ending December 31,	
	(in thousands)
2024	$205
2025	137
Total net carrying value of intangible assets	$342

7. Significant Balance Sheet Components

Prepaid expenses and other current assets consisted of the following:

	December 31,	
	2022	2023
	(in thousands)	
Research and development tax credits	$940	$896
Deferred sales commissions(a)	669	808
Short-term lease deposits	16	104
Prepaid expenses	841	741
Total prepaid expenses and other current assets	$2,466	$2,549

Other assets consisted of the following:

	December 31,	
	2022	2023
	(in thousands)	
Deferred sales commissions(a)	$1,135	$1,501
Prepaid expenses	99	86
Long-term lease deposits	347	238

Total other assets	$1,581	$1,825

(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

On December 8, 2021, Silvaco entered a promissory note with the Company's founding principal stockholder for $500,000 ("Promissory Note") which was repaid in full in July 2022.

On March 30, 2022, Silvaco entered a second related party note payable with the Company's founding principal stockholder for $500,000 (“March 2022 Note”) bearing interest at 3.25% payable and due on March 30, 2023. The March 2022 Note was repaid in full in December 2022.

On May 1, 2022, the Company entered into a commercial lease agreement with Kipee, a related party controlled by the Company's founding principal stockholder, for Silvaco's corporate office in Santa Clara, California. In connection with this lease arrangement, the Company recorded rent expense of $144,000 and $216,000 of rent expense during the year ended December 31, 2022 and 2023, respectively. 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 $259,000 as of December 31, 2023. The short term and long term components of the Company’s operating lease liability for this commercial office lease are $209,000 and $50,000 as of December 31, 2023, respectively.

The Company has two international office leases with New Horizons (Cambridge) LTD (“NHC”) and New Horizons France (“NHF”) in Cambridgeshire, England and Grenoble, France, respectively. NHC and NHF are real estate entities owned and controlled by the Company's founding principal stockholder. In connection with these lease arrangements, the Company recorded rent expense of $278,000 and $314,000 during the year ended December 31, 2022 and 2023, respectively.

On June 13, 2022, Silvaco entered into a $4.0 million line of credit with the Company's founding principal stockholder. In connection with this line of credit, the Company recorded interest expense of $75,000 and $190,000 during the year ended December 31, 2022 and 2023, respectively. As of December 31, 2023, the balance of this line of credit was $2.0 million. See Note 10, Debt, for further discussion.

During the year ended December 31, 2023, the Company recorded $436,000 in legal expenses pursuant to an indemnification agreement for attorney’s fees incurred, by the son of the Company's founding principal stockholder incurred relating to his former role as a member of the board of directors.

In February of 2012, Gu-Guide LP, a real estate entity controlled by the Company’s founding principal stockholder, Bank of the West and Silvaco Group, Inc. entered into a loan agreement pursuant to which Bank of the West agreed to lend Gu-Guide LP certain amounts of money (the “Loan”). The Loan is secured by a building representing a total of 9,000 square feet located at 4701 Patrick Henry Drive, Santa Clara, California 95054. In the event that the proceeds from the foreclosure of the foregoing collateral are insufficient to repay the outstanding amounts under the Loan, Silvaco Group Inc. has guaranteed the repayment of the outstanding amounts under the Loan. As of December 31, 2023, $0.8 million is outstanding under the Loan.

Note 9

9. Accrued Expenses and Other Long-Term Liabilities

Accrued expenses consisted of the following:

	December 31,	
	2022	2023
	(in thousands)	

Accrued employee expenses	$4,869	$6,329
Accrued taxes payable	1,608	1,278
Accrued royalties payable(a)	787	1,113
Contingent consideration(b),(c)	736	103
Accrued operating expense	950	1,293
Other	67	64
Total accrued expenses	$9,017	$10,180

Other long-term liabilities consisted of the following:

	December 31,	
	2022	2023
	(in thousands)	
Contingent consideration(b),(c)	56	9
Net deferred tax liabilities (Note 12)	285	212
Total other long-term liabilities	$341	$221

(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 16, Fair Value of Financial Instruments.

