



SILVACO

Annual Report

2024

2024 Letter to Stockholders

DEAR STOCKHOLDERS,

On behalf of Silvaco Group, Inc., I am pleased to submit our Annual Report on Form 10-K for the fiscal year ended December 31, 2024. This report provides a comprehensive overview of our financial performance, strategic initiatives, and operational achievements throughout the year.

◆ FINANCIAL PERFORMANCE

In 2024, Silvaco achieved record gross bookings of \$65.8 million and revenue of \$59.7 million, reflecting our robust growth trajectory. We welcomed 46 new customers and deepened relationships across key markets, including power, automotive, memory, foundry, and photonics. Notably, we secured a \$5.0 million follow-on order for our FTCO™ digital-twin modeling product from a strategic memory customer, underscoring the value of our innovative solutions.

◆ STRATEGIC INITIATIVES

During the year, we made strong progress executing on our strategic initiatives:

- **Customer Growth and Market Focus:** We landed 46 new customers and expanded engagements with existing partners, focusing on high-growth markets such as power, memory, automotive, foundry, and photonics. Our differentiated products, agile R&D, and responsiveness to future R&D roadmaps have positioned us as a trusted partner for both new and existing customers.
- **Digital Twin Expansion:** Our FTCO™ platform continues to gain traction as a cornerstone of digital twin modeling for semiconductor manufacturing. This innovation expanded our SAM by an additional \$500 million, and we see significant runway in both commercial and government initiatives such as the CHIPS Act.
- **Global Reach and Partnerships:** We formed a strategic sales partnership with Micon Global to grow our footprint in EMEA and joined the SMART USA Institute under the CHIPS Manufacturing USA program, reinforcing our leadership in advanced semiconductor modeling technologies.

◆ OPERATIONAL EXCELLENCE

Our commitment to operational excellence was reaffirmed through the achievement of ISO 9001 certification, demonstrating our dedication to delivering high-quality products and services across our TCAD, EDA, and SIP portfolios.

Looking Ahead

We remain laser-focused on expanding our impact across the semiconductor design and manufacturing ecosystem—enabling our customers to develop the next generation of advanced technologies through simulation, digital twins, and AI automation. Our scalable platform, recurring revenue model, and innovation roadmap provide a strong foundation for continued growth.

We appreciate the opportunity to share our progress and remain committed to delivering long-term value to our stakeholders. The enclosed Form 10-K includes detailed financial statements, analysis, and additional context regarding our strategic progress. We look forward to building upon this momentum and thank you for your continued support and confidence.

Sincerely,



Babak Taheri

Babak Taheri, Ph.D.
CEO and Director

Silvaco Financial & Operating Highlights

OPERATING DATA

in millions (except per share amounts and percentages)

FISCAL YEAR ENDED DECEMBER 31	2021	2022	2023	2024
Gross Bookings	\$47.3	\$49.7	\$58.1	\$65.8
Revenue	\$42.0	\$46.5	\$54.2	\$59.7
GAAP Gross Margin	79%	81%	83%	80%
GAAP Net Income (Loss)	(\$1.8)	(\$3.9)	(\$0.3)	(\$39.4)
Diluted Net Income (Loss) Per Share	(\$0.09)	(\$0.20)	(\$0.02)	(\$1.53)
Non-GAAP Gross Margin*	79%	81%	83%	86%
Non-GAAP Operating Income (Loss)*	(\$1.3)	\$2.3	\$4.4	\$5.5
Non-GAAP Diluted Net Income (Loss) Per Share*	(\$0.08)	\$0.02	\$0.17	\$0.25

*Non-GAAP results presented above exclude certain non-cash and non-recurring items, including stock-based compensation, amortization of acquired intangible assets, payroll taxes from the IPO lockup release, acquisition-related estimated litigation claim and legal costs, IPO preparation expenses, and executive severance. Non-GAAP net income (loss) per share is calculated using diluted weighted-average shares when non-GAAP net income (loss) is reported, while GAAP diluted net income (loss) per share is based on basic or diluted shares depending on the income or loss position. Accordingly, the reconciling items may not mathematically reconcile GAAP to non-GAAP diluted net income (loss) per share due to differences in share count treatment.

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

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2024

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-42043

Silvaco Group, Inc.
(Exact name of Registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	7372 (Primary Standard Industrial Classification Code Number)	27-1503712 (I.R.S. Employer Identification Number)
Silvaco Group, Inc. 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)		

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	SVCO	The Nasdaq Stock Market LLC

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐ No ☒

The aggregate market value of common stock held by non-affiliates of the registrant (6,294,217 shares), based on the closing price of the registrant's common stock as reported on the Nasdaq Global Select Market on June 28, 2024 of \$17.98, was \$113,170,022. For purposes of this computation, all officers, directors, and 10% beneficial owners of the registrant are deemed to be affiliates. Such determination should not be deemed to be an admission that such officers, directors, or 10% beneficial owners are, in fact, affiliates of the registrant.

As of February 28, 2025 the registrant had 28,672,399 shares of common stock, \$0.0001 par value per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Part III of this Form 10-K are incorporated by reference from the registrant's definitive proxy statement for its 2025 annual meeting of stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year covered by this Form 10-K. Except with respect to information specifically incorporated by reference in this Form 10-K, the proxy statement is not deemed to be filed as part of this Form 10-K.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, or this Annual Report, contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements reflect the current views of management of Silvaco Group, Inc. with respect to, among other things, its operations, its financial performance and its industry. Forward-looking statements include all statements that are not historical facts. In some cases, you can identify these forward-looking statements by the use of words such as “outlook,” “believe(s),” “expect(s),” “potential,” “continue(s),” “may,” “will,” “should,” “could,” “would,” “seek(s),” “predict(s),” “intend(s),” “trends,” “plan(s),” “estimate(s),” “anticipates,” “projection,” “will likely result” and or the negative version of these words or other comparable words of a future or forward-looking nature. Such forward-looking statements are subject to various risks and uncertainties. Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. These factors include but are not limited to: (a) market conditions; (b) anticipated trends, challenges and growth in our business and the markets in which we operate; (c) our ability to appropriately respond to changing technologies on a timely and cost-effective basis; (d) the size and growth potential of the markets for our software solutions, and our ability to serve those markets; (e) our expectations regarding competition in our existing and new markets; (f) the level of demand in our customers’ end markets; (g) regulatory developments in the United States and foreign countries; (h) changes in trade policies, including the imposition of tariffs; (i) proposed new software solutions, services or developments; (j) our ability to attract and retain key management personnel; (k) our customer relationships and our ability to retain and expand our customer relationships; (l) our ability to diversify our customer base and develop relationships in new markets; (m) the strategies, prospects, plans, expectations, and objectives of management for future operations; (n) public health crises, pandemics, and epidemics and their effects on our business and our customers’ businesses; (o) the impact of the current conflicts between Ukraine and Russia and Israel and Hamas 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; (p) 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; (q) our ability to raise additional capital; (r) our ability to accurately forecast demand for our software solutions; (s) our expectations regarding the financial and other impacts of current and future litigation (including our ongoing litigation with the former shareholders of shareholders of Nangate Denmark ApS); (t) 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; (u) our expectations regarding our ability to obtain, maintain, protect and enforce intellectual property protection for our technology; (v) our status as a controlled company; (w) variations in certain financial statement line items from the estimated figures presented herein upon the completion of the Company’s financial reporting process; (x) our use of the net proceeds from our initial public offering and (y) the factors described in Part I, “Item 1.A. Risk Factors”. These factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included in this Annual Report. Silvaco Group, Inc. undertakes no obligation to publicly update or review any forward-looking statements, whether as a result of new information, future developments or otherwise, except as required by law.

NOTE REGARDING INDUSTRY AND MARKET DATA

This Annual Report contains market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts included in this report may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed in Part I, “Item 1A. Risk Factors,” contained in this Annual Report. Accordingly, investors should not place undue reliance on this information.

Part I

Unless otherwise indicated, “the Company,” “we,” “our,” “us” and “Silvaco” are used in this report to refer to the businesses of Silvaco Group, Inc. and its consolidated subsidiaries.

Item 1. Business

Overview

We are a provider of technology computer aided design (“TCAD”) software, electronic data automation (“EDA”) software and semiconductor intellectual property (“SIP”) solutions that 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 system-on-a-chip (“SoC”), integrated circuits (“ICs”) and SIP management tools to enable team collaborations on complex SoC designs. Our customers include semiconductor manufacturers, original equipment manufacturers (“OEMs”) and original design manufacturers (“ODMs”) who deploy our solutions in production flows across our target markets, including display, power devices, automotive, memory, high performance computing (“HPC”), Internet of Things (“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 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.

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 FTCTO™, for wafer-level fabrication facilities. FTCTO uses manufacturing data to perform statistical and physics-based machine learning software simulations to create a computer model or “digital twin” of a wafer that can be used to simulate the fabrication process. 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, all without the need to run physical wafers which can be time-consuming and expensive. We have partnered with Micron Technology, Inc. for the development of these modeling tools. We began 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.

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.

Our business model primarily consists of selling time-based software licenses, with an average of approximately 3 years per term-based license (“TBL”) for the years ended December 31, 2024 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.

During 2024, we generated \$65.8 million in bookings and recognized \$59.7 million of revenue, a \$39.4 million net loss and \$19.8 million of cash flows used in operating activities. We also had a GAAP operating loss of \$40.3 million and a non-GAAP operating income of \$5.5 million. 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 cash flows provided by 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. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Indicators and Non-GAAP Financial Measures” of Part II, Item 7 of this Annual Report on Form 10-K for additional information on bookings and non-GAAP operating income and the reconciliation of operating (loss) income to non-GAAP operating income.

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Silvaco Group, Inc. was incorporated in the State of Delaware in 2009 under the name Saratoga International, Inc., and changed its name to Silvaco Group, Inc. in November 2013.

Initial Public Offering

In May 2024, we completed our initial public offering (“IPO”), in which we sold 6,000,000 shares of our common stock at an offering price of \$19.00 per share and raised a total of \$114.0 million in gross proceeds, or approximately \$106.0 million in net proceeds after deducting underwriting discounts and commissions of \$7.9 million and before deducting offering-related expenses.

Industry Overview

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 gallium nitride (“GaN”) and silicon carbide (“SiC”) adds additional costs, time to market and complexity to the systems that enable AI.

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 Moore’s Law, which states that the number of circuits on a microchip will double every two years, has also led to the adoption of new semiconductor materials to address varying application requirements.

For example, SiC, and 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 time and costs. With each reduction in manufacturing process geometry comes a corresponding increase in manufacturing and development costs. Factors driving development cost and time include those 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. Additionally, 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.

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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.

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 (modular providers) and Tier 2s (IC providers) 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. Within data centers, artificial intelligence (“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 electronics such as smartphones, smart watches, wearables and virtual reality (“VR”) and gaming, consoles, as well as other display products such as flat-screen TVs, and more, we believe semiconductors used in display technologies are of increasing importance. 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, (“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.

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.

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 and Tier 2 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. 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. 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, low-noise amplifiers, power amplifiers, and RF switches for millimeter wave 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.

Our Solutions and Products

In addition to providing TCAD software, EDA software and SIP, we 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. As such, we are 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 business model includes:

- *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 complementary metal-oxide semiconductors (“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 (“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, VR, and augmented reality, 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.* 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 (“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.

Many of our solutions can be used in tandem with our competitors’ tools, and power devices and display providers 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 have invested in advanced semiconductor and photonics TCAD solutions, including investments in atomistic simulations, process etch, process deposition and design of experiments that are AI driven to serve these markets. We have also partnered with key research universities, including Purdue University, the University of Vienna and Stanford University, who have focused TCAD related studies, which we believe 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. 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.

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.

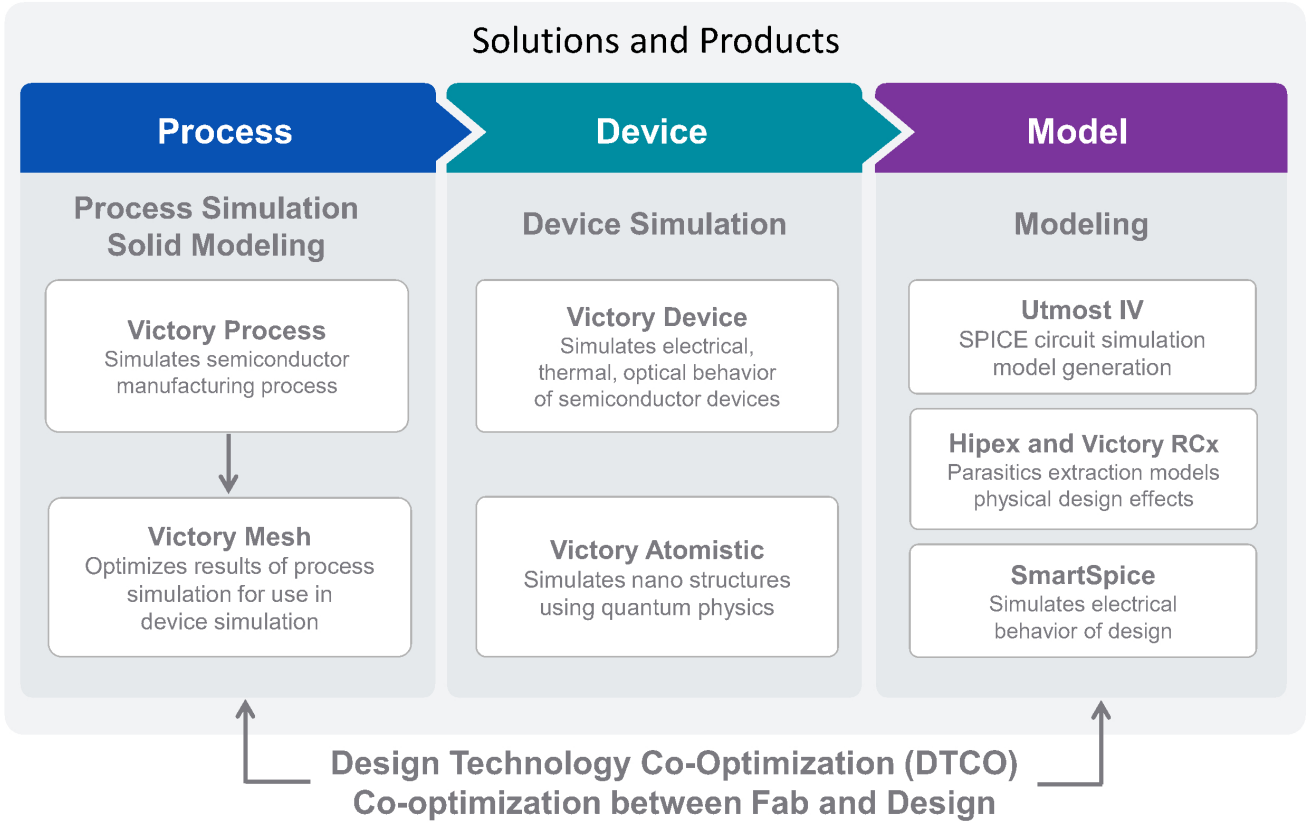
TCAD Solutions and Products

Our TCAD software solutions are designed 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.

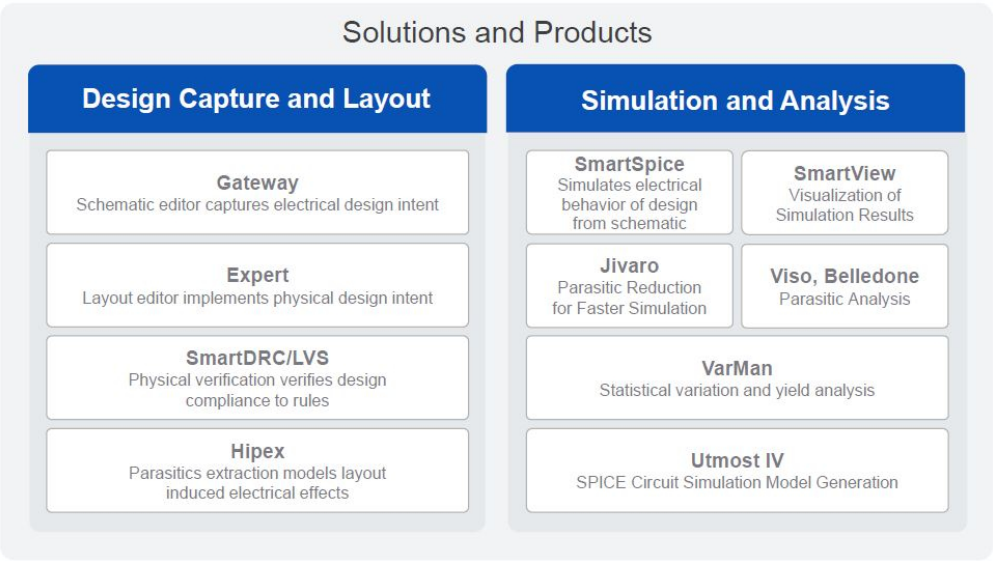
The graphic below shows the three classes of TCAD products we provide, namely Process, Device and Modeling. Utilizing all three classes of TCAD products enables our design co-optimization solutions for design and fabrication.



