

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

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the Fiscal Year December 31, 2022

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
Commission file number: 000-32929

**PERASO INC.**

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of  
incorporation or organization)

77-0291941

(IRS Employer  
Identification Number)

2309 Bering Drive

San Jose, California 95131

(Address of principal executive offices)

(408) 418-7500

(Registrant's telephone number, including area code)

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 \$0.001 per share	PRSO	The Nasdaq Stock Market, LLC

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

Title of each class	Name of each exchange on which registered
Series AA Preferred Stock, par value \$0.01 per share	None

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 ☐

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 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 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 the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on the Nasdaq Stock Market on June 30, 2022 was \$22,138,865.

The number of outstanding shares of the Registrant's exchangeable shares, no par value, was 9,106,876 as of March 23, 2023.

The number of shares of the Registrant's common stock outstanding, par value \$0.001 per share, as of March 23, 2023, was 14,269,590.

**ANNUAL REPORT ON FORM 10-K  
FOR THE YEAR ENDED DECEMBER 31, 2022**

**TABLE OF CONTENTS**

Special Note Regarding Forward-Looking Statements and Other Information Contained in this Report

	<b>Page</b>
<b>Part I</b>	
Item 1. Business .....	1
Item 1A. Risk Factors .....	8
Item 1B. Unresolved Staff Comments .....	21
Item 2. Properties .....	21
Item 3. Legal Proceedings .....	21
Item 4. Mine Safety Disclosures .....	21
<b>Part II</b>	
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities .....	22
Item 6. [Reserved] .....	22
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations .....	22
Item 8. Financial Statements and Supplementary Data .....	31
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure .....	31
Item 9A. Controls and Procedures .....	32
Item 9B. Other Information .....	32
Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections .....	32
<b>Part III</b>	
Item 10. Directors, Executive Officers and Corporate Governance .....	33
Item 11. Executive Compensation .....	37
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters .....	48
Item 13. Certain Relationships and Related Transactions, and Director Independence .....	50
Item 14. Principal Accountant Fees and Services .....	51
<b>Part IV</b>	
Item 15. Exhibits .....	52
Item 16. Form 10-K Summary .....	55
Signatures .....	56

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND OTHER INFORMATION CONTAINED IN THIS REPORT**

*This Annual Report on Form 10-K, or this Report, and the documents incorporated herein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which include, without limitation, statements about the market for our products, technology, our strategy, competition, expected financial performance and other aspects of our business identified in this Report, as well as other reports that we file from time to time with the Securities and Exchange Commission. Any statements about our business, financial results, financial condition and operations contained in this Report that are not statements of historical fact may be deemed to be forward-looking statements. These forward-looking statements represent our intentions, plans, expectations, assumptions and beliefs about future events and are subject to risks, uncertainties and other factors including, without limitation, the direct and indirect effects of coronavirus disease 2019, or COVID-19, and related issues that may arise therefrom. Without limiting the foregoing, the words “believes,” “anticipates,” “expects,” “intends,” “plans,” “projects,” or similar expressions are intended to identify forward-looking statements. Our actual results could differ materially from those expressed or implied by these forward-looking statements as a result of various factors, including the risk factors described in Part I, Item 1A, “Risk Factors,” and elsewhere in this Report. We undertake no obligation to update publicly any forward-looking statements for any reason, except as required by law, even as new information becomes available or other events occur in the future.*

Peraso®, MoSys®, 1T-SRAM® and Bandwidth Engine® are registered trademarks of Peraso Inc. QPR™, LineSpeed™ and PERSPECTUS™ are trademarks of Peraso Inc.

Unless expressly indicated or the context requires otherwise, the terms “Peraso,” the “Company,” “we,” “us” or “our” in this Report refer to Peraso Inc., a Delaware corporation, and, where appropriate, its subsidiaries.

## Part I

### Item 1. Business

#### Overview

Peraso Inc., together with its subsidiaries (“Peraso,” the “Company,” “we,” “our” or “us”), is a fabless semiconductor company focused on the development and sale of: i) semiconductor devices and millimeter wavelength wireless technology, or mmWave antenna modules based on its proprietary semiconductor devices and ii) performance of non-recurring engineering, or NRE, services and licensing of intellectual property, or IP. Our primary focus is the development of mmWave, which is generally described as the frequency band from 24 Gigahertz, or GHz, to 300GHz. Our mmWave products enable a range of applications, including i) multi-gigabit point-to-point, or PtP, wireless links with a range of up to 25 kilometers and operating in the 60GHz frequency band, ii) multi-gigabit point-to-multi-point, or PtMP, links in the 60GHz frequency band used to provide fixed wireless access, or FWA, services, iii) FWA in the 5G operating bands from 24GHz to 43GHz to provide multi-gigabit capability and low latency connections, and iv) consumer applications, such as wireless video streaming and untethered augmented reality and virtual reality, or AR/VR. We also have a line of memory-denominated integrated circuits, or ICs, for high-speed cloud networking, communications, security appliance, video, monitor and test, data center and computing markets that deliver time-to-market, performance, power, area and economic benefits for system original equipment manufacturers, or OEMs.