Note 10

10. Notes Payable

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 bearing interest at 3.25% payable and due on March 30, 2023. The March 2022 Note was repaid in full in December 2022.

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. As of December 31, 2022 and 2023, the balance of this line of credit was $2.0 million. Originally the line of credit was due in full upon the earlier of (a) June 13, 2023 and (b) 10 days following the date that the Company secures subordinated financing in an amount equal to or greater than the line of credit. In May of 2023, the due date was revised to be the earlier of (a) June 13, 2024 and (b) 10 days following the date that the Company secures subordinated financing in an amount equal to or greater than the line of credit. Concurrent with entering into the East West Bank Loan agreement, described below, Ms. Ngai-Pesic agreed to (i) extend the repayment term of the 2022 Credit Line to be the later of (a) the expiration or termination date of the East West Bank Loan or (b) June 13, 2024, and (ii) subordinate the right of repayment of any outstanding amount under the 2022 Credit Line to any amount outstanding under the East West Bank Loan. Following the extension of the repayment term, the Company has determined that as of December 31, 2023, the line of credit should be classified as current on the consolidated balance sheet, given that under the certain circumstances previously described, including early termination of the East West Bank Loan, the amount outstanding under the line of credit may become due and payable on June 13, 2024.

In December 2023, the Company entered into a loan facility with East West Bank (the “East West Bank Loan”) which has a maturity date of December 14, 2025 and provides for borrowings of up to $5.0 million bearing interest at a per annum rate equal to one half of one percent (0.5%) above the greater of (i) the prime rate or (ii) four and one half percent (4.5%). The East West Bank Loan is secured by certain of the Company’s assets, including without limitation, certain of the Company’s intellectual property and the equity of certain of the Company’s subsidiaries. In addition, the East West Bank Loan contains customary financial and negative covenants, including a six month minimum Adjusted EBITDA of $1.0 million measured at an initial test date of December 2023 and minimum cash at bank covenant of $1.5 million, with such minimum amount increasing to $10.0 million upon the effectiveness of an initial public offering. As of December 31, 2023, there were no outstanding borrowings under the East West Bank Loan and the Company is in compliance with all covenants.

Note 11

11. Restricted Stock Units

Silvaco has 8.0 million shares of common stock reserved for its restricted stock units (“RSUs”) grants. Since 2014, the Company has issued RSUs to employees, directors, and advisors, pursuant to the Company's 2014 Stock Incentive Plan (the "2014 Plan"). As of December 31, 2022 and 2023, 5,286,496 and 6,797,137 RSUs were outstanding under the 2014 Plan, including 1,359,150 and 2,051,049 RSUs granted during the years ended December 31, 2022 and 2023, 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.

In addition to the RSU awards described above, in the fourth quarter of 2023 the Company granted 60,000 RSUs to an executive which contain vesting conditions with both a Time-Based Requirement and a performance condition requirement linked to the Company achieving certain revenue thresholds. The grant date fair value of these awards was $414,000, and there was no stock-based compensation expense recognized related to such awards during the year ended December 31, 2023. The Company also granted to the executive a total of 150,000 RSUs that vest based on a Time-Based Requirement, a Liquidity Event Requirement and a market condition, based on the volume weighted average price of the Company's stock as measured over a period of time. The grant date fair value of these awards of $600,000 has yet to be recognized as stock-based compensation expense, as throughout 2023 the Liquidity Event Requirement associated with such awards was not deemed probable of occurring.