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.

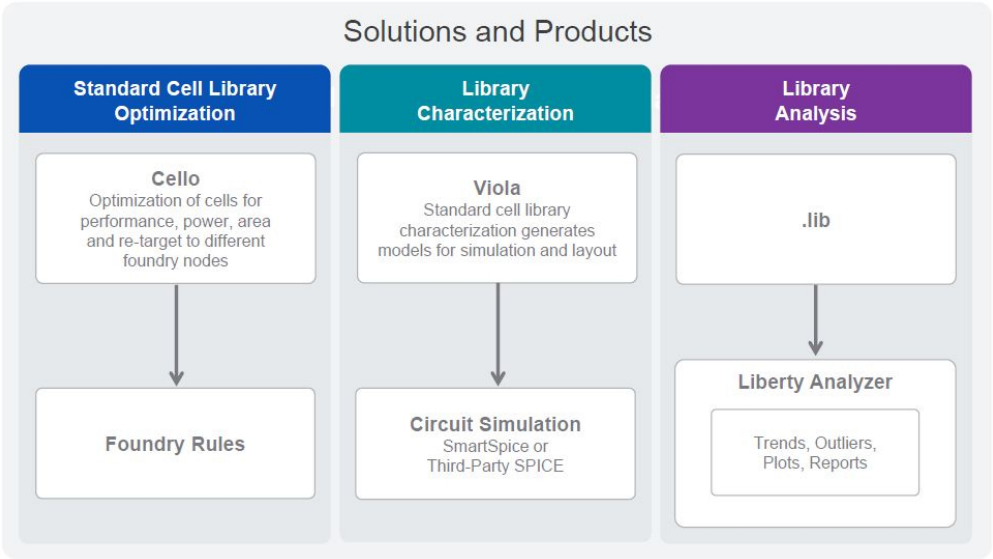
The graphic below shows our EDA products in the “design capture and layout” and design “simulation and analysis” classes. We have the ability to address specific customer needs by combining any of the products described below.



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 that are designed to enable foundries, design houses and allow 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 .35nm 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.

Our 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;

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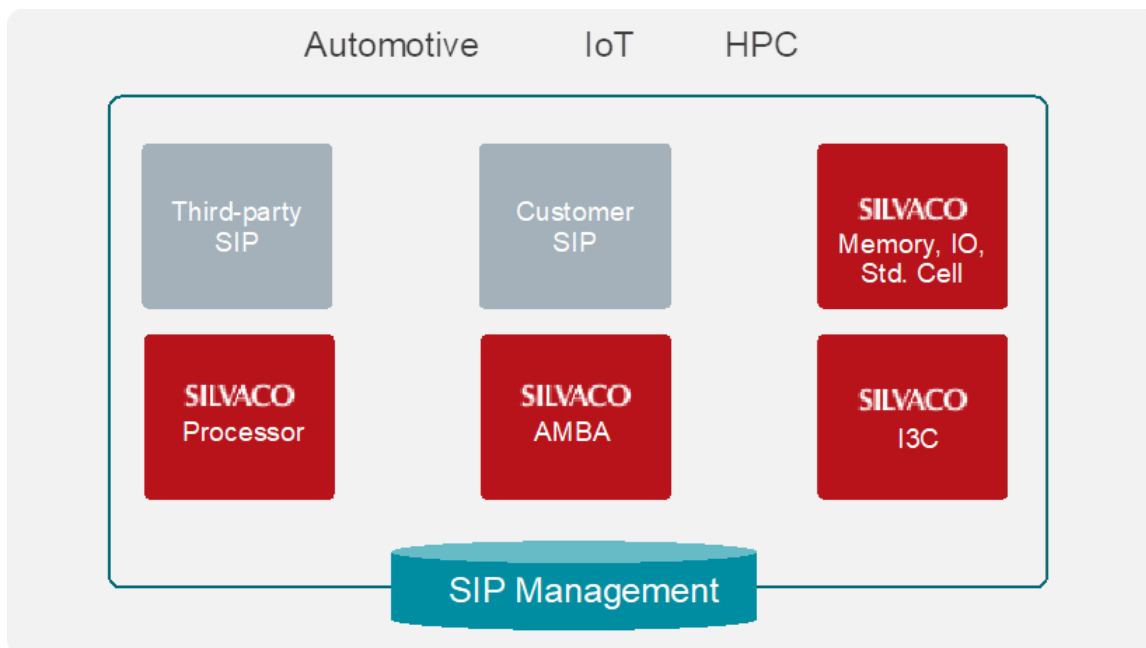
- IP migration to new process;
- Embedded memory compilers such as SRAM, Read Only Memories, or ROM, and Register files both as services and standard products. Our embedded memories span many process technology nodes optimized for speed, power and area;
- Library characterization services; and
- General 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 utilizes 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 HPC. 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.



Growth Strategy

As the demands of semiconductor technology continue to grow and increase in complexity, we intend to take the following actions to deliver value to our customers with our TCAD, EDA and SIP solutions, further our long-term growth and increase our market share:

- *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 growing display, automotive semiconductor, memory device and IoT markets. We believe our current position will allow us to expand our top line in concert with the growth of our existing customers in these markets.
- *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 2024 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 to seek strategic acquisitions to accelerate growth and expand our market footprint.* We have a 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 PolyEDA in 2021, which expanded our capabilities for rapid physical verification of IC designs prior to mask creation and manufacturing and cloud enablement of EDA tools. We also acquired Dolphin Design SAS's ("Dolphin") 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, 2024, contributed \$40.3 million of our total bookings in 2024, and the bookings received from strategic accounts grew at a 37% CAGR over the past two years. In addition, we gained 13 new customers in the power end-market and eight new customers in the memory end-market in 2024.
- *Establish, maintain and expand relationships with key technology providers and academic partners.* We have 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.

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, 2024, we had over 800 customers that relied on our solutions worldwide, of which over 200 are academic institutions.

As of December 31, 2024, our revenue was geographically distributed as follows: 53% from customers in Asia, 38% from customers in North America, and 9% from customers in Europe.

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, 2024, our sales and marketing team included 30 regional sales representatives positioned across these geographies. As of December 31, 2024, 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, 2024, we had 145 engineers worldwide, representing approximately 51% 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, 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, ("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, 2024, we had 19 issued U.S. patents expiring generally between 2028 and 2039, 3 pending U.S. patent applications, 4 issued foreign patents (including 2 French patents, 1 Taiwanese patent, and 1 Japanese patent) expiring generally between 2032 and 2041, 5 pending foreign patents (including 2 pending Taiwanese applications, 2 pending European patent applications, and 1 pending Japanese patent application) and 3 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, 2024, we have obtained registered U.S. federal trademarks for SILVACO and VIRTUAL WAFER FAB, and have pending applications for FTCO and PCAIO.

Competition

Within the TCAD software segment, we compete against several other vendors, including Synopsys, Inc., 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.

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, 2024, we had 279 employees worldwide, including 104 full-time equivalent employees located in the United States, consisting of 47 in research and development, 25 in sales and marketing, and 32 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.

Additional Information

Our website address is www.silvaco.com. Our website and the contents therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K. Through a link on the Investor Relations section of our website, we make available the following filings as soon as reasonably practicable after they are electronically filed with or furnished to the SEC: our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. All such filings are available free of charge. In addition, the SEC maintains an Internet site (<http://www.sec.gov>) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Item 1A. Risk Factors

1A description of the risks and uncertainties associated with our business is set forth below. You should carefully consider the risks and uncertainties described below, together with all of the other information in this Annual Report on Form 10-K, including the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and related notes. Our business, results of operations, financial condition, and prospects could also be harmed by risks and uncertainties not currently known to us or that we currently do not believe to be material. If any of the risks actually occur, our business, results of operations, financial condition and prospects could be harmed. In that event, the market price of our common stock could decline, and you could lose part or all of your investment.

Risk Factor Summary

- 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 experienced a material weakness in our internal control over financial reporting in the past. If we experience 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.

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 significantly 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., Ansys, Inc., Coventor, Inc., a Lam Research company, Cadence Design Systems, Inc., Siemens EDA, 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. In addition, new market entrants with novel technology could change the competitive landscape, potentially resulting in reduced market share, additional pressure to lower prices, or further increases in selling and marketing expense. 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 can vary significantly from period to period, depending largely on bookings recorded during a quarter as well as the timing of the receipt of purchase orders, and is difficult to predict. Revenue that we anticipate will be recognized in a given quarter may end up being recognized in subsequent quarters as a result of the timing of the booking, the specifics of the licensing arrangements or other factors. For example, in the third quarter of 2024, we expected to receive a significant purchase order of approximately \$5.0 million but the purchase order was not received until the first week of the fourth quarter. As a result, we did not recognize any revenues from that purchase order in the third quarter of 2024. 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 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 cyclicity 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 its adversaries, Hamas, Hezbollah and Iran, pandemics, including the COVID-19 pandemic, and natural disasters have, at times, contributed to widespread uncertainty and speculation in the semiconductor markets. For example 53% and 60% of our revenue was derived from our customers in APAC for the years ended December 31, 2024 and 2023, respectively.

During the years ended December 31, 2024 and 2023, 18% and 23% of our revenue was derived from our customers in China, respectively. 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.

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 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 recently increased in the United States and globally as a result of global supply chain issues, increased government spending and monetary policy, a rise in energy prices, and strong consumer demand coming out of the COVID-19 pandemic. As we experienced, 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 supply chain issues like those caused by the 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. During the years ended December 31, 2024 and 2023, 63% 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, such as COVID-19, 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.

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.

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

We face risks associated with doing business in China.

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

During the years ended December 31, 2024 and 2023, 18% and 23% of our revenue, respectively, was derived from our customers in China. Our operating expenses in China were \$3.4 million and \$3.2 million, respectively, for the years ended December 31, 2024 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 ("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 and December 2024, BIS tightened restrictions and compliance burdens on the transfer to China (including Macau) 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, as a result of the conflict between Israel and Hamas, Israel and other regional adversaries, including Hezbollah and Iran, have engaged in direct military hostilities. While we do not currently consider the conflict between Israel and its adversaries to have had a material impact on our business, the ongoing regional 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 response to Russia's invasion of Ukraine, 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 its adversaries 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 the years ended December 31, 2024 and 2023, we generated \$0.4 million and \$0.6 million in revenues from the Middle East, respectively, including Israel. During the year ended December 31, 2024 we had no employees in the Middle East, and during the year ended December 31, 2023 we had only 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. Unless and until the conflict in Ukraine is stabilized, we do not intend to reopen office locations in either country.

As of December 31, 2024, we had 8 employees and 4 contractors in Ukraine, all of whom were working remotely. If our employees in 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 the Israeli conflict 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 situation remains uncertain, and while it is difficult to predict the impact of any of the foregoing, the conflict and actions taken in response to 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.

During the years ended December 31, 2024 and 2023, 63% 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.

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 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 future debt, equity or other applicable financing arrangements. We believe that our cash flow from operations and existing cash and cash equivalents and marketable securities balances 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, as receiver. Similarly, on March 12, 2023, Signature Bank and Silvergate Capital Corp. were each swept into receivership. Although we are not a borrower or party to any financial 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, 2024, \$2.4 million, or 12%, of our cash and cash equivalents were maintained with one financial institution, where 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.

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 forecast 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 or fund such acquisitions or investments, we could use significant amounts of cash or incur substantial debt.

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.

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 report or other public statements we have or may make relating to the size and expected growth of our 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 report, 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 have, and may in the future 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 regularly 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 the IPO in May of 2024, we became 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 members of her immediate family collectively holding more than 50% of the voting power of our company, following the completion of the IPO in May, we became 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 the IPO, 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 her immediate family members 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 her immediate family members 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 stockholder may conflict with or differ from your interests as a stockholder

The Pesic Family (as defined below) own 20,173,590 shares of our common stock, collectively representing approximately 70.7% of our total outstanding common stock. For so long as the Pesic Family 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 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, the Pesic Family 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, dated April 12, 2024, among us and the Pesic Family 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 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 or bylaws 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 has the ability to designate up to four nominees for our board of directors and one non-voting board observer, depending on ownership levels.

The Pesic Family'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.

The Pesic Family are not prohibited from selling a controlling interest in us to a third party and may do so without the approval of other stockholders and without providing for a purchase of shares of common stock held by other stockholders. Accordingly, the shares of common stock held by other stockholders may be worth less than they would be if the Pesic Family did not maintain voting control over us.

The interests of the Pesic Family could conflict with or differ from the interests as a holder of other stockholders. For example, the concentration of ownership held by the Pesic Family could delay, defer or prevent a change of control of us or impede a merger, takeover or other business combination that other stockholders may otherwise view favorably. So long as the Pesic Family 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, or other members of the Pesic Family, with respect to our past, future and ongoing relationships may adversely affect our operating results.

We lease several office facilities from entities controlled by Ms. Ngai-Pesic pursuant to which we recorded a rent expense of \$0.5 million during each of the years ended December 31, 2024 and 2023. Because we are controlled by the Pesic Family, 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 Note 8 to our consolidated financial statements 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, or other members of the Pesic Family, and us or members of our board of directors or management in a number of areas relating to our or their past and ongoing relationships. We may not be able to resolve any potential conflicts, and even if we do, the resolution may be less favorable than if we were dealing with an unaffiliated party.

Risks Related to Legal, Regulatory, Accounting and Tax Matters

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

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

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

We are subject to governmental export and import controls 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 ("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. In July 2024, OFAC issued a cautionary letter regarding the sanctions matters instead of pursuing a civil monetary penalty or taking other enforcement action. However, OFAC reserved the right to take future enforcement action should additional information warrant renewed attention. If either BIS and OFAC chooses to bring an enforcement action against us in relation to any potential violations in the future, 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.

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 we sought declaratory relief in the California Superior Court to clarify our obligations regarding the earnout payments due to the selling shareholders of Nangate following its acquisition by us in 2018. In February 2021, the Nangate Parties filed a cross-complaint against us, as well as one current and one former member of our board of directors (the "Co-Defendants"). The cross-complaint alleged breach of contract, fraud, and negligent misrepresentation among other causes of action.

In January 2022, the Nangate Parties filed a third amended cross-complaint against the Company and the Co-Defendants, seeking \$20.0 million in damages for breach of contract, fraud, and unfair business practices, as well as punitive damages.

On July 23, 2024, a jury awarded the Nangate Parties \$11.3 million in damages under breach of contract related claims, including breach of contract and breach of the covenant of good faith and fair dealing (the "Contract Damages"), and court and litigation related costs and certain expert expenses subject to the Nangate Parties establishing the legal right to them and to be determined by the court.

The jury also found the Company and the Co-Defendants liable for fraud claims, including false promise and intentional misrepresentation, and awarded the Nangate parties \$6.6 million in compensatory damages. On August 16, 2024, the jury awarded \$17.0 million in punitive damages to be paid by the Company and a total of \$16.0 million to be paid by the Co-Defendants (together with the compensatory damages, the “Fraud Damages”). The punitive damages are incremental to the \$6.6 million compensatory damages awarded. The Nangate Parties will have the option to choose either the Contract Damages or the Fraud Damages, but in no circumstances will the Nangate Parties receive both remedies. The Company and the Co-Defendants may appeal the judgement, which will require the Company to collateralize and post an appeal bond of up to \$35.4 million on or before March 24, 2025.

The Company recorded a charge for the estimated litigation awarded and accrued expenses and other current liabilities of \$11.3 million for the year ended December 31, 2024. See Note 14 of our consolidated financial statements in Part II, Item 8 on this Annual Report on Form 10-K for further discussion on the Nangate Litigation.

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. Aldini AG seeks \$703 million and punitive damages. On March 17, 2023, the Second Amended Complaint was dismissed on all counts. On December 19, 2024, the U.S. Court of Appeals for the Ninth Circuit affirmed the dismissal of all claims brought against the Company by Aldini AG. See Note 14 of our consolidated financial statements in Part II, Item 8 on this Annual Report on Form 10-K for further discussion.

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 the IPO 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 the price at which you bought them, including the IPO 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 have fluctuated and 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 report, 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 geopolitical changes, 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, the Pesic Family, including upon the expiration of contractual lock-up agreements, and other market participants, in whom ownership of our common stock may be concentrated following the IPO;
- 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 Annual Report on Form 10-K.

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. 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 previously 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.

Until the IPO, we 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 have incurred and expect to incur stock-based compensation expense, which we did not incur 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 status as a public company. For example, we are 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, the rules and regulations of the SEC and the rules and regulations of Nasdaq. To comply with the various requirements applicable to public companies, we have had 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 have, and intend to continue to, invest resources to comply with evolving laws, regulations and standards. These investments have, and are likely to continue to, result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities.