#### Business Combination

We were formerly known as MoSys, Inc., or MoSys. On September 14, 2021, we and our subsidiaries, 2864552 Ontario Inc. and 2864555 Ontario Inc., entered into an Arrangement Agreement, or the Arrangement Agreement, with Peraso Technologies Inc., or Peraso Tech, a privately-held corporation existing under the laws of the province of Ontario, to acquire all of the issued and outstanding common shares of Peraso Tech, or the Peraso Shares, including those Peraso Shares to be issued in connection with the conversion or exchange of secured convertible debentures and common share purchase warrants of Peraso Tech, as applicable, by way of a statutory plan of arrangement, or the Arrangement, under the Business Corporations Act (Ontario). On December 17, 2021, following the satisfaction of the closing conditions set forth in the Arrangement Agreement, the Arrangement was completed, and we changed our name from MoSys to “Peraso Inc.” and began trading on The Nasdaq Stock Market, or the Nasdaq, under the symbol “PRSO.” Certain previous shareholders of Peraso Tech elected to convert their Peraso Tech common stock into exchangeable shares in 2864555 Ontario Inc., one of our wholly-owned subsidiaries. These exchangeable shares, which can be converted into our common stock at the option of the holder, are similar in substance to our common stock.

#### Industry Trends and Market Opportunities

##### mmWave

The demand for wireless services is increasing exponentially, and, as a result, the current low frequency spectrum (under 7GHz) is running out of capacity. While service providers have maximized the capacity of the available spectrum, demand continues to outpace supply. We believe that mmWave spectrum will need to be utilized.

MmWave has been standardized for use in both licensed and unlicensed applications. In the licensed market, the 3<sup>rd</sup> Generation Partnership Project, or 3GPP, standards organizations have included mmWave frequencies in the 5G specification, utilizing the frequency band from 24GHz to 43GHz. The Institute of Electrical and Electronics Engineers, or IEEE, has standardized mmWave in the unlicensed band from 57GHz to 71GHz. We believe mmWave will soon be licensed on the 45GHz band in China.

A primary opportunity for the unlicensed product line is the FWA market. This market is primarily driven by wireless Internet service providers, or WISPs, in contrast to the licensed market, which is primarily serviced by large telecommunications carriers such as AT&T, Verizon and T-Mobile. Pursuant to the *2022 Fixed Wireless Access and Infrastructure and Devices* report issued in September 2022 by Mobile Experts Inc., the WISP market has been estimated to be 3.2M subscribers in 2023. The market is primarily served today by traditional WiFi technology using the 2.4GHz and 5GHz bands. From an equipment perspective, this worldwide market is historically serviced

by FWA original equipment manufacturers, or OEMs, such as Ubiquiti Inc., Cambium Networks, Ltd. and SIA MikroTik. WISPs are addressing a segment of the broadband market not served by the traditional carriers, or, in some cases, underserved by the carriers.

This market has been helped in recent years with the advent of government incentives aimed at closing the so-called ‘digital divide’ between urban and rural broadband access. In the United States, such incentive programs include the Regional Digital Opportunity Fund, or RDOF, the Broadband Equity, Access and Deployment, or BEAD, Program, and the Affordable Connectivity Program. However, in addition to rural markets, WISPs have begun offering services in large urban markets in the United States, such as Las Vegas, Los Angeles and Phoenix. The basic business premise is that the 60GHz spectrum is free, and WISPs can pass this cost savings on the customer and compete with more traditional Internet access services, such as cable broadband or digital subscriber line, or DSL.

There are several other market opportunities for 60GHz mmWave technology. Such market opportunities include transportation safety, factory automation, military, and railway communications.

Our 60GHz products can also be applied to consumer applications, as our technology can provide key advantages to this market. For example, the data rates of our Versatus antenna module product is 3Gbps, which is a good fit for high performance, 4K video for VR applications. Additionally, VR requires very low latency; under 5ms. Another benefit of 60GHz in the VR market, and in the streaming video market, is low interference. A primary characteristic of mmWave technology is the use of beamforming, which focuses the radio frequency, or RF, energy into a narrow beam. Not only does this provide improved range, it also provides physical isolation from other transmitters, and leads to reduced interference versus traditional wireless technology. Other high performance video applications include streaming, docking, surveillance, and AR.