The following table summarizes the Company's RSU activity for 2022 and 2023:

	Weighted Average		Restricted Stock Units		
	Fair Value	Remaining Contract Term	Granted	**Time Vested**	Time Unvested
Balance as of January 1, 2022	$2.61	6.40	4,286,919	2,458,419	1,828,500
Granted	4.04	9.14	1,359,150	—	1,359,150
Vested	3.77	8.38	—	684,899	(684,899)
Forfeited / canceled	3.20	6.88	(359,573)	—	(359,573)
Balance as of December 31, 2022	$2.97	6.34	5,286,496	3,143,318	2,143,178
Granted	5.06	9.46	2,051,049	—	2,051,049
Vested	4.35	8.36	—	978,569	(978,569)
Forfeited / canceled	3.71	7.30	(540,408)	—	(540,408)
Balance as of December 31, 2023	$3.60	6.56	6,797,137	4,121,887	2,675,250

The grant date fair value of the RSU awards without market conditions, 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.

The grant date fair value of the RSU awards with market conditions, was determined based on the Monte Carlo valuation model, which requires various estimates, including the expected volatility of the common stock of the Company based on the historical volatility of comparable publicly traded companies, the probability of an IPO, the IPO date and the vesting term.

Historically the Company has not recorded stock-based compensation expense for the RSUs, due to the Liquidity Event Requirement not being probable. The Company has valued the unrecorded stock-based compensation expense, using historical estimates of the fair value of the Company's common stock. Should the Liquidity Event Requirement ("Liquidity Event") become probable, the Company would incur share based compensation expense associated with (i) active employees who have fulfilled or are in the process of fulfilling the Time Based Requirement ("active employees"), (ii) certain terminated employees whose RSU's become fully vested in connection with the Liquidity Event ("terminated employees"), and (iii) the acceleration of the Time Based Requirement for certain awards to executive officers, senior management and directors as a result of Liquidity Event.

As of December 31, 2022, the Company had 5,286,496 outstanding RSUs related to active and certain terminated employees. The total grant date fair value of such outstanding RSUs in unrecognized stock-based compensation expense is $15.7 million. The 3,143,318 RSUs which have contractually met the Time-Based Requirement have a grant date fair value of $7.3 million. The remaining 2,143,178 RSUs which have not met the Time-Based Requirement have a grant date fair value of $8.4 million.

As of December 31, 2023, the Company had 6,797,137 outstanding RSUs related to active and certain terminated employees. The total grant date fair value of such outstanding RSUs in unrecognized stock-based compensation expense is $24.5 million. The 4,121,887 RSUs which have contractually met the Time-Based Requirement have a grant date fair value of $11.8 million. The remaining 2,675,250 RSUs which have not met the Time-Based Requirement have a grant date fair value of $12.7 million.

In the period in which the Liquidity Event Requirement is satisfied, the Company will record cumulative stock-based compensation expense for the service period through such date using the straight-line attribution method, net of actual forfeitures, based on the grant-date fair value of the RSU awards. Had a qualifying Liquidity Event occurred on December 31, 2023, the Time Based Requirement would be accelerated in accordance with their terms for an additional 348,899 RSUs, and the Company would recognize cumulative combined stock-based compensation expense of $14.7 million for active employees, terminated employees, executive officers, and directors.

Note

12. Income Taxes

The domestic and foreign components of the Company's income (loss) before tax provision for the years ended December 31, 2022 and 2023, were as follows:

	December 31,	
	2022	2023
	(in thousands)	
Domestic	$(3,533)	$(2,620)
Foreign	1,305	3,130
Income (loss) before income tax provision	$(2,228)	$510

The components of the Company's income tax provision for the years ended December 31, 2022 and 2023, were as follows:

	December 31,	
	2022	2023
	(in thousands)	
Current:		
Federal	$846	$393
State	82	62
Foreign	578	408
Deferred:		
Foreign	194	(37)
Income tax provision	$1,700	$826

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, 2022 and 2023 were as follows:

	December 31,	
	2022	2023
	(in thousands)	
Deferred tax assets:		
Accruals and reserves	$492	$735
Depreciable and amortizable assets	2,212	3,765
Net operating loss carryforward	587	561
Tax credits	8,037	7,328
Total deferred tax asset	$11,328	$12,389
Valuation allowance	(10,649)	(12,270)
Net deferred tax asset	$679	$119
Deferred tax liabilities		
Revenue recognition	(964)	(349)
Net deferred tax liability	$(285)	$(230)

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, 2022 and 2023:

	December 31,	
	2022	2023
Tax at federal statutory rate	21 %	21 %
Tax credits	15 %	(60)%
Other	(59)%	(65)%
Valuation allowance	(53)%	266 %
Effective tax rate	(76)%	162 %

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, 2023, 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 years ended December 31, 2022 and 2023, the valuation allowance increased by $1.4 million and $1.6 million, respectively.