Our management and other personnel are also required 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 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 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.

We are 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 is 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.

An active trading market for our common stock may not be sustained and you may not be able to sell your shares at or above the price at which you bought them, including the IPO price, or at all.

An active market in our common stock 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 is not sustained, it may be difficult for you to sell shares you purchased in the IPO 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, 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.

Future issuances of our common stock or sales of a substantial number of shares of our common stock in the public market, 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 in the future. 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 the IPO, we had approximately 28,529,318 shares of common stock outstanding, including 2,235,101 vested shares to be issued pursuant to the 2014 Stock Incentive Plan (the “2014 Plan”), and 294,217 shares issued to Micron in connection with the mandatory conversion of the senior subordinated convertible promissory note (the “Micron Note”). All of the shares of common stock sold in the IPO and issued to Micron are 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, were subject to lock-up agreements with the underwriters of the IPO, which have since expired. We have registered all shares of common stock that we may issue under equity compensation plans and therefore, those shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates. Because the restrictions on resale under the lock-up agreements have ended, 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.

Other than shares which are vested as of the end of the lock-up period, we do not anticipate satisfying the anticipated tax withholding and remittance obligations as a result of vesting of restricted stock units (“RSUs”) granted to our employees. 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. 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 may 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 may 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 have broad discretion in the use of the net proceeds to us from the IPO and may not apply the proceeds in ways that increase our market value or improve our operating results.

Our management has considerable discretion in the application of the net proceeds from the IPO, 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 the IPO 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 used a portion of the proceeds of the IPO to repay in full (i) the 2022 Credit Line payable to Ms. Ngai-Pesic and (ii) the loan facility with East West Bank (the “East West Bank Loan”). Until the net proceeds we received are fully used, they may be placed in investments that do not produce income or that lose value. Additionally, we have broad discretion in the use of the net proceeds from the IPO when determining whether to satisfy the anticipated tax withholding and remittance obligations related to vesting of RSUs granted to our employees on their behalf after settling the awards 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 these vested RSUs.

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

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

Our amended and restated charter and bylaws 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 provide 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 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 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 does 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 do 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.

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

General Risk Factors and Risks Related to Being a Public Company

We have experienced a material weakness in our internal control over financial reporting in the past. If we experience 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 are 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 the annual report for our fiscal year ending December 31, 2025. 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, 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 identified material weaknesses in our internal control over financial reporting (“ICFR”). 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 ICFR 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.

Any failure to maintain internal control over financial reporting or to identify any 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 implement or maintain other effective control systems required of public companies, could also adversely affect our future access to the capital markets.

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

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

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

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

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

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

We are also a “smaller reporting company.” We may continue to be a smaller reporting company 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.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 1C. Cybersecurity

Our SVP, Global Operations is responsible for monitoring the prevention, mitigation, detection, and remediation of cybersecurity incidents and reports the same to the Audit Committee of the Board each quarter. The Audit Committee has been delegated the responsibility for fulfilling the Board’s oversight responsibilities regarding cybersecurity risk.

Our cybersecurity risk management program is part of our overall approach to enterprise risk management. Our cybersecurity risk management program seeks to protect our information systems by managing and reducing material risks from cybersecurity threats and by responding to and mitigating cybersecurity incidents. We have designed our cybersecurity risk management program using certain industry practices and frameworks as a guide, including those established by the International Organization for Standardization and the National Institute of Standards and Technology, although we may not meet all technical standards, specifications, or requirements. We employ a cross-functional approach to preserving the confidentiality, security and availability of the employee, customer, supplier, and partner information that we collect and store.

We have implemented cybersecurity processes, measures and controls to assist management in our assessment, identification and management of risks from cybersecurity threats. Our security information and event management system and team, in coordination with our edge security, monitor the events, analyze threats, and coordinate with our incident response team pursuant to our incident response plan, which includes the process to be followed for reporting of incidents. Our cybersecurity risk management involves identifying information assets and potential threats, assessing and prioritizing risks, employing various tools and techniques, including vulnerability scanning and penetration testing. Based on the risk assessment, appropriate security measures are implemented. We conduct annual and ongoing security awareness and behavioral change training for employees to educate them on cybersecurity best practices and train them to recognize phishing attempts. We also assess and manage cybersecurity risks associated with third-party service providers, including those in our supply chain or vendors who have access to our data or systems. Our cybersecurity process is iterative, with regular reviews and updates to help improve and respond to a dynamic and continuously evolving threat landscape.

In the last three fiscal years, we have not experienced a cybersecurity incident which has been determined to be material, and the expenses we have incurred from cybersecurity incidents and threats were immaterial, including penalties and settlements, of which there were none.

Item 2. Properties

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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, 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.

Item 3. Legal Proceedings

We are party to various litigation matters and claims arising from time-to-time in the ordinary course of business. For more information regarding our current legal proceedings, see Note 14 of our consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K and “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.”

Item 4. Mine Safety Disclosures

Not applicable.

Part II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information on Common Stock

Our common stock is traded on the Nasdaq Global Select Market under the symbol "SVCO". As of February 28, 2025, there was 1 holder of record of our common stock. Because most of our shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial stockholders represented by these holders of record.

Dividends

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings to fund business development and growth, and do not expect to pay any dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, general business conditions and other factors that our board of directors may deem relevant.

Use of Proceeds

On May 13, 2024, the Company completed its IPO in which an aggregate of 6,000,000 shares of Common Stock at a price to the public of \$19.00 per share pursuant to a Registration Statement on Form S-1 that was declared effective on May 8, 2024 (File No. 333-278666). Jefferies LLC and TD Securities (USA) LLC acted as joint book-running managers for the IPO, Needham & Company, LLC as lead manager, and Craig-Hallum Capital Group LLC and Rosenblatt Securities Inc. acted as co-managers for the IPO. The gross proceeds to the Company from the IPO were \$114.0 million, with \$106.0 million funded to the Company after deducting underwriting discounts and commissions.

Proceeds from the IPO have been used for general corporate purposes, including working capital, selling and marketing activities, research and product development, general and administrative matters, and capital expenditures. Additionally, proceeds were used to repay \$2.0 million outstanding under the 2022 Credit Line and \$4.3 million under the East West Bank Loan. There has been no material change in our intended use of proceeds as described in the Registration Statement.

Item 6. [Reserved]

Item 7. 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 the related notes included in Part II, Item 8 of this Annual Report on Form 10-K. This discussion and other parts of this report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, 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 under Part I, Item 1A. Risk Factors of this Annual Report on Form 10-K. Forward-looking statements may be identified by words including, but not limited to, "may," "will," "could," "would," "can," "should," "anticipate," "expect," "intend," "believe," "estimate," "project," "continue," "forecast," "likely," "potential," "seek," or the negatives of such terms and similar expressions. The information included herein represents our estimates and assumptions as of the date of this filing. Unless required by law, we undertake no obligation to update publicly any forward-looking statements, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

Overview

We are 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. 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 system-on-a-chip ("SoC") and integrated circuits ("ICs"), and SIP management tools to enable team collaborations on complex SoC designs. Our customers include semiconductor manufacturers, original equipment manufacturers ("OEMs") and design teams who deploy our solutions in production flows across our target markets, including display, power devices, automotive, memory, high performance computing ("HPC"), internet of things ("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, 2024 and 2023, respectively, and associated maintenance and services accounted for 26% and 27% of our revenue for the years ended December 31, 2024 and 2023, respectively. For the years ended December 31, 2024 and 2023, approximately 90% and 81% of our bookings came from existing customers and 10% 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.

Similar to trends observed across the semiconductor industry, we saw a decline in orders from Asia during the year ended December 31, 2024 primarily driven by economic challenges and the ongoing strain in U.S.-China trade relations. Despite these challenges, fiscal year 2024 includes record results for bookings and revenue, driven by sustained demand for our digital twin modeling platform and growth in key semiconductor markets. During the year ended December 31, 2024, our bookings were \$65.8 million as compared to \$58.1 million for the year ended December 31, 2023. Our revenue was \$59.7 million for the year ended December 31, 2024 as compared to \$54.2 million for the year ended December 31, 2023.

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 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. The growth of our business and our future success are also subject to uncertainties and risks as described in Part I, Item 1A., Risk Factors of this Annual Report on Form 10-K.

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 that also instruct fabrication facility managers and the next generation of chip designers 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. Over time, we expect that existing customers will choose to upgrade and/or 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 (“AI”), -based solution named fab technology co-optimization or FTCO™ 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. Additionally, we currently, and have in the past, and may in the future, partner with third parties to expand our product offerings to our customers. 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

We believe that trends in the global EDA software market, including 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, 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 35% and 24% of revenue for the years ended December 31, 2024 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 success depends in part on our ability to identify, complete and integrate acquisitions. Our goal for future potential acquisitions 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 mergers and acquisitions, 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. 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. We have also incurred a significant increase in stock-based compensation expense. 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.

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 developed in partnership with NXP Semiconductors Netherlands B.V. ("NXP") (the "NXP IP"). 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 standard SIPs 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 the NXP IP, we generally act as a principal to the transaction because we have a license to sell, and therefore control the NXP IP that we deliver to the customer. Consistent with our role as the principal, we recognize SIP revenue of the NXP IP on a gross basis. Any royalty fees based upon unit sales, revenue or flat fees which were paid to NXP were reported in cost of revenue upon delivery pursuant to the terms and conditions of our contractual obligations with the customers.

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 ("PCS"), which includes unspecified technical enhancements and customer support. 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.

We also recognized an immaterial portion of our revenue from device characterization and modeling services for the years ended December 31, 2024 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, amortization of acquired intangible assets, and royalties related to the recognized revenue. Historically, we have not recognized stock-based compensation expense, but after the consummation of the IPO during the year ended December 31, 2024, we recognized \$3.0 million of stock-based compensation expense in cost of revenue. We also recognized \$0.7 million of amortization associated with our acquired intangible assets in cost of revenue during the year ended December 31, 2024. See Note 11 and Note 6 of our consolidated financial statements in Item 8 in this Annual Report on Form 10-K for further discussion. Gross profit represents revenue less cost of revenue.

Operating Expenses

Our operating expenses consist of research and development, selling and marketing, general and administrative, and estimated litigation claim. Related personnel costs are the most significant component of our operating expenses and consist of salaries, benefits, stock-based compensation expense, 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 expense, but after the consummation of the IPO during the year ended December 31, 2024, we recognized an aggregate of \$23.9 million of stock-based compensation expense in operating expenses. Of the aggregate stock-based compensation expense recorded, we recognized \$14.5 million, \$5.1 million, and \$4.3 million in general and administrative expense, research and development expense, and selling and marketing expense, respectively, during the year ended December 31, 2024. See Note 11 of our consolidated financial statements in Item 8 in this Annual Report on Form 10-K for further discussion.

Research and Development

Our research and development expense consists primarily of personnel costs comprised of salaries, stock-based compensation expense, and 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, stock-based compensation expense, 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, stock-based compensation expense, 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 expenses 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.

Estimated Litigation Claim

Estimated litigation claim expense consists of legal costs that became probable and reasonably estimable associated with our obligations with respect to the earnout payment due to the selling shareholders of Nangate, Inc. ("Nangate"), along with a third cross complainant (collectively, the "Nangate Parties"). On July 23, 2024, a jury awarded the Nangate Parties \$11.3 million in damages under breach of contract related claims, including breach of contract and breach of covenant of good faith and fair dealing, and court and litigation related costs and certain expert expenses subject to the Nangate Parties establishing the legal right to them and to be determined by the court (the "Contract Damages"). The jury also awarded damages for certain of the fraudulent and negligent misrepresentation claims of \$6.6 million to the Nangate Parties and incremental punitive damages, including \$17.0 million payable by the Company (the "Fraud Damages"). The Nangate Parties will have the option to choose either the Contract Damages or the Fraud Damages, but in no circumstances will the Nangate Parties receive both remedies. We and the Co-Defendants may appeal the judgement, which will require us to collateralize and post an appellate bond of up to \$35.4 million on or before March 24, 2025. We recorded a charge to estimated litigation claim and accrued expenses and other current liabilities of \$11.3 million during the year ended December 31, 2024. See Note 14 of our consolidated financial statements in Item 8 in this Annual Report on Form 10-K for further discussion.

Loss on Debt Extinguishment

Loss on debt extinguishment includes losses incurred related to the extinguishment of our note purchase agreement with Micron Technology Inc. and our loan facility with East West Bank.

Interest Income

Interest income includes interest income earned on our cash and cash equivalents and marketable securities balances and accretion of the purchase discounts on our marketable securities balances.

Interest and Other Expense, Net

Interest and other expense, net includes 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, 2024 and 2023:

	Year Ended December 31,	
	2024	2023
	<i>(in thousands)</i>	
Revenue:		
Software license revenue	\$ 43,991	\$ 39,331
Maintenance and service	15,689	14,915
Total revenue	59,680	54,246
Cost of revenue	12,042	9,354
Gross profit	47,638	44,892
Operating expenses:		
Research and development	20,740	13,170
Selling and marketing	18,300	12,707
General and administrative	37,571	17,881
Estimated litigation claim	11,306	—
Total operating expenses	87,917	43,758
Operating (loss) income	(40,279)	1,134
Loss on debt extinguishment	(718)	—
Interest income	2,976	6
Interest and other expense, net	(899)	(630)
(Loss) income before income tax provision	(38,920)	510
Income tax provision	484	826
Net loss	\$ (39,404)	\$ (316)

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The following table summarizes our results of operations as a percentage of total revenue for the years ended December 31, 2024 and 2023:

	Year Ended December 31,	
	2024	2023
Revenue:		
Software license revenue	74 %	73 %
Maintenance and service	26 %	27 %
Total revenue	100 %	100 %
Cost of revenue	20 %	17 %
Gross profit	80 %	83 %
Operating expenses:		
Research and development	35 %	24 %
Selling and marketing	31 %	23 %
General and administrative	63 %	33 %
Estimated litigation claim	19 %	— %
Total operating expenses	147 %	81 %
Operating (loss) income	(67)%	2 %
Loss on debt extinguishment	(1)%	— %
Interest income	5 %	— %
Interest and other expense, net	(2)%	(1)%
(Loss) income before income tax provision	(65)%	1 %
Income tax provision	1 %	2 %
Net loss	(66)%	(1)%

Comparison of the Years Ended December 31, 2024 and 2023

Revenue

	Year Ended December 31,	
	2024	2023
(in thousands)		
Revenue:		
Software license revenue	\$ 43,991	\$ 39,331
Maintenance and service	15,689	14,915
Total revenue	\$ 59,680	\$ 54,246

Despite economic challenges in Asia including the impact of the ongoing strain in U.S.-China trade relations, total revenue increased by \$5.4 million, or 10%, to \$59.7 million for the year ended December 31, 2024 from \$54.2 million for the year ended December 31, 2023. Revenue associated with our TCAD and EDA tools increased by \$8.1 million and \$0.6 million, respectively, and revenue derived from IP sales decreased by \$3.2 million. Software license revenue increased by \$4.7 million, or 12%, to \$44.0 million for the year ended December 31, 2024 from \$39.3 million for the year ended December 31, 2023. Maintenance and service revenue increased by \$0.8 million, or 5%, to \$15.7 million for the year ended December, 2024 from \$14.9 million for the year ended December 31, 2023.

Gross Profit and Cost of Revenue

	Year Ended December 31,	
	2024	2023
	(in thousands)	
Total revenue	\$ 59,680	\$ 54,246
Cost of revenue	12,042	9,354
Gross profit	\$ 47,638	\$ 44,892
Gross profit margin	80 %	83 %

Gross profit increased by \$2.7 million, or 6%, to \$47.6 million for the year ended December 31, 2024 from \$44.9 million for the year ended December 31, 2023. Gross profit margin decreased to 80% for the year ended December 31, 2024 from 83% for the year ended December 31, 2023. The decrease was attributable to \$3.0 million in stock-based compensation expense recorded upon the consummation of the IPO and \$0.7 million of amortization associated with our acquired intangible assets.

Operating Expenses

	Year Ending December 31,	
	2024	2023
	(in thousands)	
Operating expenses		
Research and development	\$ 20,740	\$ 13,170
Selling and marketing	18,300	12,707
General and administrative	37,571	17,881
Estimated litigation claim	11,306	\$ —
Total operating expenses	\$ 87,917	\$ 43,758

Research and Development Expenses

Research and development expenses were \$20.7 million and \$13.2 million for the years ended December 31, 2024 and 2023, respectively. The increase of \$7.6 million, or 57%, was primarily due to \$5.1 million of stock-based compensation expense recorded as a result of the consummation of the IPO, \$1.0 million increase in salary and benefits expenses, primarily related to increased headcount and merit increases, a \$0.9 million increase in software maintenance expense, and a \$0.6 million increase in engineering support expenses.