Considering the licensed 5G market, there are several primary applications for mmWave. Our initial target is the FWA segment. In this market segment, carriers provide their customers with a fixed wireless link to a base station or small cell, thus providing the customer with high-speed access to the Internet. mmWave can provide download speeds of over 1 Gbps and upload speeds of several hundred megabits per second. In addition, mmWave is a much cheaper alternative to installing fiber and allows carriers an additional advantage and competitive advantage against other access technologies, such as cable broadband. Additionally, our mmWave antenna modules can be utilized in consumer-premise applications, including hotspots, laptops and tablets. 5G mmWave has support from major industry players. Apple has incorporated mmWave wireless into substantially all versions of the iPhone for sale in the US market. The basic premise is the ever-increasing demand for bandwidth. Verizon is the leading carrier in the US at deploying mmWave for both mobile and fixed wireless access. The initial use case for cellular service providers is to provide their customer base (primarily smart-phone customers) with continuity of network access in highly congested environments, such as sporting events, public beaches, music festivals or generally any large gathering where thousands of users are attempting to access the network simultaneously. We believe that mmWave will gain universal acceptance, as users will demand full continuity in terms of network access, and we are well positioned to address the mobile opportunity for mmWave, which is expected to present an order of magnitude increase in the total available market.

mmWave is not without challenges, as mmWave signals do not typically travel as far as traditional wireless signals and are more attenuated by solid objects. Mitigation strategies must be deployed, particularly with regard to the management of signal propagation. Whereas traditional wireless devices utilize a broad, omni-antenna pattern, mmWave systems rely on phased array technology, which focusses the radio signal into a narrow beam to improve propagation characteristics. Peraso is a global leader in implementing these sophisticated radio systems and is one of the few companies in the market that is successfully shipping phased array devices in mass production.

### *Memory*

Our memory solutions deliver time-to-market, performance, power, area and economic benefits for system original equipment manufacturers, or OEMs. Our primary product line is marketed under the Accelerator Engine name and comprises our Bandwidth Engine and quad-partition rate SRAM memory ICs, which integrate our proprietary, 1T-SRAM high-density embedded memory and a highly-efficient serial interface protocol resulting in a monolithic memory IC solution optimized for memory bandwidth and transaction access performance. Further performance benefits can be achieved to offload statistical, search or other custom functions using our optional integrated logic and processor elements.

As data rates and the amount of high-speed processing increase, critical memory access bottlenecks occur. Our Accelerator Engine ICs dramatically increase memory accesses per second, removing these bottlenecks. In addition, the serial interface and high-memory capacity reduce the board footprint, number of pins and complexity, while using less power.

## **Our Products**

Our primary focus is the development, marketing and sale of our mmWave products. Currently, there are two industry standards that incorporate mmWave technology for wireless communications: (i) IEEE 802.11ad/ay and (ii) 3GPP Release 15-17 (commonly referred to as 5G). We have developed and continue to develop products that conform to these standards. To date, we have not sold any 5G products.

### *mmWave ICs*

Our first mmWave product line operates in the 60 GHz band and conforms to the IEEE 802.11ad standard. This product line includes a baseband IC, several variations of mmWave radio frequency, or RF, ICs, as well as associated antenna technology. The second product line addresses the 5G mmWave opportunity. Given our extensive experience in the development of mmWave technology, 5G mmWave, is a logical adjacent and larger market.

Our initial target market was the 60GHz IEEE 802.11ad market. Our 60GHz IEEE802.11ad products had two very important advantages over traditional 2.4GHz/5GHz Wi-Fi products: very high data rates (up to 4.5 Gigabits per second, or Gb/s) and low latency, i.e., less than 5 milliseconds, or ms. The first application that had traction was outdoor broadband, including applications such as point-to-point, or PtP, backhaul links or FWA using point-to-multipoint, or PtMP, links. As the spectrum is unlicensed (free), wireless carriers can provide services without having to spend significantly on wireless spectrum licenses. These services are offered by WISPs. The WISP market has seen significant growth over the last six years. In the United States, the number of subscribers that WISP providers serve has grown from 4 million in 2016 to 6.7 million in 2022 and could grow to 12.7 million subscribers in 2025, based on *The 2021 Fixed-Wireless and Hybrid ISP Industry Report* prepared by the Carmel Group.

We are a leading supplier of semiconductors in the PtP and PtMP markets. We are currently shipping to leading equipment suppliers in this space, as well as directly to service providers that are building their own equipment. We believe we bring certain advantages to the market. First, our products support the spectrum from 66 GHz to 71GHz. These are often referred to as channels 5 and 6 in the 802.11ad/ay specifications. The key advantage in supporting these channels is that the signals are able to propagate much further than channels 1 through 4; this is a result of significantly lower oxygen absorption at frequencies above 66GHz. To date, our FWA customers have achieved links in the range of 25 kilometers, which is substantially longer than any past 60 GHz links.