As of December 31, 2023, the Company had federal research and development tax credits of $5.7 million which begin expiring in 2028 and no net operating loss carryforwards for federal income tax purposes.

As of December 31, 2023 the Company had net operating loss carryforwards for state income tax purposes of $2.9 million which begin expiring in 2029 and state research and development credits of $8.0 million which begin expiring in 2024.

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,	
	2022	2023
	(in thousands)	
Balance as of January 1,	$10,054	$6,827
Increases related to prior years' tax positions	40	32
Increases related to current year's tax positions	426	388
Decreases related to prior years' tax positions	(3,693)	—
Balance as of December 31,	$6,827	$7,247

The Company records unrecognized tax benefits, where appropriate, for all uncertain income tax positions. The Company recorded unrecognized tax benefits for uncertain tax positions of approximately $7.2 million as of December 31, 2023, of which $1.4 million, if recognized, would impact the effective tax rate.

The Company recognizes interest and/or penalties related to uncertain tax positions in income tax expense. To the extent accrued interest and penalties do not ultimately become payable, amounts accrued will be reduced and reflected as a reduction of the overall income tax provision in the period that such determination is made. During the 2022 and 2023 tax years, interest and penalties recorded in the statements of loss were $16,000 and $19,000, respectively. The amounts of accrued interest and penalties recorded on the consolidated balance sheets as of December 31, 2022 and 2023 were $58,000 and $77,000, respectively. The Company does not believe there will be material changes in its unrecognized tax positions over the next twelve 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 three years for federal and four years for states, after the utilization of net operating losses 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, who is the Company’s Chief Executive Officer, reviews financial information presented on a consolidated basis for purposes of allocating resources and evaluating financial performance. As such, the Company’s operations constitute a single operating segment and one reportable segment.

Revenue is attributed to geography based upon the country in which the software license is used, or maintenance and services are delivered. The Company's single reportable segment recorded customer revenue from the following geographical areas for the years ended December 31, 2022 and 2023:

	December 31,	
Region	2022	2023
	(in thousands)	
United States	$14,888	$16,214
China	10,685	12,410
Japan	7,288	7,556
Korea	4,172	7,505
All other	9,441	10,561

Total revenue	$46,474	$54,246

Property and equipment are attributed to geography based on the country where the assets are located. The following table presents a summary of property and equipment by region as of December 31, 2022 and 2023:

	December 31,	
Region	2022	2023
	(in thousands)	
United States	$214	$242
China	162	152
Japan	64	74
All other countries	119	123
Total property and equipment	$559	$591

Note 14

14. 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 years ended December 31, 2022 and 2023, 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.

Guarantees

In February of 2012, Gu-Guide LP, a real estate entity controlled by the Company's founding principal stockholder, Bank of the West and Silvaco Group, Inc. entered into a loan agreement pursuant to which Bank of the West agreed to lend Gu-Guide LP certain amounts of money. The Loan is secured by a building representing a total of 9,000 square feet located at 4701 Patrick Henry Drive, Santa Clara, California 95054. In the event that the proceeds from the foreclosure of the foregoing collateral are insufficient to repay the outstanding amounts under the Loan, Silvaco Group Inc. has guaranteed the repayment of the outstanding amounts under the Loan. As of December 31, 2023, $0.8 million is outstanding under the Loan.