Selling and Marketing Expenses

Selling and marketing expenses were \$18.3 million and \$12.7 million for the years ended December 31, 2024 and 2023, respectively. The increase of \$5.6 million, or 44%, was primarily due to \$4.3 million of stock-based compensation expense recorded as a result of the consummation of the IPO, a \$1.0 million increase in salary and benefits expenses, primarily related to increased headcount and merit increases, and a \$0.3 million increase in sales and marketing related travel, conferences, trade shows and advertising.

General and Administrative Expenses

General and administrative expenses were \$37.6 million and \$17.9 million for the years ended December 31, 2024 and 2023, respectively. The increase of \$19.7 million, or 110%, was primarily due to \$14.5 million of stock-based compensation expense recorded as a result of the consummation of the IPO, a \$3.5 million increase in legal, professional and audit fees, a \$0.6 million increase in corporate insurance, a \$0.5 million increase in salary and benefits expenses, primarily related to increased headcount and merit increases, and \$0.6 million of severance expenses.

Estimated Litigation Claim

Estimated litigation claim was \$11.3 million for the year ended December 31, 2024. The estimated litigation claim for the year ended December 31, 2024 consists of a \$11.3 million charge recorded due to a jury's verdict to award the Nangate Parties damages under breach of contract related claims (the "Nangate Litigation"). We and the Co-Defendants may appeal the judgement, which will require us to collateralize and post an appellate bond of up to \$35.4 million on or before March 24, 2025. See Note 14 of our consolidated financial statements in Item 8 in this Annual Report on Form 10-K for further discussion.

Loss on debt extinguishment

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On May 13, 2024, the senior subordinated convertible promissory note (the “Micron Note”) between us and Micron Technology, Inc. (“Micron”) was converted into 294,217 shares of our common stock in connection with the consummation of the IPO. As a result, \$5.6 million was recognized in additional paid-in capital and we recognized a loss on debt extinguishment of \$0.6 million during the year ended December 31, 2024. We also recognized a loss on debt extinguishment of \$0.1 million associated with the settlement of our loan facility with East West Bank (the “East West Bank Loan”) during the year ended December 31, 2024. See Note 10 of our consolidated financial statements in Item 8 in this Annual Report on Form 10-K for further discussion.

Interest Income

Interest income reflects interest earned and accretion on our cash and cash equivalents and marketable securities.

Interest and Other Expense, Net

Interest and other expense, net, was expense of \$0.9 million and \$0.6 million for the years ended December 31, 2024 and 2023, respectively. The change in interest and other expense, net, for the year ended December 31, 2024 was primarily due to an increase in the amount of interest associated with our vendor financing obligation during the current year. The Company does not have any interest-bearing debt outstanding as of December 31, 2024.

Income Tax Provision

Income tax provision was \$0.5 million and \$0.8 million for the years ended December 31, 2024 and 2023, respectively. See Note 12 of our consolidated financial statements in Item 8 in this Annual Report on Form 10-K for 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.

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 satisfaction of our customer obligations, and not of the successful execution of a booking 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, 2024 and 2023, we recorded \$65.8 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, 2024 and 2023.

	Three Months Ended							
	Dec 31, 2024	Sep 30, 2024	Jun 30, 2024	Mar 31, 2024	Dec 31, 2023	Sep 30, 2023	Jun 30, 2023	Mar 31, 2023
	(in thousands)							
Bookings	\$ 20,310	\$ 9,875	\$ 19,478	\$ 16,112	\$ 15,565	\$ 12,487	\$ 14,362	\$ 15,667

Non-GAAP Operating Income and Non-GAAP Net Income

We report our financial results in accordance with GAAP. However, our management believes that non-GAAP operating income and non-GAAP net income 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 facilitate 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.

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We define non-GAAP operating income as our GAAP operating (loss) income adjusted to exclude certain costs, including IPO preparation costs, acquisition-related estimated litigation claim and legal costs, stock-based compensation expense, amortization of acquired intangible assets, payroll taxes from the restricted stock unit ("RSU") lockup release, and executive severance costs. We define non-GAAP net income as our GAAP net loss adjusted to exclude certain costs, including IPO preparation costs, acquisition-related estimated litigation claim and legal costs, stock-based compensation expense, amortization of acquired intangible assets, payroll taxes from the RSU lockup release, executive severance costs, change in fair value of contingent consideration, foreign exchange (gain) loss, loss on debt extinguishment, and the income tax effect on non-GAAP items. We monitor non-GAAP operating income and non-GAAP net income 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 and non-GAAP net income because these items are non-cash in nature or management believes they are not indicative of our core operating performance and render comparisons with prior periods and competitors less meaningful. We adjust GAAP operating (loss) income and net loss for these items to arrive at non-GAAP operating income and non-GAAP net income 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. By excluding items that may not be indicative of our recurring core operating results, we believe that non-GAAP operating income and non-GAAP net income provide meaningful supplemental information regarding our performance.

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

	Year Ended December 31,	
	2024	2023
Operating (loss) income	\$ (40,279)	\$ 1,134
Add:		
Stock-based compensation expense	26,915	—
Acquisition-related estimated litigation claim and legal costs ⁽¹⁾	15,935	1,707
Amortization of acquired intangible assets ⁽²⁾	953	339
IPO preparation costs ⁽³⁾	873	1,221
Payroll taxes from RSU lockup release ⁽⁴⁾	725	—
Executive severance ⁽⁵⁾	415	—
Non-GAAP operating income	<u>\$ 5,537</u>	<u>\$ 4,401</u>

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

	Year Ended December 31,	
	2024	2023
Net loss	\$ (39,404)	\$ (316)
Add:		
Stock-based compensation expense	26,915	—
Acquisition-related estimated litigation claim and legal costs ⁽¹⁾	15,935	1,707
Amortization of acquired intangible assets ⁽²⁾	953	339
IPO preparation costs ⁽³⁾	873	1,221
Payroll taxes from RSU lockup release ⁽⁴⁾	725	—
Executive Severance ⁽⁵⁾	415	—
Change in fair value of contingent consideration ⁽⁶⁾	(27)	325
Foreign exchange loss	404	335
Loss on debt extinguishment ⁽⁷⁾	718	—
Income tax effect of non-GAAP adjustments ⁽⁸⁾	(831)	(169)
Non-GAAP net income	<u>\$ 6,676</u>	<u>\$ 3,442</u>

(1) Reflects litigation-related expenses incurred in connection with our acquisitions and the Nangate Litigation estimated claim accrual.

(2) Reflects the amortization of intangible assets attributable to our acquisitions and the NXP IP.

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

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- (4) Reflects payroll taxes related to the release of vested RSUs which had been subject to lock-up agreements in connection with the Company's IPO under the Company's 2014 Plan.
- (5) Reflects executive severance which occurred in connection with management changes.
- (6) Reflects the change in fair value of contingent consideration recorded in connection with our acquisitions.
- (7) Reflects loss incurred on conversion of the Micron Note to common stock in connection with the IPO and the loss incurred on the extinguishment of the East West Bank Loan.
- (8) Reflects the increase in income tax expenses due to non-GAAP adjustments.

Liquidity and Capital Resources

Since inception, we have financed operations primarily through proceeds received from payments from our customers, borrowings from Ms. Ngai-Pesic and other lenders, and the net proceeds from the sale of our common stock in the IPO. Our primary sources of liquidity are cash, cash equivalents and marketable securities including cash generated from operations. As of December 31, 2024, we had \$19.6 million in cash and cash equivalents, of which \$4.5 million was held by our foreign subsidiaries, and \$63.1 million in current marketable securities.

On June 13, 2022, we entered into a \$4.0 million line of credit (the "2022 Credit Line") with Ms. Ngai-Pesic bearing interest at a rate of prime plus 1% per annum. As of December 31, 2023, the principal balance of the 2022 Credit Line was \$2.0 million. In May 2024, the 2022 Credit Line was repaid in full and terminated.

In December 2023, we entered into 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 as reported in The Wall Street Journal or (ii) four and one half percent (4.5%). We drew \$4.3 million on the East West Bank Loan during the year ended December 31, 2024. In May 2024, the East West Bank Loan was repaid in full and terminated.

On April 11, 2024, we amended and restated our license agreement with NXP, pursuant to which we recorded an associated vendor financing obligation. The vendor financing obligation was \$4.4 million as of December 31, 2024. We determined that the vendor financing obligation had an imputed interest rate of 9%, which is reflective of our borrowing rate with similar terms to that of the license agreement.

On April 16, 2024, we entered into a note purchase agreement with Micron, a customer of the Company, pursuant to which we issued the Micron Note in the principal amount of \$5.0 million. The Micron Note accrued interest at a rate of 8% per annum with principal and interest due upon maturity three years after the date of issuance. On May 13, 2024, the Micron Note was converted into 294,217 shares of our common stock in connection with the consummation of the IPO.

On May 13, 2024, we sold 6,000,000 shares of common stock in the IPO at a price to the public of \$19.00 per share. The gross proceeds from the IPO were \$114.0 million, with \$106.0 million funded to us after deducting underwriting discounts and commissions of \$8.0 million.

We believe our cash and cash equivalents and marketable securities balances, which include proceeds received in connection with the IPO and the \$5.0 million received in connection with the Micron Note, 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 committed sources of capital.

If our cash and cash equivalents and marketable securities including cash generated from operating activities 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" in Item 1A in Part 1 in this Annual Report on Form 10-K for further discussion.

As of December 31, 2024, \$2.4 million, or 12%, of our cash and cash equivalents was maintained with one financial institution, 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 failures of Silicon Valley Bank, Signature Bank and 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.

Cash Flows

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

	Year Ended December 31,	
	2024	2023
	(in thousands)	
<i>Cash provided by (used in):</i>		
Net cash (used in) provided by operating activities	\$ (19,774)	\$ 1,180
Net cash used in investing activities	(66,535)	(339)
Net cash provided by (used in) financing activities	101,301	(1,652)
Effect of exchange rate changes	193	(246)
<i>Net increase (decrease) in cash</i>	<u>\$ 15,185</u>	<u>\$ (1,057)</u>

Operating Activities

Cash flows from operating activities may vary significantly from period to period depending on a variety of factors including the timing of our collections and payments. Our ongoing cash outflows from operating activities primarily relate to personnel related costs, payments for professional services, 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 executed agreements and payment terms that can vary by customer.

Net cash used in operating activities for the year ended December 31, 2024, was \$19.8 million compared to \$1.2 million of net cash provided by operating activities for the year ended December 31, 2023. The \$21.0 million decrease in net cash provided by operating activities reflects a \$1.4 million increase in net loss, after excluding the non-cash effects of stock-based compensation expense, provision for credit losses, estimated litigation claim, loss on debt extinguishment, change in fair value of contingent consideration, depreciation and amortization, and the accretion of discount on marketable securities, and a \$19.6 million increase in net working capital, primarily due to changes in contract assets, accounts receivable, deferred revenue and the payment of accrued operating expenses in connection with our IPO and accrued royalties for licensed technology sold in our product lines during the year ended December 31, 2024.

Investing Activities

Net cash used in investing activities for the years ended December 31, 2024 and 2023 was \$66.5 million and \$0.3 million, respectively. Use of cash during the year ended December 31, 2024 includes \$99.6 million in purchases of marketable securities and \$0.5 million in purchases of property and equipment, partially offset by \$33.6 million of maturities in marketable securities. During the year ended December 31, 2023, we used \$0.3 million of cash to purchase property and equipment.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2024, was \$101.3 million. We received \$106.0 million in net proceeds from the IPO, \$4.9 million in proceeds from the Micron Note, net of debt issuance costs, \$4.3 million from our drawdown on the East West Bank Loan, and \$0.3 million in proceeds from the issuance of common stock through our employee stock purchase plan partially offset by \$4.6 million of cash in payment of employee withholding taxes upon vesting of RSUs, \$4.3 million repayment of the East West Bank Loan, \$2.6 million of payments related to deferred transaction costs incurred in connection with the IPO, the \$2.0 million repayment of the 2022 Line of Credit, \$0.6 million of payments for our vendor financing obligation and \$0.1 million of contingent consideration paid. 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, \$1.0 million repaid on the 2022 Credit Line, and \$0.7 million of transaction costs incurred in connection with the IPO; partially offset by \$1.0 million of proceeds from the 2022 Credit Line.

Effects of Exchange Rate Fluctuations on Cash

The effects of exchange rate fluctuations on cash were \$0.2 million and \$(0.2) million for the years ended December 31, 2024 and 2023, respectively.

Contractual Obligations

Our financial commitments for contractual obligations as of December 31, 2024, include our operating leases and our vendor financing obligation. As noted in Note 4, Leases, of our consolidated financial statements in Item 8 on this Annual Report on Form 10-K, we have a current obligation of \$0.7 million and a non-current obligation of \$0.9 million. Our vendor financing obligation, as noted in Note 10. Debt and Financing Obligations of our consolidated financial statements in Item 8 on this Annual Report on Form 10-K, includes a current obligation of \$1.5 million and a non-current obligation of \$2.9 million.

Estimated Litigation Claim

In addition to our financial commitments for contractual obligations as of December 31, 2024, we recorded a charge to estimated litigation claim and accrued expenses and other current liabilities of \$11.3 million during the year ended December 31, 2024 in connection with the Nangate Litigation. We and the Co-Defendants may appeal the judgement, which will require us to collateralize and post an appellate bond of up to \$35.4 million on or before March 24, 2025. See Note 14 of our consolidated financial statements in Item 8 on this Annual Report on Form 10-K for further discussion.

Off-Balance Sheet Arrangements

As of December 31, 2024, we did not have any off-balance sheet arrangements. As of December 31, 2023, we were guarantor to an outstanding loan held by Gu-Guide, LP. We were released from the guarantee when the loan was repaid in full in July of 2024. See Note 8 and Note 14 of our consolidated financial statements in Item 8 on this Annual Report on Form 10-K for further discussion.

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 of our consolidated financial statements in Item 8 on this Annual Report on Form 10-K 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 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.

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We also recognized an immaterial portion of our revenue from device characterization and modeling services for the years ended December 31, 2024 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. 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 we have 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, noncompete agreements, and licensed IP 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 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.

No indicators of impairment or impairments charges were identified or recorded to goodwill or other intangible assets during the fiscal years ended December 31, 2024 and 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. For awards with market and service conditions, we recognize 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.

Prior to the IPO, we had 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 vesting requirement”, an improbable contingency as of December 31, 2023. See Note 11 to our consolidated financial statements in Item 8 on this Annual Report on Form 10-K for additional information.

Prior to January 1, 2024, we valued the awards granted using historical estimates of the fair value 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*. Commencing January 1, 2024 and prior to the IPO, the grant date fair value of the awards was derived from an interpolation based on the contemplated listing price of our anticipated IPO. For RSUs granted after the IPO, we used the closing stock price as reported on Nasdaq on the grant date as the grant date fair value.

The assumptions underlying pre-IPO 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 have been materially different.

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.

We are a “smaller reporting company” as defined under the federal securities laws, and will continue to be a smaller reporting company until such time as (i) the market value of our common stock held by non-affiliates is more than \$250.0 million or (ii) our annual revenue is more than \$100.0 million during the most recently completed fiscal year and the market value of our common stock held by non-affiliates is more 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.

Recently Adopted Accounting Pronouncements

See Note 2 to our consolidated financial statements in Item 8 on this Annual Report on Form 10-K for information regarding recently issued accounting pronouncements.

Item 7A. Qualitative and Quantitative Disclosures about Market Risk

We are a smaller reporting company as defined by Rule 12b-2 of the Securities Exchange Act of 1934 and are not required to provide the information under this item.

Item 8. Financial Statements and Supplementary Data

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, 2024 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, 2024 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.

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 5, 2025

We have served as the Company’s auditor since 2021.