In the indoor area, the 802.11ad technology is ideal for high-speed, low-latency video applications. In indoor applications, our products can support 3Gb/s links with under 5ms of latency. Example applications include:

- AR/VR links between the headset and the video console;
- USB video cameras for corporate video conferencing;
- wireless security cameras; and
- smart factory safety and surveillance.

We are a leader in the production of mmWave devices and have pioneered a high-volume mmWave production test methodology using standard low-cost production test equipment. It has taken us several years to refine performance of this production test methodology, and we believe this places us in a leadership position to address the operational challenge of delivering mmWave products into high-volume markets.

### *mmWave Antenna Modules*

In the second half of 2021, we augmented our business model to produce and sell complete mmWave antenna modules. The primary advantage provided by our antenna modules is that our proprietary mmWave ICs and the antenna are integrated into a single device. A differentiating characteristic of mmWave technology is that the RF amplifiers must be as close as possible to the antenna to minimize loss. By providing a module, we can



guarantee the performance of the amplifier/antenna interface and simplify our customer's RF design engineering, facilitating more opportunities for new companies that have not provided RF-type systems, as well as shortening the time to market for new products. It is possible for third parties to provide competitive module products, but, because we utilize our mmWave ICs and incorporate our proprietary mmWave antenna IP, we can provide a highly-competitive solution based on our internally-owned and developed module components.

During 2022, we launched our PERSPECTUS family of mmWave antenna modules to enable WISPs to offer high-capacity FWA networks in the unlicensed 60-GHz spectrum. The PERSPECTUS product family includes a new generation of integrated 60-GHz mmWave antenna modules and enhanced software for PtMP FWA applications. Our PERSPECTUS products allow rapid development of low-cost network equipment utilizing over 14 GHz of spectrum to provide multi-gigabit access services. Leveraging our integrated phased-array antennas and operating in the upper channels of the band, link ranges from 1.5 kilometers up to extended ranges of 30 kilometers can be achieved using a parabolic reflector.

## *Memory*

### Accelerator Engines

Our memory products comprise our Accelerator Engine ICs, which include our Bandwidth Engine and quad-partition rate SRAM memory ICs.

### Bandwidth Engine

The Bandwidth Engine is a memory-dominated IC that was designed to be a high-performance companion IC to packet processors and is targeted for high-performance applications where throughput is critical. While the Bandwidth Engine primarily functions as a memory device with a high-performance and high-efficiency interface, it also can accelerate certain processing operations by serving as a co-processor element. Our Bandwidth Engine ICs combine: (1) our proprietary high-density, high-speed, low latency embedded memory, (2) our high-speed serial interface technology, or SerDes, (3) an open-standard interface protocol and (4) intelligent access technology. We believe an IC combining our 1T-SRAM memory and serial interface with logic and other intelligence functions provides a system-level solution and significantly improves overall system performance at lower cost, size and power consumption. Our Bandwidth Engine ICs can provide up to and over 6.5 billion memory accesses per second externally and 12 billion memory accesses per second internally, which we believe is more than three times the performance of current memory-based solutions. They also can enable system designers to significantly narrow the gap between processor and memory IC performance. Our customers that design Bandwidth Engine ICs onto the line cards in their systems will re-architect their systems at the line-card level and use our product to replace traditional memory IC solutions, such as dynamic random access, or DRAM, and static random access memory, or SRAM, ICs. When compared with existing commercially available DRAM and SRAM IC solutions, our Bandwidth Engine ICs may:

- provide up to four times the performance;
- reduce power consumption by approximately 50%;
- reduce cost by greater than 50%; and
- result in a dramatic reduction in IC pin counts on the line card.

Our Bandwidth Engine 2 IC products contain 576 megabits, or Mb, of memory and use a SerDes interface with up to 16 lanes operating at up to 12.5 Gbps per lane. We have been shipping our Bandwidth Engine 2 IC products since 2013.

Our Bandwidth Engine 3 IC products contain 1152 Mb of memory and use a SerDes interface with up to 16 lanes operating at up to 25 Gbps per lane. Our Bandwidth Engine 3 ICs target support for packet-processing applications with up to five billion memory single word accesses per second, as well as burst mode to enable full duplex buffering up to 400 Gbps for ingress, egress and oversubscription applications. The devices provide benefits of size, power, pin count, and cost savings to our customers.