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, the Nangate Parties 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 $20.0 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. A trial date has been set for the second quarter of 2024. The Company 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 Design SAS ("Dolphin"). Aldini's allegations center around the bankruptcy and reorganization of Dolphin in 2018 and Silvaco, Inc.'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 France, and officers Iliya Pesic and Babak Taheri, including claims for trade secret theft, conspiracy, and intentional interference with a prospective economic advantage. Silvaco, Inc. 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, Inc., Silvaco France, and officers Iliya Pesic and Babak Taheri that included similar claims of trade secret theft, conspiracy, and intentional interference with a prospective economic advantage in relation to Silvaco, Inc.'s acquisition of certain assets of Dolphin Design SAS. Aldini AG seeks $703.0 million and punitive damages. On March 17, 2023, the Second Amended Complaint was dismissed on all counts, subject to a right of appeal. Aldini has filed a notice of appeal although their mediation brief relating to this appeal does not include Silvaco. The Company accordingly has not recorded a charge for this contingency.

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 export of the Company's 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. 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 and January 2023, 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 and has not recorded a charge for this contingency. However, if either organization chose to bring an enforcement action against the Company such actions could result in significant penalties.

After establishing its branch office in Russia in 2017, the Company used a local bank (“Bank A”) as its primary financial institution and engaged a local service provider (“Local Agent”) to act as its tax, accounting and legal consultant to advise with respect to matters affecting the branch office. As a result of the conflict in Ukraine, Bank A was sanctioned by OFAC on April 6, 2022, and, based on the recommendation from the Local Agent, the Company established replacement bank accounts at another local bank (“Bank B”), which were opened on June 2, 2022. Following the opening of the new accounts at Bank B, the Local Agent used the Bank B accounts to receive injections of funds from the Company’s US bank accounts; transferred the funds from Bank B to Bank A and paid compensation of certain of the Company’s employees and other expenses using the Company’s bank accounts at Bank A. The discovery of transactions involving the Company’s funds through Bank A following the establishment of the Company’s accounts at Bank B led to the Company’s subsequent voluntary self-disclosure in October 2023 (the “October OFAC Filing”). The Company cannot estimate any reasonable possible loss at this time and has not recorded a charge for this contingency. However, if OFAC chose to bring an enforcement action against the Company such actions could result in significant penalties.

On September 22, 2023, the Company received a demand letter from a customer related to alleged deficiencies in certain intellectual property used by the customer. Management is in initial discussions with the customer regarding the nature of the claims set forth in the letter. Given the early stages of the matter and the unknown financial impact, the Company cannot estimate any reasonable range of loss. The Company accordingly has not recorded a charge for this contingency.

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, 2022 and 2023, the Company contributed $0.1 million related to the 401(k) Plan. In connection with the 401(k) Plan, the Company recorded expense of $0.1 million and $0.5 million during the years ended December 31, 2022 and 2023, respectively.

Note 1

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, 2022 and 2023:

	Fair value measurements as of December 31, 2022			
	(in thousands)			
	Carrying value	Level 1	Level 2	Level 3
Liabilities:				
Contingent consideration	792	—	—	792
Total	$792	$—	$—	$792

	Fair value measurements as of December 31, 2023			
	(in thousands)			
	Carrying value	Level 1	Level 2	Level 3
Liabilities:				
Contingent consideration	112	—	—	112

Total	$112	$—	$—	$112

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 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, 2022 and 2023:

	Year Ended December 31,	
	2022	2023
	(in thousands)	
Fair value as of January 1,	$1,870	$792
Change in fair value	(210)	325
Earn-out payments	(376)	(502)
Milestone achievement paid	(500)	(500)
Foreign exchange	8	(3)
Fair value as of December 31,	$792	$112

Nonfinancial Assets Measured at Fair Value on a Nonrecurring Basis

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 $560,000 to reduce the carrying value of $284,000 of developed technology and $276,000 of customer relationships associated with the Company's Ukrainian subsidiary which management determined would not be recoverable. The related intangible assets were deemed fully impaired and therefore did not include any sensitive level 3 estimates or inputs as of December 31, 2022.