SILVACO GROUP, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands except share and par value amounts)

	As of December 31,	
	2024	2023
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 19,606	\$ 4,421
Accounts receivable, net	9,211	4,006
Current marketable securities	63,071	—
Contract assets, net	11,932	8,749
Prepaid expenses and other current assets	3,460	2,549
Deferred transaction costs	—	1,163
Total current assets	107,280	20,888
Non-current assets:		
Non-current marketable securities	4,785	—
Property and equipment, net	865	591
Operating lease right-of-use assets, net	1,711	1,963
Intangible assets, net	4,369	342
Goodwill	9,026	9,026
Non-current portion of contract assets	12,611	6,250
Other assets	1,698	1,825
Total non-current assets	35,065	19,997
Total assets	\$ 142,345	\$ 40,885
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 3,316	\$ 2,495
Accrued expenses and other current liabilities	19,801	10,255
Accrued income taxes	1,668	1,626
Operating lease liabilities, current	744	735
Deferred revenue, current	7,497	7,882
Related party line of credit	—	2,000
Vendor financing obligation, current	1,462	—
Total current liabilities	34,488	24,993
Non-current liabilities:		
Deferred revenue, non-current	3,593	5,071
Operating lease liabilities, non-current	946	1,198
Vendor financing obligation, non-current	2,928	—
Other non-current liabilities	307	221
Total liabilities	42,262	31,483
Commitments and contingencies (Note 14)		
Stockholders' equity:		
Preferred stock \$0.0001 par value; 10,000,000 shares authorized, no shares issued and outstanding as of December 31, 2024; no shares authorized as of December 31, 2023	—	—
Common stock, \$0.0001 par value; 500,000,000 shares authorized; 28,526,615 shares issued and outstanding as of December 31, 2024; 25,000,000 shares authorized; 20,000,000 shares issued and outstanding as of December 31, 2023	3	2
Additional paid-in capital	130,360	—
(Accumulated deficit) Retained earnings	(28,012)	11,392
Accumulated other comprehensive loss	(2,268)	(1,992)
Total stockholders' equity	100,083	9,402
Total liabilities and stockholders' equity	\$ 142,345	\$ 40,885

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

SILVACO GROUP, INC.
CONSOLIDATED STATEMENTS OF LOSS
(in thousands except share and per share amounts)

	Year Ended December 31,	
	2024	2023
Revenue:		
Software license revenue	\$ 43,991	\$ 39,331
Maintenance and service	15,689	14,915
Total revenue	59,680	54,246
Cost of revenue	12,042	9,354
Gross profit	47,638	44,892
Operating expenses:		
Research and development	20,740	13,170
Selling and marketing	18,300	12,707
General and administrative	37,571	17,881
Estimated litigation claim	11,306	—
Total operating expenses	87,917	43,758
Operating (loss) income	(40,279)	1,134
Loss on debt extinguishment	(718)	—
Interest income	2,976	6
Interest and other expense, net	(899)	(630)
(Loss) income before income tax provision	(38,920)	510
Income tax provision	484	826
Net loss	\$ (39,404)	\$ (316)
Net loss per share attributable to common stockholders:		
Basic and diluted	\$ (1.53)	\$ (0.02)
Weighted average shares used in computing per share amounts:		
Basic and diluted	25,672,845	20,000,000

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

SILVACO GROUP, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31,	
	2024	2023
Net loss	\$ (39,404)	\$ (316)
Other comprehensive income (loss):		
Foreign currency translation adjustments	(417)	(85)
Unrealized gains on marketable securities	141	—
Comprehensive loss	<u>\$ (39,680)</u>	<u>\$ (401)</u>

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

SILVACO GROUP, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands except share amounts)

	Common Stock		Additional Paid-in Capital	(Accumulated Deficit) Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balance, December 31, 2022	20,000,000	\$ 2	\$ —	\$ 11,928	\$ (1,907)	\$ 10,023
ASC 326 Transition Adjustment	—	—	—	(220)	—	(220)
Balance, January 1, 2023	20,000,000	\$ 2	\$ —	\$ 11,708	\$ (1,907)	\$ 9,803
Other comprehensive loss	—	—	—	—	(85)	(85)
Net loss for the year	—	—	—	(316)	—	(316)
Balance, December 31, 2023	20,000,000	\$ 2	\$ —	\$ 11,392	\$ (1,992)	\$ 9,402
Issuance of common stock in connection with initial public offering, net of underwriting fees and commissions and net of deferred transaction costs of \$3,299	6,000,000	1	102,721	—	—	102,722
Conversion of Micron Note into common stock	294,217	—	5,589	—	—	5,589
Issuance of common stock for share-based award plans	2,959,580	—	315	—	—	315
Tax withholding on restricted stock unit settlements	(727,182)	—	(4,575)	—	—	(4,575)
Stock-based compensation expense	—	—	26,310	—	—	26,310
Other comprehensive loss	—	—	—	—	(276)	(276)
Net loss for the year	—	—	—	(39,404)	—	(39,404)
Balance, December 31, 2024	<u>28,526,615</u>	<u>\$ 3</u>	<u>\$ 130,360</u>	<u>\$ (28,012)</u>	<u>\$ (2,268)</u>	<u>\$ 100,083</u>

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

SILVACO GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,	
	2024	2023
Cash flows from operating activities:		
Net loss	\$ (39,404)	\$ (316)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization	1,285	601
Stock-based compensation expense	26,915	—
Provision for credit losses	351	220
Accretion of discount on marketable securities, net	(1,685)	—
Estimated litigation claim	11,306	—
Loss on debt extinguishment	718	—
Change in fair value of contingent consideration	(27)	325
Changes in operating assets and liabilities:		
Accounts receivable	(5,971)	1,378
Contract assets	(10,293)	(5,208)
Prepaid expense and other current assets	(790)	133
Other assets	57	(267)
Accounts payable	1,326	156
Accrued expenses and other current liabilities	(2,160)	2,015
Accrued income taxes	74	(23)
Deferred revenue	(1,585)	2,268
Other non-current liabilities	109	(102)
Net cash (used in) provided by operating activities	(19,774)	1,180
Cash flows from investing activities:		
Purchases of marketable securities	(99,630)	—
Maturities of marketable securities	33,600	—
Purchases of property and equipment	(505)	(339)
Net cash used in investing activities	(66,535)	(339)
Cash flows from financing activities:		
Proceeds from initial public offering, net of underwriting fees	106,020	—
Proceeds from issuance of convertible note, net of debt issuance costs	4,852	—
Proceeds from loan facility	4,250	—
Repayment of loan facility	(4,250)	—
Proceeds from related party line of credit	—	1,000
Repayment of related party line of credit	(2,000)	(1,000)
Proceeds from issuance of common stock for share-based awards	315	—
Payroll taxes related to shares withheld from employees	(4,575)	—
Deferred transaction costs	(2,649)	(650)
Contingent consideration	(74)	(1,002)
Payments of vendor financing obligation	(588)	—
Net cash provided by (used in) financing activities	101,301	(1,652)
Effect of exchange rate fluctuations on cash and cash equivalents	193	(246)
Net increase (decrease) in cash and cash equivalents	15,185	(1,057)
Cash and cash equivalents, beginning of period	4,421	5,478
Cash and cash equivalents, end of period	\$ 19,606	\$ 4,421
Supplemental disclosures of cash flow information:		
Income taxes paid	\$ 625	\$ 655
Interest paid	\$ 498	\$ 71
Noncash investing and financing activities:		
Deferred offering costs incurred, not yet paid	\$ —	\$ 513
Right of use assets obtained in exchange for lease obligations	\$ 607	\$ 452
Issuance of equity upon Micron Note conversion	\$ 5,589	\$ —
Financial obligation incurred upon acquisition of NXP IP	\$ 4,979	\$ —

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

SILVACO GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
For the Years Ended December 31, 2024 and 2023

1. Description of Business

Silvaco Group, Inc. (“Silvaco,” and the “Company” refers to Silvaco Group Inc. and its subsidiaries, unless the context specifically requires otherwise) 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.

Initial public offering

In May 2024, the Company completed its initial public offering (“IPO”), in which it issued and sold 6,000,000 shares of its common stock at the public offering price of \$19.00 per share. The Company received gross proceeds of \$114.0 million, with \$106.0 million funded to the Company after deducting underwriting discounts and commissions of \$8.0 million.

Reclassifications

The Company reclassified its presentation of accrued expenses and other current liabilities in the consolidated balance sheet for the year ending December 31, 2023 to conform to the current year’s presentation. Such reclassification had no effect on the previously reported consolidated balance sheets, consolidated statements of loss or consolidated statements of cash flows of the Company.

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.

Emerging growth company status

The Company is an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act, until such time as those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that the Company (i) is no longer an emerging growth company or (ii) affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act.

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, stock-based compensation expense, valuation of goodwill and other intangible assets, contingent consideration, derivative valuations, uncertain tax positions, legal contingencies 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.

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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 recognized an immaterial portion of its revenue from device characterization and modeling services for the years ended December 31, 2024 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. 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 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.

Accounts receivable, contract assets and contract 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. The Company records an accounts receivable upon invoicing.

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 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, 2024 and 2023, the Company capitalized sales commissions of \$0.9 million and \$1.4 million, respectively. Amortization of sales commissions during the years ended December 31, 2024 and 2023 was \$0.9 million and \$0.8 million, respectively.

Cash and cash equivalents

Cash and cash equivalents consist of bank deposits and highly liquid investments in marketable securities with original maturities of three months or less at the time of purchase. The Company's cash and cash equivalents as of December 31, 2024 consisted of bank deposits, money market funds, and U.S. treasury securities with a fair value of \$19.6 million. The Company's cash and cash equivalents as of December 31, 2023 consisted of bank deposits with a fair value of \$4.4 million.

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 expensed as incurred. Gains or losses from the sale or retirement of property and equipment and repairs and maintenance charges are included within general and administrative expenses in the consolidated statements of loss.

Research and development

Research and development ("R&D") 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. R&D 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, noncompete agreements and licensed IP 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 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.

No indicators of impairment or impairments charges were identified or recorded to goodwill or other intangible assets during the years ended December 31, 2024 and 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 assets may not be recoverable. No impairment charges were recorded to other long-lived assets for the years ended December 31, 2024 and 2023.

Deferred transaction costs

Deferred offering costs are capitalized and consist of fees and expenses incurred in connection with the Company's IPO, including the legal, accounting, printing, and other IPO-related costs. Upon completion of the IPO in May of 2024, \$3.3 million of deferred transaction costs were reclassified to stockholders' equity and recorded against the proceeds from the offering. No balance was outstanding as of December 31, 2024. The balance of deferred offering costs as of December 31, 2023 was \$1.2 million.

Concentrations of credit risk

Accounts receivable from customers representing 10% or more of the Company's total accounts receivable were as follows:

	Year Ended December 31,	
	2024	2023
Customer A	21 %	*
Customer B	15 %	*
Customer C	*	20 %
Customer D	*	15 %

* Customer accounted for less than 10% of total accounts receivable at period end.

Revenue from customers representing 10% or more of the Company's total revenue was as follows:

	Year Ended December 31,	
	2024	2023
Customer E	15 %	*

* Customer accounted for less than 10% of total revenue for the year ended December 31, 2023.

None of the Company's customers represented more than 10% of the Company's total revenue during the year ended December 31, 2023.

In addition to trade receivables and revenue, the Company's cash on deposit with financial institutions is also exposed to concentration risk. The Company's cash on deposit with financial institutions is 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, 2024 and 2023 exceeded insured limits.

As of December 31, 2024, \$2.4 million, or 12%, of the Company's cash and cash equivalents was maintained with one financial institution, where the Company's current deposits are in excess of federally insured limits, and \$4.5 million, or 23%, was held by the Company's foreign subsidiaries.

Marketable securities

The Company's investments in marketable securities have been classified and accounted for as available-for-sale and are recorded at estimated fair value. The Company's available-for-sale marketable securities are comprised of money market funds, U.S. treasury securities and U.S. government securities. The Company classifies its investments with original maturities of three months or less when acquired as cash equivalents. The Company classifies its marketable securities with original maturities of longer than three months but within twelve months as of the reporting date as current marketable securities. Marketable securities with maturities of twelve months or longer as of the reporting date are classified as non-current marketable securities. Purchase discounts are accreted using the effective interest method over the life of the related security and such accretion is included in interest income in the consolidated statements of loss.

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For available-for-sale debt securities in an unrealized loss position, the Company evaluates whether it intends to sell the security before the recovery of its amortized cost basis. If both of these criteria are met, the security's amortized cost basis is written down to fair value and a loss is recorded in interest and other expense, net on the consolidated statements of loss, not to exceed the amount of the unrealized loss. The Company did not recognize any other-than-temporary impairment on its marketable securities during the year ended December 31, 2024. Unrealized gains and losses (excluding other-than-temporary impairment and credit loss) on available-for-sale marketable securities are reported in other comprehensive loss on the consolidated statements of comprehensive loss. Credit-related unrealized losses are recognized as an allowance on the consolidated balance sheets with a corresponding charge to interest and other expense, net on the consolidated statements of loss. The cost of securities sold is based on the specific identification method and realized gains and losses are reported in interest income and interest and other expense, net on the consolidated statements of loss, respectively. The Company recognized \$0.1 million of unrealized gains on available-for-sale marketable securities in other comprehensive loss on the consolidated statements of comprehensive loss during the year ended December 31, 2024. The Company did not hold marketable securities in the year ended December 31, 2023.

Allowance for credit losses

The Company assesses its ability to collect outstanding receivables and contract assets and provides customer-specific allowances, allowances for credit losses 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 in the consolidated statements of loss. 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, 2024 and 2023:

	Year Ended December 31,	
	2024	2023
	(in thousands)	
Beginning balance – January 1	\$ 540	\$ 762
Provision for credit losses	351	220
Accounts written off	(114)	(442)
Ending balance – December 31	<u>\$ 777</u>	<u>\$ 540</u>

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 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, 2024 and 2023, the Company recorded foreign currency translation adjustments of \$0.4 million and \$0.1 million, 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 in the consolidated statements of loss. The Company recorded net foreign exchange losses of \$0.4 million and \$0.3 million for the years ended December 31, 2024 and 2023, respectively.

Accumulated other comprehensive loss

Accumulated other comprehensive loss is composed entirely of foreign currency translation adjustments and unrealized gains and losses on marketable securities.

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.

Prior to the IPO, the Company had not recorded stock-based compensation expense, as the restricted stock units ("RSUs") granted under the 2014 Plan generally had two vesting requirements, a time and service-based requirement (the "Time-Based Requirement") and a liquidity event requirement (the "Liquidity Event Requirement"). The satisfaction of the Liquidity Event Requirement was not probable as of December 31, 2023. See Note 11. Stock-Based Compensation for additional information.

Prior to January 1, 2024, the Company valued the awards granted using historical estimates of the fair value of Silvaco's 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*.

Commencing January 1, 2024 and prior to the IPO, the grant date fair value of the awards was derived from an interpolation based on the contemplated listing price of the Company's anticipated IPO. For RSUs granted after the IPO, the Company used the publicly listed closing stock price on the grant date as the grant date fair value.

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.

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As of December 31, 2024 and 2023, the carrying amount of the Company's cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximated their fair values due to their short maturities. The Company's available for sale marketable securities have an amortized costs that approximates fair value, which was determined using quoted prices in active markets for identical assets and if that is unavailable, using third-party inputs which are either directly or indirectly observable, such as reported trades and broker or dealer quotes as of December 31, 2024. The Company's related party line of credit at December 31, 2023 was carried at net carrying value. See Note 16, Fair Value of Financial Instruments for additional information.

Research and development grants and tax subsidies

Silvaco is a recipient of R&D grants and tax subsidies associated with the Company's French and British subsidiaries. Grants and tax subsidies are determined on the basis of eligible R&D expenses incurred during the calendar year. Eligible expenditures include 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 grants and tax subsidies are recorded as a reduction of R&D expense as qualifying expenditures are incurred. Certain tax subsidies can be offset against corporate income tax liabilities payable with respect to the calendar year during which the eligible R&D expenditures were incurred, and any excess credit is refunded to the taxpayer. Certain tax subsidies and all grants are paid to the Company in cash, which are included in prepaid expenses and other current assets in the Company's consolidated balance sheets until the Company receives the cash payment.

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 non-current 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 \$39,000 and \$28,000 for the years ended December 31, 2024 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 outstanding securities were excluded from the computation of diluted earnings per share because (i) the effect would be anti-dilutive for the year ended December 31, 2024, and (ii) the securities were contingent upon conditions for issuance which were not satisfied as of December 31, 2023. See Note 11, Stock-Based Compensation for additional information.

	December 31,	
	2024	2023
RSU Grants	1,503,662	3,398,276

Recently Adopted Accounting Pronouncements

In August 2020, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity. This ASU simplifies accounting for convertible instruments by removing major separation models required under current GAAP. The Company adopted this standard on January 1, 2024, and the adoption did not impact the consolidated financial statements.

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. The Company adopted the new standard with the filing of this Annual Report on Form 10-K. Upon adoption, the guidance was applied retrospectively to all prior periods presented in the consolidated financial statements, which resulted in the disclosure of payroll expenses as a significant segment expense. See Note 13 Segment Reporting and Geographical Concentration for additional information.

Accounting Guidance Issued and Not Yet Adopted

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.

In November 2024, the FASB issued ASU No. 2024-03, *Income Statement – Reporting Comprehensive Income – Expense Disaggregation Disclosures (Topic 220)*: Disaggregation of Income Statement Expenses. This ASU requires additional disclosure of certain amounts included in the expense captions presented on the statements of loss as well as disclosures about selling expenses. This ASU is effective on a prospective basis, with the option for retrospective application, for annual periods beginning after December 15, 2026 and interim reporting periods beginning after December 15, 2027. Early adoption is permitted. The Company is currently evaluating the impact of this accounting standard update on its condensed 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 and is generally recognized upon shipment and delivery of license keys. Maintenance and service revenue consists of both maintenance revenues, which is recognized ratably over the term of the arrangement, and professional services revenues which is recognized based on when the Company delivers the related service pursuant to the terms of the arrangement.