## QPR

Our quad partition rate, or QPR, family of low cost, ultra-high speed SRAM memory devices are optimized for FPGA-based systems. Our QPR memory technology features an architecture that allows for parallel accesses to multiple partitions of the memory simultaneously and allows access of up to 576 bits per read or write cycle. The QPR device includes four independent partitions per input/output and each partition functions as a stand-alone random-access SRAM. The high-performance interface, larger density and the multiple partitions work together to support multiple independent functional blocks within an FPGA with one QPR device. Our MSQ220 and MSQ230 QPR devices are ideally suited for random-access applications.

## **Research and Development**

Our ability to compete in the future depends on successfully improving our technology to meet the increasing demand for higher performance and lower cost solutions. Development of new IC products requires specialized chip design and product engineers, expensive computer-aided design software licenses, and significant fabrication and testing costs, including mask costs.

We have over 14 years of technical know-how in the design and manufacturing of mmWave technology. The most important aspect of this knowledge is knowing how mmWave circuits will perform in a real-world environment. Traditionally, semiconductor design utilizes sophisticated computer-aided design software to simulate the performance of a device that is manufactured at a specific semiconductor manufacturing plant. However, mmWave is extremely difficult to model precisely. Therefore, the only path to understand how well a device will perform is to produce the device and test it in a real-world application. Over the last decade, many companies have attempted to develop mmWave semiconductor devices, however, given that the devices had inconsistent or weak performance, a number of the companies were unsuccessful and abandoned their design and product development efforts. As an example of our leadership and expertise in the development of mmWave technology, we were an active participant in the development of the IEEE 802.11ay wireless specification and, to date, have been granted nine essential claims patents with respect to this standard.

At a system level, there are additional technical challenges presented by mmWave technology that we have overcome and form a key part of our internal know-how. For example, a key technology of mmWave is the concept of beamforming and beam steering using a phased array antenna. This technology is utilized to concentrate the RF energy into a narrow beam to improve the range and coverage of mmWave devices. We have developed effective beamforming and beam steering technology for phased array circuits and antennas. While there are many academic examples of successful phased array implementations, there is a vast barrier between a “laboratory” version of phased array technology and a version that is deployed for commercial use. One such aspect is the implementation of the beamforming procedure, which seeks to maximize throughput and do so while not impacting latency. While the details of achieving this are complex, it is important-intellectual property that we have gained through real-world experience.

With regard to our memory products, we do not have internal resources to develop new, memory IC products, and do not intend to expend any development efforts or funds to develop new memory products. That said, we believe our Accelerator Engine IC products will provide us with meaningful revenue and gross margin contributions through at least the end of 2024. We intend to continue to devote substantially all of our research and development efforts toward further expanding our mmWave technology portfolio and expanding our product offerings.

## **Sales and Marketing**

In addition to our direct sales personnel, we sell through sales representatives and distributors in the United States, Asia and Europe. Our distributors have a global presence with offices and technical selling and applications engineering capabilities, which we believe will enable us to reach new potential customers for our products.

We also have applications engineers who support our customer engagements and engage with the customers’ system architects and designers to propose and implement our products and solutions to address system design challenges and improve performance.



In the markets we serve, the time from a design win to production volume shipments of our IC products can range from 12 to 36 months. Networking, wireless and wired communication and security appliance systems can have a product life from a few years to over 10 years once a product like ours has been designed into the system. Historically, our revenue has been highly concentrated, with a few customers accounting for a significant percentage of our total revenue.

During the year ended December 31, 2022, four customers accounted for 10% or more of our net revenues, including Nokia Corporation at 26%, WeLink Communications LLC, or WeLink, at 21%, CEAC International Limited, or CEAC, a distributor selling to Ubiquiti Inc., at 16%, and F5, Inc. at 11%. During the year ended December 31, 2021, three customers accounted for 10% or more of our net revenues, including CEAC at 48%, WeLink at 19% and Alltek Technology Corp., a distributor selling to Ubiquiti Inc., at 11%.

## **Intellectual Property**

We regard our patents, copyrights, trademarks, trade secrets and similar intellectual property as critical to our success and rely on a combination of patent, trademark, copyright, and trade secret laws to protect our proprietary rights.

As of December 31, 2022, we held 95 United States patents and 59 foreign patents on various aspects of our mmWave, antenna, memory and other technology, with expiration dates ranging from 2025 to 2041. We also held 15 pending patent applications in the United States and abroad. There can be no assurance that others will not independently develop or patent similar or competing technology or design around any patents that may be issued to us, or that we will be able to successfully enforce our patents against infringement by others.

We were also an active participant in the development of the IEEE 802.11ay wireless specification and, to date, have been granted nine essential claims patents with respect to this standard. Essential claims patents are of particular value as a specification cannot be implemented without obtaining a license to the patents from us.