17. Subsequent Events

During February 2024, the Company drew $3.1 million on the East West Bank Loan.

During February 2024 the board of directors approved the grant of 1,058,559 of restricted stock units under the 2014 Plan. Substantially all the awards include a Time-Based Requirement, which generally requires four years for full vesting of the grants, with 25% vesting after one year and quarterly vesting over the subsequent three years. In addition, such awards contain a Liquidity Event Requirement, which requires the completion of an underwritten initial public offering or a change of control, as defined in the Company's 2014 Plan documents.

On February 29, 2024, the Company entered into an Amended and Restated Employment Agreement with an executive officer (the "A&R Employment Agreement"), effective as of January 1, 2024. The A&R Employment Agreement amended and restated the executive officer's offer letter agreement with the Company dated November 23, 2021. The A&R Employment Agreement provides that the executive officer is entitled to receive an annual base salary of $485,000 effective as of December 1, 2023. Such base salary shall be evaluated annually by the Board beginning in early 2025, with

any Board-approved adjustments effective retroactively as of January 1 of such adjustment year. Additionally, beginning with the fiscal year 2024, the executive officer is also entitled to an annual cash incentive bonus of 60% of his then-current base salary. Further, in accordance with the terms A&R Employment Agreement, the executive officer will earn an additional 700,000 RSUs if the Company closes an initial public offering prior to December 31, 2024. If the 700,000 additional RSUs are earned, (i) 350,000 of these RSUs will vest on the business day after the closing of the initial public offering and (ii) 350,000 RSUs will vest over a two-year period following the IPO, with 50% of these RSUs vesting on the one-year anniversary of the closing of the initial public offering and 1/8th of these RSUs vesting in equal quarterly installments during the next 4 quarters thereafter.

18. Events [Unaudited] Subsequent to the Date of the Report of Independent Registered Public Accounting Firm

On March 18, 2024, the Company's board of directors authorized an extension of the maximum term of the 2014 Plan to March 18, 2034 and increased the maximum number of shares of common stock authorized for issuance under the 2014 Plan to 9,200,000 shares.

During March 2024, the Company drew $1.2 million on the East West Bank Loan.

On April 11, 2024, the Company amended its license agreement to offer SIP developed in partnership with a third party vendor to extend its term for an additional five years.

Shares

Common Stock

Preliminary Prospectus

Jefferies	TD Cowen	
B. Riley Securities	**Craig-Hallum Capital Group**	**Rosenblatt**

, 2024

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	*
Nasdaq 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.

Since January 1, 2021, we have granted to our employees, consultants, and other service providers, restricted stock units representing an aggregate of 4,842,199 shares of our common stock, under our 2014 Plan.

The issuances of the securities described above were deemed to be exempt from registration under Rule 701 promulgated under the Securities Act as transactions under compensatory benefit plans and contracts relating to compensation. The recipients of such securities were our directors, employees or bona fide consultants and received the securities under our equity incentive plan. Appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions had adequate access, through employment, business or other relationships, to information about us.

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

Exhibit No.	Description
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 ascurrently 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 DLA Piper LLP (US).
10.1+†	Form of Indemnification Agreement between the Registrant and its directors and officers.
10.2+	Amended 2014 Stock Incentive Plan and Form of Restricted Stock Unit Agreement thereunder.
10.3+	Form of 2024 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+	Form of 2024 Employee Stock Purchase Plan.
10.5+	Offer Letter Agreement, dated December 25, 2021, between the Registrant and Dr. Raul Camposano.
10.6+	Offer Letter Agreement, dated July 20, 2023, between the Registrant and Ryan Benton.
10.7+	Consulting Advisory Agreement, dated January 12, 2022, between the Registrant and Katherine S. Ngai-Pesic.
10.8+	Consulting Advisory Agreement, dated January 12, 2022, between the Registrant and Iliya I. Pesic.