Customer contracts

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 December 31, 2024, December 31, 2023 and January 1, 2023 were as follows:

	Contract Balances		
	December 31, 2024	December 31, 2023	January 1, 2023
	(in thousands)		
Accounts receivable, net	\$ 9,211	\$ 4,006	\$ 5,998
Contract assets, net	\$ 24,543	\$ 14,999	\$ 10,536
Deferred revenue	\$ 11,090	\$ 12,953	\$ 11,553

Transaction Price Allocated to the Remaining Performance Obligations

As of December 31, 2024, approximately \$34.3 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 46% of these remaining performance obligations over the next 12 months, with the remaining balance recognized thereafter.

Deferred Revenue

Deferred revenue is comprised mainly of unearned revenue related to PCS on software licenses and pending software license deliveries. Deferred revenue also includes contracts for professional services to be performed in the future.

During the years ended December 31, 2024 and 2023, the Company recognized revenue of \$6.7 million and \$7.2 million, respectively, that was included in the deferred revenue balance at the beginning of fiscal year 2024 and 2023, respectively. All other activity in deferred revenue is due to the timing of invoices in relation to the timing of revenue recognized during the years ended December 31, 2024 and 2023 as described above. Approximately 68% of the Company's deferred revenue as of December 31, 2024 is expected to be recognized over the next 12 months with the remainder recognized thereafter.

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 2025 through 2029.

The components of operating lease cost were as follows:

	Year Ended December 31,	
	2024	2023
	(in thousands)	
Operating lease cost	\$ 940	\$ 1,003
Variable lease cost ⁽¹⁾	168	223
Total operating lease cost	\$ 1,108	\$ 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, 2024 and 2023 was as follows:

	Year Ended December 31,	
	2024	2023
	(in thousands)	
Cash paid for operating lease liabilities	\$ 930	\$ 1,028
Right-of use assets obtained in exchange for operating lease liabilities	\$ 607	\$ 452

	December 31,	
	2024	2023
Weighted average remaining lease term (in years)	3.41	4.09
Weighted average discount rate	3.00 %	3.84 %

As of December 31, 2024, maturities of operating lease liabilities were as follows:

Year Ending December 31,	Amount
	(in thousands)
2025	\$ 752
2026	413
2027	233
2028	194
2029	194
Total lease payments	\$ 1,786
Less: imputed interest	(96)
Total operating lease liabilities	\$ 1,690
Current portion of lease liability	744
Non-current portion of lease liability	\$ 946

Rent expense was \$1.2 million in each of the years ended December 31, 2024 and 2023.

5. Property and Equipment, Net

The Company's property and equipment at December 31, 2024 and 2023 consisted of the following:

	December 31,	
	2024	2023
	(in thousands)	
Computer software	\$ 5,944	\$ 5,547
Equipment	512	545
Buildings and improvements	198	167
Leasehold improvements	212	186
Furniture and fixtures	139	156
Total property and equipment	7,005	6,601
Less accumulated depreciation	(6,140)	(6,010)
Total property and equipment, net	\$ 865	\$ 591

During the year ended December 31, 2024, the Company retired \$0.2 million of property and equipment that was fully depreciated and no longer in service. During the years ended December 31, 2024 and 2023, the Company recorded an immaterial noncash gain and an immaterial noncash loss, respectively, on the disposal of fixed assets. Depreciation expense was \$0.3 million for each of the years ended December 31, 2024 and 2023.

6. Goodwill and Intangible Assets

There were no changes in goodwill during the years ended December 31, 2024 and 2023.

For the years ended December 31, 2024 and 2023, intangible assets were classified as follows:

	Weighted Average Amortization Period (in years)	December 31, 2024		
		Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Intangible assets:		(in thousands)		
Developed technology	5	\$ 800	\$ (666)	\$ 134
Customer relationships	5	90	(90)	—
Non-compete agreements	5	20	(17)	3
Licensed IP	5	4,979	(747)	4,232
Total intangible assets		\$ 5,889	\$ (1,520)	\$ 4,369

	Weighted Average Amortization Period (in years)	December 31, 2023		
		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

On April 11, 2024, the Company amended its license agreement to sell SIP developed in partnership with NXP (the "NXP IP") for total cash consideration of \$6.0 million, to be paid over 5 years. The NXP IP has a net book value of \$4.2 million as of December 31, 2024 and a useful life of 5 years, which is the length of the license agreement. The Company recorded a corresponding vendor financing obligation related to the license agreement with NXP. See Note 10, Debt and Financing Obligations, for further discussion.

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Amortization expense for intangible assets was \$1.0 million during the year ended December 31, 2024, of which \$0.7 million was recognized in cost of revenue, as the licensed IP relates to recognized sales, with the remainder recognized in research and development expense in the Company's consolidated statements of loss. Amortization expense for intangible assets was \$0.3 million during the year ended December 31, 2023, all of which was recognized in research and development expense in the Company's consolidated statements of loss.

On January 1, 2024, the Company retired \$4.3 million of intangible assets that were fully amortized.

As of December 31, 2024, estimated future amortization expense for the intangible assets reflected above was as follows:

Year Ending December 31,	Amount	
	(in thousands)	
2025	\$	1,132
2026		996
2027		996
2028		996
Thereafter		249
Total net carrying value of intangible assets	\$	4,369

7. Significant Balance Sheet Components

Prepaid expenses and other current assets consisted of the following:

	December 31,	
	2024	2023
	(in thousands)	
Research and development tax credits and grants	\$ 900	\$ 896
Deferred sales commissions ^(a)	793	808
Software and subscriptions	679	359
Current lease deposits	321	104
Other prepaid expenses	767	382
Total prepaid expenses and other current assets	\$ 3,460	\$ 2,549

Other assets consisted of the non-current items below:

	December 31,	
	2024	2023
	(in thousands)	
Deferred sales commissions ^(a)	\$ 1,449	\$ 1,501
Lease deposits	142	238
Other prepaid expenses	107	86
Total other assets	\$ 1,698	\$ 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

The Company has a commercial lease agreement with Kipee International, Inc., a related party controlled by Katherine Ngai-Pesic ("Ms. Ngai-Pesic"), who is the Company's founding principal stockholder and chairperson of the Board of Directors, for the Company's corporate office in Santa Clara, California. In connection with this lease arrangement, the Company recorded rent expense of \$0.2 million during the years ended December 31, 2024 and 2023. The Company's right-of-use asset and operating lease liability under this three-year arrangement, which commenced on May 1, 2022 and expires on March 31, 2025, is \$0.1 million as of December 31, 2024.

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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 Ms. Ngai-Pesic. In connection with these lease arrangements, the Company recorded rent expense of \$0.3 million during the each of the years ended December 31, 2024 and 2023. The Company's right-of-use asset and operating lease liability under the NHC lease, which expires on December 31, 2029, is \$0.9 million as of December 31, 2024. The Company's right-of-use asset and operating lease liability under the NHF lease, which expires on April 30, 2026, is \$0.1 million as of December 31, 2024.

On June 13, 2022, Silvaco entered into a \$4.0 million line of credit with Ms. Ngai-Pesic (the “2022 Credit Line”). In connection with this line of credit, the Company recorded interest expense of \$0.1 million and \$0.2 million during the years ended December 31, 2024 and 2023, respectively. The outstanding amounts due under the 2022 Credit Line were repaid in full and the 2022 Credit Line was terminated in May 2024. See Note 10, Debt and Financing Obligations, for further discussion.

During the year ended December 31, 2023, the Company recorded \$0.4 million 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 Ms. Ngai-Pesic, Bank of the West and the Company, as guarantor, 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 was secured by a 9,000 square foot building located in Santa Clara, California. In the event that the proceeds from the foreclosure of the foregoing collateral were insufficient to repay the outstanding amounts under the Loan, the Company guaranteed the repayment of the outstanding amounts under the Loan. The Loan was repaid in full and the Company was released from the guarantee in July of 2024.

9. Accrued Expenses and Other Current Liabilities and Other Non-Current Liabilities

Accrued expenses and other current liabilities consisted of the following:

	December 31,	
	2024	2023
	(in thousands)	
Estimated litigation claim ^(a)	\$ 11,306	\$ —
Accrued employee expenses	6,611	6,329
Accrued taxes payable	1,276	1,278
Accrued operating expense	290	1,368
Accrued royalties payable ^(b)	215	1,113
Other	103	167
Total accrued expenses and other current liabilities	\$ 19,801	\$ 10,255

(a) Represents estimated litigation-related charges incurred in connection with the Nangate Litigation described in Note 14, Commitments and Contingencies.

(b) 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.

Total non-current liabilities as of December 31, 2024 and 2023 consisted primarily of net deferred tax liabilities. See Note 12. Income Taxes for further information.

10. Debt and Financing Obligations

On June 13, 2022, Silvaco entered into the 2022 Credit Line which bore interest at a rate of prime plus 1% per annum. As of December 31, 2023, the principal balance of the 2022 Credit Line was \$2.0 million. In May 2024, the outstanding balance under the 2022 Credit Line was repaid in full, and the 2022 Credit Line was terminated. The Company did not recognize any gain or loss on the extinguishment of the 2022 Credit Line.

In December 2023, the Company entered into a loan facility with East West Bank (the “East West Bank Loan”) which had a maturity date of December 14, 2025 and provided 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 Company drew \$4.3 million on the East West Bank Loan during the year ended December 31, 2024, and repaid the \$4.3 million in full in May 2024. Accordingly, the Company recognized a loss on debt extinguishment of \$0.1 million and interest expense of \$0.2 million during the year ended December 31, 2024, with respect to the East West Bank Loan. In May 2024, the East West Bank Loan was terminated.

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On April 11, 2024, the Company amended its license to sell the NXP IP for total cash consideration of \$6.0 million, to be paid over 5 years, pursuant to which the Company recorded an associated vendor financing obligation, which has a balance of \$4.4 million as of December 31, 2024. The Company determined that this vendor financing obligation had an imputed interest rate of 9%, which is reflective of its borrowing rate with similar terms to that of the license agreement, and recognized interest expense of \$0.3 million during the year ended December 31, 2024. The Company's vendor financing obligation is comprised of the following payments as of December 31, 2024:

For the year ending December 31,	Amount <i>(in thousands)</i>
2025	\$ 1,500
2026	1,200
2027	1,200
2028	1,200
Total undiscounted cash flows	\$ 5,100
Less: Imputed interest	710
Present value of vendor financing obligation	\$ 4,390
Vendor financing obligation, current	1,462
Vendor financing obligation, non-current	\$ 2,928

On April 16, 2024, the Company entered into a note purchase agreement with Micron Technology Inc. ("Micron"), a customer of the Company, pursuant to which the Company issued to Micron a senior subordinated convertible promissory note in the principal amount of \$5.0 million (the "Micron Note") with a maturity date three years after issuance. The Micron Note was contractually subordinated to the East West Bank Loan through a subordination agreement with East West Bank but was senior to all of the Company's other existing debt and was senior to any new future debt incurred (other than any undrawn amount available under the East West Bank Loan while it was outstanding). The Micron Note accrued interest at a rate of 8% per annum, with principal and accrued interest due upon maturity. Upon the consummation of the IPO, the Micron Note was mandatorily convertible into a number of shares equal to the outstanding principal amount and accrued interest divided by a conversion price equal to (a) the price of the Company's common stock issued in the IPO, times (b) 0.90. The Company determined that the feature that allowed for settlement of the Micron Note into a variable number of shares required bifurcation as a derivative liability and should be initially measured at fair value. The Company recorded a derivative liability of \$0.5 million and a corresponding debt discount of \$0.5 million on the issuance date.

On May 13, 2024, the Micron Note was converted into 294,217 shares of the Company's common stock in connection with the consummation of the IPO. The shares issued pursuant to the Micron Note were registered for resale under the Securities Act. Upon the settlement of the Micron Note, the derivative liability was settled and the Company remeasured it to its fair value and recorded a loss on derivative remeasurement of \$28,000 during the year ended December 31, 2024, which was recorded in interest and other expense, net on the Company's consolidated statements of loss. As a result, the fair value of the shares issued of \$5.6 million was recognized in additional paid-in capital and the Company settled the debt, inclusive of the derivative liability, and recognized a loss on debt extinguishment of \$0.6 million during the year ended December 31, 2024.

11. Stock-Based Compensation

Stock-Based Compensation Plans

On March 18, 2024, the number of shares of common stock reserved for issuance under the Company's 2014 Stock Incentive Plan (the "2014 Plan") was increased to 4.6 million and the term of the 2014 Plan was extended to March 18, 2034. On April 26, 2024, in connection with the Company's IPO, the Company's board of directors approved and adopted, subject to stockholder approval, the 2024 Stock Incentive Plan ("2024 Plan"), and the Company's stockholders approved the 2024 Plan on April 29, 2024. The 2024 Plan became effective on May 8, 2024 and supersedes the Company's 2014 Plan. All forfeited shares underlying RSUs granted under the 2014 Plan and shares reserved for future issuance under the 2014 Plan are included in the share reserve under the 2024 Plan. As of December 31, 2024, the number of shares of common stock reserved for future issuance under the 2024 Plan was 4,334,148.

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The Company issues RSUs to its employees, directors and service providers. The RSUs awarded under the 2014 Plan generally had two vesting requirements, a Time-Based Requirement and a Liquidity Event Requirement. The Liquidity Event Requirement would 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 IPO, in either case, within 10 years of the grant date. The Liquidity Event Requirement was satisfied upon the consummation of the IPO on May 13, 2024. Certain RSUs required the employee to be employed with the Company upon the consummation of the IPO for the Liquidity Event Requirement to be satisfied. 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 Requirement satisfied on the grant date. Once the Liquidity Event Requirement was satisfied, the Company recognizes its stock-based compensation expense ratably over the requisite service period, which is generally four years.

The following table summarizes the Company's RSU activity pursuant to the 2014 Plan and the 2024 Plan for the year ended December 31, 2024:

	Weighted Average		Number of Awards
	Grant Date Fair Value	Remaining Contract Term (in years)	
Balance as of December 31, 2023	\$ 7.20	6.56	3,398,276
Granted	15.71	9.09	1,183,350
Vested	10.78	8.00	(2,914,650)
Forfeited / canceled	9.42	7.00	(163,314)
Balance as of December 31, 2024	\$ 12.75	8.83	1,503,662

Historically the Company has not recorded stock-based compensation expense for the RSUs, as the Liquidity Event Requirement was not deemed probable. Upon the consummation of the Company's IPO, the Liquidity Event Requirement was met, and the Company incurred stock-based compensation expense associated with (i) RSUs granted to active employees and service providers, (ii) RSUs granted to certain former employees and service providers whose RSUs vested in connection with the Liquidity Event, and (iii) the acceleration of the Time Based Requirement for certain awards to executive officers, senior management and directors as a result of the Liquidity Event.

In November 2023, the Company issued 30,000 RSUs with certain performance-based conditions, in addition to the Time-Based Requirement, and a grant date fair value of \$0.4 million. The Company estimates the probability of achievement of applicable performance goals for performance-based RSUs in each reporting period and recognizes related stock-based compensation expense using the straight-line attribution method. The amount of stock-based compensation expense recognized in any period can vary based on the attainment or expected attainment of the various performance goals. If such performance goals are not ultimately met, no stock-based compensation expense is recognized and any previously recognized compensation expense is reversed. The Company recognized stock-based compensation expense of \$0.1 million related to these RSUs during the year ended December 31, 2024. The Company did not recognize stock-based compensation expense related to these RSUs during the year ended December 31, 2023.

In November 2023, the Company issued 75,000 RSUs with certain market-based conditions, in addition to the Time Based Requirement and the Liquidity Event Requirement, and a grant date fair value of \$0.6 million. The Company estimated the fair value of market-based RSUs on the grant date using a Monte Carlo simulation model. The vesting of the market-based RSUs is contingent on achieving a minimum volume-weighted average stock price ("VWAP") prior to the expiration of the RSUs. The assumptions used in the Monte Carlo simulation model to determine the grant date fair value were a daily VWAP of \$8.92, a volatility of 50%, and a risk-free rate of 4.3%. The Company recognized stock-based compensation expense of \$0.1 million related to these RSUs during the year ended December 31, 2024. The Company did not recognize stock-based compensation expense related to these RSUs during the year ended December 31, 2023.

During the year ended December 31, 2024, the Company's compensation committee approved the issuance of a variable number of RSUs as a portion of the employee bonus program for the fiscal year 2024. The number of RSUs issued will be calculated as the volume-weighted average price of the Company's common stock upon the bonus being finalized after the end of the fiscal year. As the Company has an obligation to issue a variable number of shares for a fixed monetary amount, the RSUs will be accounted for as liability-classified awards and subsequently re-measured to their fair value at each reporting date. The Company recognized stock-based compensation expense of \$0.6 million associated with the liability-classified RSUs during the year ended December 31, 2024, with a corresponding increase to accrued expenses of \$0.6 million. If the bonus was finalized on December 31, 2024, the Company would have been required to issue an aggregate of 74,851 RSUs to its employees.