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. Our IC customers, licensees or we might, from time to time, receive notice of claims that we have infringed patents or other intellectual property rights owned by others. Our successful protection of our patents and other intellectual property rights and our ability to make, use, import, offer to sell, and sell products free from the intellectual property rights of others are subject to a number of factors, particularly those described in Part I, Item 1A, "Risk Factors."

## **Competition**

### *mmWave*

mmWave circuit and system design is a highly specialized engineering skill, as mmWave is a challenging technology to ship in mass production. At frequencies above 24GHz, circuits are extremely vulnerable to small variances in the semiconductor manufacturing process. Designing circuits that minimize susceptibility to these variances takes years of development, and we believe we are one of the few companies in the world that is skilled in mmWave design. Further, we have shipped mmWave devices in volume, and ensuring all devices sold adhere to strict performance standards is a core competency we have developed. In addition, we have developed our own mmWave phased array antenna technology, which allows us to be highly competitive in terms of overall system cost. Our customers do not need to engage with third-party antenna suppliers, thus eliminating the additional cost for a third-party antenna.

### Unlicensed IEEE 802.11ad/ay Market:

Our primary competitor in the IEEE802.11ad/ay market is Qualcomm. The primary benefit that we provide to the market is the support of the higher frequency bands from 66GHz to 71GHz. The advantage at these frequencies is that oxygen attenuation is significantly reduced, and signals can travel much further.

We also have key points of differentiation compared to Qualcomm for wireless video devices. We are well positioned in this market, as we have USB 3.0 built into our devices, so our products generally support USB architectures. A prime example is the replacement of the USB cable with a wireless version using our technology.

There are many applications where this can be of use, including USB web cams, wireless displays, and AR/VR headsets. We have invested significant software resources into providing the market with wireless USB solutions, and we believe there is no other mmWave vendor in the world that can offer multi-gigabit solutions as a replacement for wired USB.

#### Licensed 5G Market:

With 5G, our efforts are focused on the mmWave RF front-end phased array component of the system. The 5G product instantiation is an RF module utilizing our proprietary intellectual property. Key elements of our mmWave intellectual property include:

- RF circuits;
- phased-array antenna; and
- in-system circuit calibration, beam forming, real-time system monitoring.

From a competitive perspective, we believe we are currently the only pure-play, 5G vendor to offer a dual-band (28/39GHz) RF solution for the FWA market. Qualcomm does offer a 5G RF solution for the FWA market, however its solution is based on aggregating its mobile RF solution, which requires several compromises in terms of cost, performance, and power consumption. With an initial focus on fixed wireless access, we can derive advantages by optimizing our silicon for that specific market. Furthermore, we have achieved traction in the unlicensed, 60GHz, FWA market, and we believe we will be able to transfer all of our knowledge gained from the 60GHz market to the 5G market. However, this market opportunity is more competitive, and potential competitors, in addition to Qualcomm, include MediaTek Inc. and Samsung Electronics Co., Ltd., or Samsung.

#### *Memory*

The markets for our memory products are highly competitive. We believe that the principal competitive factors are:

- processing speed and performance;
- density and cost;
- power consumption;
- reliability;
- interface requirements;
- ease with which technology can be customized for and incorporated into customers' products; and
- level of technical support provided.

We believe that our products compete favorably with respect to each of these criteria. Our proprietary 1T-SRAM embedded memory and high-speed serial interface IP can provide our Accelerator Engine ICs with a competitive advantage over alternative devices. Our Accelerator Engine ICs compete with embedded memory solutions, stand-alone memory ICs, including both DRAM and SRAM ICs, application-specific, or ASICs, designed by customers in-house to meet their system requirements, and network processing units, or NPUs, that use significant internal memory and customer-designed software to implement tasks. Competitive DRAM solutions primarily include RDRAM from Micron Technology, Inc., or Micron, LDRAM from Renesas, DDR from Samsung, Micron and others, and high-bandwidth memory, or HBM, which is stacked DRAM memory from Samsung and SK Hynix. SRAM solutions can meet high-speed performance requirements, but often lack adequate memory size. Competitive SRAM solutions primarily include QDR or similar SRAM products from Infineon Technologies AG and GSI Technology, Inc. Most of the currently available SRAM and DRAM solutions use a parallel, rather than a serial interface. To offset these drawbacks, system designers generally must use more discrete memory ICs, resulting in higher power consumption and greater utilization of space. Our competitors include established semiconductor companies with significantly longer operating histories, greater name recognition and reputation, large customer bases, dedicated manufacturing facilities and greater financial, technical, sales and

marketing resources. This may allow them to respond more quickly than us to new or emerging technologies or changes in customer requirements. Generally, customers prefer suppliers with greater financial resources than we have currently. Many of our competitors also have significant influence in the semiconductor industry. They may be able to introduce new technologies or devote greater resources to the development, marketing and sales of their products than we can. Furthermore, in the event of a manufacturing capacity shortage, these competitors may be able to manufacture products when we are unable to do so.