10.9+	Amended and Restated Consulting Advisory Agreement, dated December 1, 2023, between the Registrant and Iliya I. Pesic.
10.10+	Consulting Advisory Agreement, dated December 1, 2023, between the Registrant and Iliya I. Pesic.
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+	Amended and Restated Employment Agreement, dated February 29, 2024, between the Registrant and Dr. Babak A. Taheri.
10.14	California Commercial Lease Agreement, dated May 1, 2022, between Silvaco, Inc. and Kipee International, Inc.
10.15	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.
10.16	Commercial Lease, dated April 28, 2017, by and between the Registrant, as successor, and New Horizons, as amended by the Commercial Lease, dated September 30, 2021.
10.17+	Executive Severance Plan.
10.18	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.
10.19	Promissory Note, dated March 30, 2022, between Silvaco, Inc. and Katherine S. Ngai-Pesic.
10.20	Promissory Note and Line of Credit, dated June 13, 2022, between Silvaco, Inc. and Katherine S. Ngai-Pesic.
10.21	Amendment to Promissory Note and Line of Credit, dated May 25, 2023, between Silvaco, Inc. and Katherine S. Ngai-Pesic.
10.22	Amendment to Promissory Note and Line of Credit, dated December 11, 2023, between Silvaco, Inc. and Katherine S. Ngai-Pesic.
10.23+†	Non-Employee Director Compensation Policy of the Board of Directors of the Registrant.
10.24	Loan and Security Agreement, dated December 14, 2023, between the Registrant and East West Bank.
10.25	Registration Rights Agreement, dated April 12, 2024, among the Registrant and the stockholders named therein.
10.26	Stockholders Agreement, dated April 12, 2024, among the Registrant and the stockholders named therein.
10.27#	Technology License and Distribution Agreement, dated October 30, 2015, between the Registrant, assuccessor, and NXP Semiconductors Netherlands B.V., originally entered into by Registrant onSeptember 1, 2016, as amended by First Amendment to Technology License and DistributionAgreement, dated April 20, 2016, Second Amendment to Technology License and DistributionAgreement, dated October 18, 2016, Third Amendment to Technology License and DistributionAgreement, dated November 10, 2018, Fourth Amendment to Technology License and DistributionAgreement, dated March 22, 2022 and Fifth Amendment to Technology License and Distribution Agreement, dated April 11, 2024.
21.1†	Subsidiaries of the Registrant.
23.1	Consent of Moss Adams LLP.
23.2†	Consent of DLA Piper LLP (US) (included in Exhibit 5.1).
24.1	Power of Attorney (see signature page hereto).
	Filing Fee Table.

† To be filed by amendment.

+ Indicates management contract or compensatory plan.

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 the 12th of April, 2024.

SILVACO GROUP, INC.
/s/ Dr. Babak A. Taheri Dr. Babak A. Taheri Chief Executive Officer

Power of Attorney (see signature page hereto).

POWER OF ATTORNEY
KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Dr. Babak A. Taheri and Ryan Benton, 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.

Signature	Title	Date
/s/ Dr. Babak A. Taheri Dr. Babak A. Taheri	Chief Executive Officer and Director (Principal Executive Officer)	April 12, 2024
/s/ Ryan Benton Ryan Benton	Chief Financial Officer (Principal Financial and Accounting Officer)	April 12, 2024
/s/ Katherine S. Ngai-Pesic Katherine S. Ngai-Pesic	Chair of the Board	April 12, 2024
/s/ Dr. Hau L. Lee Dr. Hau L. Lee	Lead Independent Director	April 12, 2024
/s/ Anita Ganti Anita Ganti	Director	April 12, 2024
/s/ William H. Molloie, Jr. William H. Molloie, Jr.	Director	April 12, 2024
/s/ Anthony K. K. Ngai Anthony K. K. Ngai	Director	April 12, 2024
/s/ Dr. Walden C. Rhines Dr. Walden C. Rhines	Director	April 12, 2024
/s/ Jodi L. Shelton Jodi L. Shelton	Director	April 12, 2024