As of December 31, 2024, the Company had unrecognized stock-based compensation expense of \$15.4 million which is expected to be recognized over a weighted average period of 2.43 years.

Employee Stock Purchase Plan

The Company's 2024 Employee Stock Purchase Plan (the "2024 ESPP") allows employees to designate up to 15% of their base compensation, subject to legal restrictions and limitations, to purchase shares of common stock at 85% of the lesser of the fair market value at the beginning of the offering period or the purchase date. Under the 2024 ESPP, the first offering began on August 1, 2024, and ended on the purchase date of November 30, 2024. The second offering began on December 1, 2024, and ends on the purchase date of May 31, 2025. Under the terms of the 2024 ESPP, if the fair market value on the purchase date is less than the fair market value at the beginning of the offering period, the offering may be terminated and a new offering may be commenced.

Pursuant to the first offering, the shares purchased, the weighted average purchase price, and the cash received for 2024 ESPP purchases during the year ended December 31, 2024 were as follows (in thousands, except shares purchased and weighted average purchase price):

	Year Ended December 31, 2024
Shares purchased	44,930
Weighted average purchase price	\$ 7.01
Cash received	\$ 315

The weighted average fair value of each award granted under the 2024 ESPP of \$2.65 for the year ended December 31, 2024 was based on the Black-Scholes option pricing model and used the following weighted average assumptions:

	Year Ended December 31, 2024
Dividend yield	\$ —
Expected volatility	46.80 %
Risk-free interest rate	4.45 %
Expected term (in years)	0.46
Weighted average fair value of shares granted	\$ 2.65

Unrecognized stock-based compensation cost for awards granted under the 2024 ESPP as of December 31, 2024 of \$0.1 million will be amortized over 5 months.

Stock-based Compensation Expense

In total the Company recorded stock-based compensation expense of \$26.9 million during the year ended December 31, 2024 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 and awards granted under the 2024 ESPP. The Company did not record stock-based compensation expense during the year ended December 31, 2023. The following table summarizes stock-based compensation expense by function for the year ended December 31, 2024:

	Year Ended December 31, 2024 (in thousands)
Cost of revenue	\$ 2,974
Research and development	5,091
Selling and marketing	4,319
General and administrative	14,531
	<u>\$ 26,915</u>

12. Income Taxes

The domestic and foreign components of the Company's (loss) income before tax provision for the years ended December 31, 2024 and 2023, were as follows:

	December 31,	
	2024	2023
	<i>(in thousands)</i>	
Domestic	\$ (42,292)	\$ (2,620)
Foreign	3,372	3,130
(Loss) income before income tax provision	\$ (38,920)	\$ 510

The components of the Company's income tax provision for the years ended December 31, 2024 and 2023, were as follows:

	December 31,	
	2024	2023
	<i>(in thousands)</i>	
Current:		
Federal	\$ 56	\$ 393
State	36	62
Foreign	303	408
Deferred:		
Foreign	89	(37)
Income tax provision	\$ 484	\$ 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, 2024 and 2023 were as follows:

	December 31,	
	2024	2023
	<i>(in thousands)</i>	
Deferred tax assets:		
Accruals and reserves	\$ 3,436	\$ 735
Depreciable and amortizable assets	5,767	3,765
Net operating loss carryforward	766	561
Tax credits	8,279	7,328
Stock-based compensation expense	492	—
Total deferred tax asset	\$ 18,740	\$ 12,389
Valuation Allowance	(18,621)	(12,270)
Net deferred tax asset	\$ 119	\$ 119
Deferred tax liabilities		
Revenue recognition	(414)	(349)
Net deferred tax liability	\$ (295)	\$ (230)

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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, 2024 and 2023:

	December 31,	
	2024	2023
Tax at federal statutory rate	21 %	21 %
Tax credits	2 %	(60)%
Other	(10)%	(65)%
Valuation allowance	(14)%	266 %
Effective tax rate	(1)%	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, 2024, 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, 2024 and 2023, the valuation allowance increased by \$6.4 million and \$1.6 million, respectively.

As of December 31, 2024, the Company had net operating loss carryforwards for federal income tax purposes of \$0.42 million and federal research and development credits of \$6.9 million which begin expiring in 2028.

As of December 31, 2024 the Company had net operating loss carryforwards for state income tax purposes of \$4.9 million which begin expiring in 2029 and state research and development credits of \$8.6 million which begin expiring in 2025.

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,	
	2024	2023
	(in thousands)	
Balance as of January 1,	\$ 7,247	\$ 6,827
Increases related to prior years' tax positions	—	32
Increases related to current year's tax positions	712	388
Decreases related to prior years' tax positions	—	—
Balance as of December 31,	\$ 7,959	\$ 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 \$8.0 million as of December 31, 2024, 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 years ended December 31, 2024 and 2023, interest and penalties recorded in the consolidated statements of loss were \$22,000 and \$19,000, respectively. The amounts of accrued interest and penalties recorded on the consolidated balance sheets as of December 31, 2024 and 2023 were \$99,000 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, or foreign authorities. All tax years in the U.S. remain open to examination due to utilization of net operating losses and credits. Tax years from 2007 forward are subject to foreign income tax examinations by tax authorities.

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 ("CODM"), who is the Company's Chief Executive Officer, Dr. Babak A. Taheri, 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.

The following table presents a summary of revenue, payroll expenses, which the CODM reviews in assessing Company performance and deciding how to allocate resources, and total other expenses as a reconciliation to consolidated net loss for the years ended December 31, 2024 and 2023.

	December 31,	
	2024	2023
	(in thousands)	
Total revenue	\$ 59,680	\$ 54,246
Expenses		
Payroll expenses	67,270	36,502
All other expenses, net	31,814	18,060
Total expenses	99,084	54,562
Net loss	<u>\$ (39,404)</u>	<u>\$ (316)</u>

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, 2024 and 2023:

Region	December 31,	
	2024	2023
	(in thousands)	
United States	\$ 21,934	\$ 16,214
China	11,010	12,410
Japan	10,796	7,556
Korea	3,106	7,505
All other	12,834	10,561
Total revenue	<u>\$ 59,680</u>	<u>\$ 54,246</u>

Property and equipment, net 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, 2024 and 2023:

Region	December 31,	
	2024	2023
	(in thousands)	
United States	\$ 507	\$ 242
Japan	142	74
China	120	152
All other countries	96	123
Total property and equipment, net	<u>\$ 865</u>	<u>\$ 591</u>

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, 2024 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.

Guarantees

In February of 2012, Gu-Guide LP, Bank of the West and the Company, as guarantor, entered into a loan agreement, which was secured by a 9,000 square foot building located in Santa Clara, California. In the event that the proceeds from the foreclosure of the collateral was insufficient to repay the outstanding amounts under the Loan, the Company guaranteed the repayment of the Loan. The Loan was repaid in full and the Company was released from the guarantee in July of 2024.

Contingencies

In December 2020, the Company sought declaratory relief in the California Superior Court to clarify its obligations regarding the earnout payments due to the selling shareholders of Nangate, Inc. ("Nangate") following its acquisition by the Company in 2018. In February 2021, two of the selling shareholders of Nangate, along with a third cross-complainant (collectively, the "Nangate Parties") filed a cross-complaint against the Company, as well as one current and one former member of the Company's board of directors (the "Co-Defendants"). The cross-complaint alleged breach of contract, fraud, and negligent misrepresentation among other causes of action.

In January 2022, the Nangate Parties filed a third amended cross-complaint against the Company, as well as one current and one former member of the Company's board of directors, seeking \$20.0 million in damages for breach of contract, fraud, and unfair business practices, as well as punitive damages.

On July 23, 2024, a jury awarded the Nangate Parties \$11.3 million in damages under breach of contract related claims, including breach of contract and breach of the covenant of good faith and fair dealing, and court and litigation related costs and certain expert expenses subject to the Nangate Parties establishing the legal right to them and to be determined by the court (the "Contract Damages"). As a result, during the year ended December 31, 2024, the Company recorded a charge to estimated litigation claim and accrued expenses and other current liabilities of \$11.3 million for the Contract Damages awarded to the Nangate Parties.

The jury also found the Company and the Co-Defendants liable for certain of the fraudulent and negligent misrepresentation claims and awarded the Nangate Parties \$6.6 million. Incremental punitive damages relating to these claims, including \$17.0 million payable by the Company and a total of \$16.0 million to be paid by the Co-Defendants, were awarded following a hearing on August 16, 2024 (collectively, the "Fraud Damages"). The Nangate Parties have the option to choose either the Contract Damages or the Fraud Damages, but in no circumstances will the Nangate Parties receive both remedies. Therefore, the Company recorded the minimum amount awarded to the Nangate Parties.

The Company and the Co-Defendants may appeal the judgement, which will require the Company to collateralize and post an appellate bond of up to \$35.4 million. The Company believes it has strong grounds for appeal and is pursuing post-trial motions. Additionally, the Company believes that there are strong arguments in support of substantially reducing the punitive damages portion of the Fraud Damages, which the Company believes are excessive under California Law, and the United States and California constitutions, particularly given the disproportionate nature of the punitive damages relative to the compensatory damages. Given the uncertainty surrounding the potential reduction of the punitive damages after the appeal, the Company at this time cannot reasonably estimate the possible loss or range of loss, if any, that might arise from the Fraud Damages, and above-mentioned court and litigation related costs and certain expert expenses that may be awarded. Therefore, the Company has not recorded any charges for potential liability related to Fraud Damages, and court and litigation related costs and certain expert expenses that may be awarded in this matter.

On August 19, 2021, Aldini AG (“Aldini”) sued Silvaco, Inc., the Company’s French affiliate, a member of the Company’s board of directors and the Company’s CEO, among numerous other noncompany defendants, including the Government of France, 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’s First Amended Complaint asserts various tort claims 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 filed a Second Amended Complaint 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. Aldini 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 filed a notice of appeal on April 27, 2023 and arguments were scheduled for November 22, 2024. On December 19, 2024, the U.S. Court of Appeals for the Ninth Circuit affirmed the dismissal of all claims brought against the Company by Aldini AG. The Company accordingly has not recorded a charge for this contingency.

The Company is subject to sanctions laws and regulations and export control and import laws and regulations of the United States and other applicable jurisdictions, including the Export Administration Regulations, U.S. Customs regulations, and economic and trade sanctions regulations administered by the U.S. Department of Treasury’s Office of Foreign Assets Control (“OFAC”). Between August 2019 and June 2022, the Company filed voluntary self-disclosures with U.S. 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. BIS requested and the Company agreed to toll, or pause, the statute of limitations on certain of the potential violations while it completes its review of the voluntary self-disclosures. The Company is committed to maintaining a transparent dialogue with BIS in connection with any requests for information regarding its voluntary disclosures. The Company cannot estimate any reasonably possible loss and has not recorded a charge for this contingency. If BIS chooses to bring an enforcement action against the Company in relation to any potential violations in the future, such actions could result in the imposition of significant penalties against the Company.

In July and October 2022 and January 2023, the Company also filed voluntary disclosures with OFAC regarding potential violations of certain OFAC sanctions programs, specifically the download of certain Company software modules by users in U.S. embargoed countries. 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. However, due to administrative error, the Local Agent continued to utilize the Bank A accounts to process payroll for the Company’s employees by transferring funds from Bank B to 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 to OFAC in October 2023.

In July 2024, OFAC issued a cautionary letter in response to the voluntary self-disclosure instead of pursuing a civil monetary penalty or taking other enforcement action. However, as is common in these instances, OFAC reserved the right to take future enforcement action should additional information warrant renewed attention.

The Company is also involved in routine legal proceedings in the ordinary course of business. Unless disclosed above, 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.

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 the years ended December 31, 2024 and 2023, the Company contributed \$1.0 million and \$0.1 million, respectively, to the 401(k) Plan. In connection with the 401(k) Plan, the Company recorded expense of \$0.6 million and \$0.5 million during the years ended December 31, 2024 and 2023, respectively.

16. Fair Value of Financial Instruments

Financial instruments measured at fair value on a recurring basis

The following tables present the Company's financial assets and liabilities that are measured at estimated fair value on a recurring basis as of December 31, 2024 and 2023:

	Fair value measurements as of December 31, 2024			
	(in thousands)			
	Carrying value	Level 1	Level 2	Level 3
Financial assets:				
Cash equivalents:				
Money market funds	13,144	13,144	—	—
Total	13,144	13,144	—	—
Available-for-sale marketable securities:				
U.S. treasury securities	27,237	—	27,237	—
U.S. government agencies securities	40,619	—	40,619	—
Total	67,856	—	67,856	—
Total	\$ 81,000	\$ 13,144	\$ 67,856	\$ —
Liabilities:				
Contingent consideration	11	—	—	11
Total	\$ 11	\$ —	\$ —	\$ 11
	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

The Company's level 1 financial assets were valued using quoted prices in active markets for identical assets as of December 31, 2024. The Company's level 2 financial assets were determined based on third-party inputs which are either directly or indirectly observable, such as reported trades and broker or dealer quotes. The Company's marketable securities have an amortized cost that approximates fair value as of December 31, 2024.

Pursuant to the Company's stock purchase agreements for the acquisition of Nangate in March of 2018 and PolyEDA Cloud LLC ("PolyEDA") in January of 2021, the selling shareholders are entitled to additional milestone and earn out consideration based on operating income generated by the business and technical achievements. 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 interest and other expense, net in the consolidated statements of loss.

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.

The following is a reconciliation of changes in the liability related to contingent consideration during the years ended December 31, 2024 and 2023:

	Year Ended December 31,	
	2024	2023
	<i>(in thousands)</i>	
Fair value as of January 1,	\$ 112	\$ 792
Change in fair value	(27)	325
Earn-out payments	(74)	(502)
Milestone achievement paid	—	(500)
Foreign exchange	—	(3)
Fair value as of December 31,	\$ 11	\$ 112

17. Subsequent Events

On March 4, 2025, Silvaco, Inc. and Cadence Design Systems, Inc. (“Cadence”), entered into an asset purchase agreement, pursuant to which, among other things, Silvaco agreed to acquire certain assets and assume certain liabilities comprising of Cadence’s Process Proximity Compensation product line, an optical proximity correction tool in exchange for \$11.5 million in cash. The acquisition was consummated on March 4, 2025.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

Conclusions Regarding Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based on this evaluation, our Chief Executive Officer and Chief Financial Officer, as of December 31, 2024, concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) were effective to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) for our company. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in the Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO 2013 framework).

Based on our evaluation under the COSO 2013 framework, our management concluded that our internal control over financial reporting was effective, at the reasonable assurance level, as of December 31, 2024.

Remediation of Previously Identified Material Weaknesses

We identified a material weakness as of December 31, 2023, in connection with the preparation of our consolidated financial statements related to a lack of formalized accounting processes over internal control over financial reporting 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.

As part of the remediation process, we implemented additional measures including the hiring of qualified accounting and finance personnel with appropriate levels of accounting and financial reporting experience to improve the timeliness and accuracy of our financial statement reporting process. We additionally formalized our accounting policies and financial reporting procedures and controls. The applicable measures have been implemented for a sufficient period of time and management has concluded, through testing, that the enhanced controls are operating effectively, and that the material weakness was remediated as of December 31, 2024.

Changes in Internal Control Over Financial Reporting

Except for the changes discussed above, there have been no changes to our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fiscal year ended December 31, 2024, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues, misstatements, errors, and instances of fraud, if any, within our company have been or will be prevented or detected. Further, internal controls may become inadequate as a result of changes in conditions, or through the deterioration of the degree of compliance with policies or procedures.

Item 9B. Other Information

Rule 10b5-1 Trading Plans

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The adoption or termination of contracts, instructions or written plans for the purchase or sale of our securities by our Section 16 officers and directors for the three months ended December 31, 2024, each of which is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act ("Rule 10b5-1 Plan"), were as follows:

Name	Title	Action Taken	Date of Action	Duration of Rule 10b5-1 Plan	Number of Shares to be Sold under the Rule 10b5-1 Plan
Babak Taheri	Chief Executive Officer, Director	Adoption	12/15/2024	June 1, 2025 to December 31, 2025	250,000
Katherine Ngai-Pesic	Director	Adoption	12/13/2024	March 14, 2025 to December 31, 2025	205,000

Item 9C. Disclosure Regarding Foreign Jurisdiction that Prevent Inspections.

Not applicable.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

Other than set forth below, the information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2025 Annual Meeting of Stockholders.

We have adopted a code of ethics that applies to our chief executive officer, chief financial officer and other senior accounting personnel. The “Code of Ethics for the CEO and Senior Financial Officers” is located on our website at www.silvaco.com in the Investor Relations section under Corporate Governance.

We intend to satisfy the disclosure requirement under Item 5.05(c) of Form 8-K regarding any amendment to, or waiver from, a provision of this code of ethics by posting such information on our website, at the address and location specified above.