## **Manufacturing**

We depend on third-party vendors to manufacture, package, assemble and test our IC and module products, as we do not own or operate a semiconductor fabrication, packaging or production testing facility. By outsourcing manufacturing, we can avoid the high cost associated with owning and operating our own facilities, allowing us to focus our efforts on the design and marketing of our products.

We perform an ongoing review of our product manufacturing and testing processes. Our IC products are subjected to extensive testing to assess whether their performance meets design specifications. Our test vendors provide us with immediate test data and the ability to generate characterization reports that are made available to our customers.

## **Employees**

As of December 31, 2022, we had 73 employees, including 17 located in the United States and 56 located in Canada. Our headcount consisted of 54 in research and development and manufacturing operations and 19 in sales, marketing and general and administrative functions. In February 2023, we implemented a reduction in our workforce and eliminated five positions. We believe our current headcount is adequate to conduct our business.

## **Available Information**

We were founded in 1991 and reincorporated in Delaware in 2000. Our website address is [www.perasoinc.com](http://www.perasoinc.com). The information in our website is not incorporated by reference into this report. Through a link on the Investor section of our website, we make available 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, as soon as reasonably practicable after they are filed with, or furnished to, the Securities and Exchange Commission, or SEC. You can also read any materials submitted electronically by us to the SEC on its website ([www.sec.gov](http://www.sec.gov)), which contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us.

## **Item 1A. Risk Factors**

The following risks could materially and adversely affect our business, financial condition, cash flows, and results of operations, and the trading price of our common stock could decline. These risk factors do not identify all of the risks that we face. Our operations could also be affected by factors that are not presently known to us or that we currently consider to be immaterial to our operations. Due to risks and uncertainties, known and unknown, our past financial results may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. Refer also to the other information set forth in this Annual Report on Form 10-K, including in Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” as well as our Consolidated Financial Statements and the related notes in Part II, Item 15.

### ***We might not be able to continue as a going concern.***

Our consolidated financial statements as of December 31, 2022 have been prepared under the assumption that we will continue as a going concern for the next twelve months. As of December 31, 2022, we had cash, cash equivalents and investments of \$2.9 million and an accumulated deficit of \$149.6 million. We do not believe that our cash, cash equivalents and investments are sufficient to fund our operations for the next 12 months. We will need to increase revenues substantially beyond levels that we have attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time. As a result of our expected operating losses and cash burn for the foreseeable future and recurring losses from operations, if we are unable to raise sufficient capital through additional debt or equity arrangements, there

will be uncertainty regarding our ability to maintain liquidity sufficient to operate our business effectively, which raises substantial doubt as to our ability to continue as a going concern. If we cannot continue as a viable entity, our stockholders would likely lose most or all of their investment in us.

If we are unable to generate sustainable operating profit and sufficient cash flows, then our future success will depend on our ability to raise capital. We are seeking additional financing and evaluating financing alternatives in order to meet our cash requirements for the next 12 months. We cannot be certain that raising additional capital, whether through selling additional debt or equity securities or obtaining a line of credit or other loan, will be available to us or, if available, will be on terms acceptable to us. If we issue additional securities to raise funds, these securities may have rights, preferences, or privileges senior to those of our common stock, and our current stockholders may experience dilution. If we are unable to obtain funds when needed or on acceptable terms, we may be required to curtail our current product development programs, cut operating costs, forego future development and other opportunities or even terminate our operations.

***We have a history of losses, and we will need to raise additional capital.***

We recorded net losses of approximately \$32.4 million and \$10.9 million for the years ended December 31, 2022 and December 31, 2021, and we ended the period with an accumulated deficit of approximately \$149.6 million. These and prior-year losses have resulted in significant negative cash flows. To remain competitive and expand our product offerings to customers, we will need to increase revenues substantially beyond levels that we have attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time. Given our history of fluctuating revenues and operating losses, and the challenges we face in securing customers for our products, we cannot be certain that we will be able to achieve and maintain profitability on either a quarterly or annual basis in the future. As a result, we may need to raise additional capital in the future, which may or may not be available to us at all or only on unfavorable terms.