In addition, we have adopted an Insider Trading and Communications Policy, attached as Exhibit 19.1 hereto, which governs the purchase, sale, and other dispositions of our securities by directors, officers and employees that are reasonably designed to promote compliance with insider trading laws, rules and regulations, and Nasdaq listing standards.

Item 11. Executive Compensation

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2025 Annual Meeting of Stockholders.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2025 Annual Meeting of Stockholders.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2025 Annual Meeting of Stockholders.

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2025 Annual Meeting of Stockholders.

Part IV**Item 15. Exhibits and Financial Statement Schedules.****(a) Financial Statement Schedules.**

(1) Financial Statements are listed in the Index to Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

(b) Exhibits.

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of Silvaco Group, Inc. (filed as Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 13, 2024)
3.2	Amended and Restated Bylaws of Silvaco Group, Inc. (filed as Exhibit 3.2 of the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 13, 2024)
4.1	Form of Common Stock Certificate (filed as Exhibit 4.1 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
4.2*	Description of Capital Stock
4.3	Registration Rights Agreement, dated April 12, 2024, among the Registrant and the stockholders named therein (filed as Exhibit 10.25 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
4.4	Stockholders Agreement, dated April 12, 2024, among the Registrant and the stockholders named therein (filed as Exhibit 10.26 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
10.1 +	Form of Indemnification Agreement between the Registrant and its directors and officers (filed as Exhibit 10.1 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
10.2 +	Amended and Restated 2014 Stock Incentive Plan and Form of Restricted Stock Unit Agreement thereunder (filed as Exhibit 10.2 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
10.3 +	2024 Stock Incentive Plan (filed as Exhibit 10.3 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
10.4 +	Form of Restricted Stock Unit Agreement pursuant to the 2024 Stock Incentive Plan (filed as Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2024)
10.5 +	2024 Stock Incentive Plan Form of Notice of RSU Award for Employees (filed as Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2024)
10.6 +	2024 Employee Stock Purchase Plan (filed as Exhibit 10.4 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
10.7 +	Executive Severance Plan (filed as Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2024)
10.8 +	Executive Severance Plan Participation Agreement, dated February 28, 2024, between the Registrant and Dr. Babak A. Taheri (filed as Exhibit 10.4 of the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2024)
10.9 +	Executive Severance Plan Participation Agreement, dated April 23, 2024, between the Registrant and Ryan Benton (filed as Exhibit 10.5 of the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2024)

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10.10 *	Executive Severance Plan Participation Agreement, dated April 24, 2024, between the Registrant and Dr. Eric Guichard (filed as Exhibit 10.6 of the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2024)
10.11 **	Executive Severance Plan Participation Agreement, dated November 20, 2024, between the Registrant and Candace Jackson
10.12 *	Amended and Restated Employment Agreement, dated February 29, 2024, between the Registrant and Dr. Babak A. Taheri (filed as Exhibit 10.13 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024
10.13 *	Offer Letter Agreement, dated July 20, 2023, between the Registrant and Ryan Benton (filed as Exhibit 10.6 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024
10.14 **	Offer Letter Agreement, dated August 29, 2024, between the Registrant and Candace Jackson
10.15 **	Separation Agreement, dated January 2, 2025, between the Registrant and Raul Camposano
10.16 *	Consulting Advisory Agreement, dated January 12, 2022, between the Registrant and Katherine S. Ngai-Pesic (filed as Exhibit 10.7 to the Registrant's Registration on Form S-1 (No. 333-278666) initially filed with the Securities and Exchange Commission on April 12, 2024)
19.1*	Silvaco Group, Inc. Insider Trading and Communications Policy
21.1*	List of Subsidiaries of Silvaco Group, Inc.
23.1*	Consent of Moss Adams LLP, Independent Registered Public Accounting Firm
31.1*	Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97.1*	Silvaco Group, Inc. Policy for Recovery of Erroneously Awarded Incentive Compensation
101.INS *	XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH *	Inline XBRL Taxonomy Extension Schema Document.
101.CAL *	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF *	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB *	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE *	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104 *	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101).

* Filed herewith.

** The certifications attached as Exhibit 32.1 and 32.2 accompanying this Annual Report on Form 10-K, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

+ Indicates management contract or compensatory plan.

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Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Santa Clara, State of California, on March 5, 2025.

SILVACO GROUP, INC.

/s/ Dr. Babak A. Taheri

Dr. Babak A. Taheri
Chief Executive Officer

We, the undersigned directors and officers of Silvaco Group, Inc., hereby severally constitute and appoint Dr. Babak A. Taheri, Ryan Benton and Candace Jackson, and each of them individually, with full powers of substitution and resubstitution, our true and lawful attorneys, with full powers to them and each of them to sign for us, in our names and in the capacities indicated below, any and all amendments to this Annual Report on Form 10-K filed with the SEC, granting unto said attorneys-in-fact and agents, each acting alone, 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 might or could do in person, hereby ratifying and confirming that any such attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the registrant and 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)	March 5, 2025
/s/ Ryan Benton Ryan Benton	Chief Financial Officer (Principal Financial and Accounting Officer)	March 5, 2025
/s/ Katherine S. Ngai-Pesic Katherine S. Ngai-Pesic	Chair of the Board	March 5, 2025
/s/ Dr. Hau L. Lee Dr. Hau L. Lee	Lead Independent Director	March 5, 2025
/s/ Anita Ganti Anita Ganti	Director	March 5, 2025
/s/ William H. Molloie, Jr. William H. Molloie, Jr.	Director	March 5, 2025
/s/ Anthony K. K. Ngai Anthony K. K. Ngai	Director	March 5, 2025
/s/ Dr. Walden C. Rhines Dr. Walden C. Rhines	Director	March 5, 2025
/s/ Jodi L. Shelton Jodi L. Shelton	Director	March 5, 2025

DISCUSSION OF NON-GAAP FINANCIAL MEASURES

We use certain non-GAAP financial measures to supplement the performance measures in our consolidated financial statements, which are presented in accordance with GAAP. These non-GAAP financial measures include non-GAAP gross profit, non-GAAP gross margin, non-GAAP operating income (loss), non-GAAP net income (loss), and non-GAAP net income (loss) per share. We use these non-GAAP financial measures for financial and operational decision-making and as a means to assist us in evaluating period-to-period comparisons.

We define non-GAAP gross profit and non-GAAP gross margin as our GAAP gross profit and GAAP gross margin adjusted to exclude certain costs, including stock-based compensation expense, amortization of acquired intangible assets and payroll tax from the IPO lockup release. We define non-GAAP operating income (loss), as our GAAP operating income (loss) adjusted to exclude certain costs, including certain transaction-related costs, IPO preparation costs, acquisition-related estimated litigation claim and legal costs, stock-based compensation expense, amortization of acquired intangible assets, impairment charges, payroll tax from the IPO lockup release, and executive severance costs. We define non-GAAP net income (loss) as our GAAP net income (loss) adjusted to exclude certain costs, including certain transaction-related costs, IPO preparation costs, acquisition-related estimated litigation claim and legal costs, stock-based compensation expense, amortization of acquired intangible assets, impairment charges, payroll tax from the IPO lockup release, executive severance costs, change in fair value of contingent consideration, foreign exchange (gain) loss, loss on debt extinguishment, and the income tax effect on non-GAAP items. Our non-GAAP net income (loss) per share is calculated in the same way as our non-GAAP net income (loss), but on a per share basis. We monitor non-GAAP gross profit, non-GAAP gross margin, non-GAAP operating income (loss), non-GAAP net income (loss) and non-GAAP net income (loss) per share 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 gross profit, non-GAAP gross margin, non-GAAP operating income (loss), non-GAAP net income (loss) and non-GAAP diluted net income (loss) per share 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 gross profit, GAAP gross margin, GAAP operating income (loss), and GAAP net income (loss) for these items to arrive at non-GAAP gross profit, non-GAAP gross margin, 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. By excluding certain items that may not be indicative of our recurring core operating results, we believe that non-GAAP gross profit, non-GAAP gross margin, non-GAAP operating income (loss), non-GAAP net income (loss) and non-GAAP diluted net income (loss) per share provide meaningful supplemental information regarding our performance.

We believe these non-GAAP financial measures are useful to investors and others because they allow for additional information with respect to financial measures used by management in its financial and operational decision-making and they may be used by our institutional investors and the analyst community to help them analyze our financial performance and the health of our business. However, there are a number of limitations related to the use of non-GAAP financial measures, and these non-GAAP measures should be considered in addition to, not as a substitute for or in isolation from, our financial results prepared in accordance with GAAP. Other companies, including companies in our industry, may calculate these non-GAAP financial measures differently or not at all, which reduces their usefulness as comparative measures.

The following is a reconciliation of the differences between GAAP and non-GAAP gross margin as a percentage of revenue for the periods indicated:

FISCAL YEAR ENDED DECEMBER 31	2021	2022	2023	2024
GAAP Gross Margin	79%	81%	83%	80%
Add: Stock Based Compensation	-	-	-	5%
Add: Amortization of acquired intangible assets ¹	-	-	-	1%
Add: Payroll tax related to IPO lockup release ²	-	-	-	0%
Non-GAAP Gross Margin	79%	81%	83%	86%

Note: We define non-GAAP Gross Profit and non-GAAP Gross Margin as our GAAP Gross Profit and GAAP Gross Margin adjusted to exclude stock-based compensation expense, amortization of acquired intangible assets, and payroll tax from the IPO lock up release.

1. Reflects the amortization of intangible assets attributable to our technology licenses.

2. Reflects taxes related to the release of vested RSUs previously subject to a liquidity provision, triggered by the IPO and subsequent lockup expiration.

The following is a reconciliation of the differences between GAAP and non-GAAP operating income (loss) for the periods indicated:

FISCAL YEAR ENDED DECEMBER 31	2021	2022	2023	2024
GAAP Operating Income (Loss)	(\$3,536)	(\$1,873)	\$1,134	(\$40,279)
Add: Stock Based Compensation	-	-	-	\$26,915
Add: Acquisition-related estimated litigation claim and legal costs ¹	\$1,148	\$1,340	\$1,707	\$15,935
Add: IPO preparation costs ²	-	\$1,429	\$1,221	\$873
Add: Regulatory Compliance Costs	-	\$523	-	-
Add: Amortization of acquired intangible assets ³	\$808	\$316	\$339	\$953
Add: Payroll tax related to IPO lockup release ⁴	-	-	-	\$725
Add: Impairment Charges ⁵	-	\$560	-	-
Add: Executive Severance ⁶	\$280	-	-	\$415
Non-GAAP Operating Income (Loss)	(\$1,300)	(\$2,295)	\$4,401	\$5,537

Note: We define non-GAAP operating income (loss) as our GAAP operating income (loss) adjusted to exclude certain costs, including certain transaction-related costs, IPO preparation costs, acquisition-related estimated litigation claim and legal costs, stock-based compensation expense, amortization of acquired intangible assets, payroll tax from the IPO lockup release, impairment charges and executive severance costs.

1. Reflects litigation-related expenses incurred in connection with our acquisitions and the estimated Nangate litigation claim and legal costs.

2. Reflects one-time costs including third-party professional services fees and costs incurred in connection with, and in preparation for our Initial Public Offering.

3. Reflects the amortization of intangible assets attributable to our acquisitions and technology licenses.

4. Reflects taxes related to the release of vested RSUs previously subject to a liquidity provision, triggered by the IPO and subsequent lockup expiration.

5. Reflects impairment charges related to certain intangible assets assumed through our acquisition of PolyEDA Cloud LLC, or PolyEDA.

6. Includes executive severance which occurred in connection with management changes.

The following is a reconciliation of the differences between GAAP diluted net income (loss) per share and non-GAAP diluted net income (loss) per share for the periods indicated:

FISCAL YEAR ENDED DECEMBER 31	2021	2022	2023	2024
GAAP Diluted Net Income (Loss) Per Share	(\$0.09)	(\$0.20)	(\$0.02)	(\$1.53)
Add: Stock Based Compensation	-	-	-	\$1.00
Add: Acquisition-related estimated litigation claim and legal costs ¹	\$0.06	\$0.07	\$0.09	\$0.59
Add: IPO preparation costs ²	-	\$0.07	\$0.06	\$0.03
Add: Regulatory Compliance Costs	-	\$0.03	-	-
Add: Amortization of acquired intangible assets ³	\$0.04	\$0.02	\$0.02	\$0.04
Add: Payroll tax related to IPO lockup release ⁴	-	-	-	\$0.03
Add: Impairment Charges ⁵	-	\$0.03	-	-
Add: Executive Severance ⁶	\$0.01	-	-	\$0.02
Add: Foreign Exchange Gain (Loss)	(\$0.00)	\$0.03	\$0.06	\$0.02
Add: Change in Fair Value of Contingent Consideration ⁷	\$0.01	(\$0.01)	\$0.02	(\$0.00)
Add: (Gain) Loss on Debt Extinguishment ⁸	(\$0.11)	-	-	\$0.03
Less: Income Tax effect of Non-GAAP Items ⁹	-	(\$0.01)	(\$0.01)	(\$0.03)
Non-GAAP Diluted Net Income (Loss) Per Share	(\$0.08)	\$0.02	\$0.17	\$0.25
Shares used in GAAP and Non-GAAP				
Net Income (Loss) Per Share – Basic	20,000	20,000	20,000	25,673
Net Income (Loss) Per Share – Diluted	20,000	20,000	20,000	26,842

Note: We define non-GAAP net income (loss) per share as our GAAP net income (loss) per share adjusted to exclude certain costs including certain transaction-related costs, IPO preparation costs, acquisition-related estimated litigation claim and legal costs, stock-based compensation expense, payroll taxes from the IPO lockup release, impairment charges, amortization of acquired intangible assets, and executive severance costs. GAAP EPS is calculated using either basic or diluted weighted-average shares outstanding, depending on whether GAAP net income or loss was reported for the respective period. Non-GAAP EPS is calculated using diluted weighted-average shares outstanding when non-GAAP net income is reported. Accordingly, reconciling items are presented on a per-share basis using diluted shares when applicable. As a result, the total of the reconciling items may not mathematically foot to the difference between GAAP and non-GAAP EPS due to differences in share count treatment.

1. Reflects litigation-related expenses incurred in connection with our acquisitions and the estimated Nangate litigation claim and legal costs.
2. Reflects one-time costs including third-party professional services fees and costs incurred in connection with, and in preparation for our Initial Public Offering.
3. Reflects the amortization of intangible assets attributable to our acquisitions and technology licenses.
4. Reflects taxes related to the release of vested RSUs previously subject to a liquidity provision, triggered by the IPO and subsequent lockup expiration.
5. Reflects impairment charges related to certain intangible assets assumed through our acquisition of PolyEDA Cloud LLC, or PolyEDA.
6. Includes executive severance which occurred in connection with management changes.
7. Includes the change in fair value of contingent consideration recorded in connection with our acquisitions.
8. Loss incurred from the repayment of debt facility.
9. Reflects the increase in income tax expenses due to non-GAAP adjustments.

Corporate Information

EXECUTIVE TEAM

Dr. Babak A. Taheri
Chief Executive Officer and Director

Ryan Benton
Chief Financial Officer*

Eric Guichard
SVP and GM of TCAD Business Unit

Candace Jackson
SVP, General Counsel and Corporate Secretary

** Resigned, effective April 11, 2025*

BOARD OF DIRECTORS

Katherine Ngai-Pesic
Chair of the Board, Silvaco Group, Inc.

Anita Ganti
Independent Board Director

Dr. Hau Lee
Independent Board Director and Retired Professor,
Stanford University

William H. Molloie, Jr.
Lecturer, University of California, San Diego
Rady School of Management

Anthony Ngai
Chief Financial Officer, Unience.io

Dr. Walden C. Rhines
Chief Executive Officer, Cornami, Inc.

Jodi Shelton
Chief Executive Officer,
Global Semiconductor Alliance

Dr. Babak A. Taheri
Chief Executive Officer and Director,
Silvaco Group, Inc.

STOCKHOLDERS MEETING

Our annual meeting of stockholders will take place on Thursday, May 22, 2025, at 9:00 a.m. Pacific Time and will be held via live interactive webcast on the internet at www.virtualshareholdermeeting.com/svco2025

ANNUAL REPORT COPIES

Stockholders may obtain copies of the company's Annual Report on Form 10-K, as filed with the Securities and Exchange Commission, without charge from Silvaco Group, Inc., 4701 Patrick Henry Drive, Building #23, Santa Clara, CA 95054. Such information is also available on the company's website at www.silvaco.com

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Moss Adams LLP
635 Campbell Technology Parkway
Campbell, CA 95008
(408) 558 – 7500

STOCK TRANSFER AGENT

Equiniti Trust Company, LLC
48 Wall Street, Floor 23
New York, NY 10005
(800) 937 - 5449

2024 Annual Report

SILVACO

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