***Our failure to generate the significant capital necessary or raise additional capital to expand our operations and invest in new products could reduce our ability to compete and could harm our business.***

We intend to continue spending to grow our business. If we do not achieve and maintain profitability, we will need additional financing to pursue our business strategy, develop new products, respond to competition and market opportunities and acquire complementary businesses or technologies. There can be no assurance that such additional capital, whether in the form of debt or equity financing, will be sufficient or available and, if available, that such capital will be offered on terms and conditions acceptable to us.

If we were to raise additional capital through sales of our equity securities, our stockholders would suffer dilution of their equity ownership. If we engage in debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, prohibit us from paying dividends, repurchasing our stock or making investments, and force us to maintain specified liquidity or other ratios, any of which could harm our business, operating results and financial condition. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things:

- develop or enhance our products;
- continue to expand our product development and sales and marketing organizations;
- acquire complementary technologies, products or businesses;
- expand operations, in the United States or internationally;
- hire, train and retain employees; or
- respond to competitive pressures or unanticipated working capital requirements.

***Our failure to successfully market our products could seriously harm our ability to execute our business strategy and may force us to curtail our research and development plans or existing operations.***

Our success depends upon the acceptance by our target markets of our products and technologies by original equipment manufacturers or OEMs and service providers. Our prospective customers may be unwilling to adopt and design-in our products due to the uncertainties and risks surrounding designing a new IC or module

and/or incorporating new IP into their systems and relying on a small, sole-sourced supplier. Thus, currently, we do not know whether we will be able to generate adequate profit from making and selling our products and licensing our technologies.

An important part of our strategy to gain market acceptance is to penetrate new markets by targeting market leaders to accept our technology solutions. This strategy is designed to encourage other participants in those markets to follow these leaders in adopting our solutions. If a high-profile industry participant adopts our products for one or more of its products but fails to achieve success with those products, or is unable to successfully implement our products, other industry participants' perception of our solutions could be harmed. Any such event could reduce the amount of future sales of our products.

***Future revenue growth depends on our winning designs with existing and new customers, retaining current customers, and having those customers design our solutions into their product offerings and successfully selling and marketing such products. If we do not continue to win designs in the short term, our product revenue in the following years will not grow.***

We sell our ICs to customers that include our ICs and modules in their products. Our technology is generally incorporated into products at the design stage, which we refer to as a design win, and which we define as the point at which a customer has made a commitment to build a board against a fixed schematic for its system, and this board will utilize our products. As a result, our future revenue depends on our OEM customers designing our products into their products, and on those products being produced in volume and successfully commercialized. If we fail to retain our current customers or convince our current or prospective customers to include our products in their products and fail to achieve a consistent number of design wins, our results of operations and business will be harmed. In addition, if a current or prospective customer designs a competitor's offering into its product, it becomes significantly more difficult for us to sell our products to that customer because changing suppliers involves significant cost, time, effort and risk for the OEM. Even if a customer designs one of our ICs or modules into its product, we cannot be assured that the OEM's product will be commercially successful over time, or at all, or that we will receive or continue to receive any revenue from that customer. Furthermore, the customer product for which we obtain a design win may be canceled before the product enters production or before or after it is introduced into the market. Because of our extended sales cycle, our revenue in future years is highly dependent on design wins we are awarded today. Our lack of capital and uncertainty about our future technology roadmap also may limit our success in achieving additional design wins, as discussed under "*We may experience difficulties in transitioning to new wafer fabrication process technologies or in achieving higher levels of design integration, which may result in reduced manufacturing yields, delays in product deliveries and increased costs.*"

***The design win process for our products is generally lengthy, expensive and competitive, with no guarantee of revenue, and, if we fail to generate sufficient revenue to offset our expenses, our business and operating results would suffer.***

Achieving a design win for one of our products is typically a lengthy, expensive and competitive process because our customers generally take a considerable amount of time to evaluate our products. In the markets we serve, the time from initial customer engagement to design win to production volume shipments can range from one to three years, though it may take longer for new customers or markets we intend to address. In order to win designs, we are required to both incur design and development costs and dedicate substantial engineering resources in pursuit of a single customer opportunity. Even though we incur these costs we may not prevail in the competitive selection process, and, even if we do achieve a design win, we may never generate sufficient, or any, revenue to offset our development expenditures. Our customers have the option to decide whether or not to put our solutions into production after initially designing our products in the specification. The customer can make changes to its product after a design win has been awarded to us, which can have the effect of canceling a previous design win. The delays inherent in our protracted sales cycle increase the risk that a customer will decide to cancel, curtail, reduce or delay its product plans, causing us to lose anticipated revenue. In addition, any change, delay or cancellation of a customer's plans could harm our financial results, as we may have incurred significant expense while generating no revenue.



***If our foundries do not achieve satisfactory yields or quality, our cost of net revenue will increase, our operating margins will decline and our reputation and customer relationships could be harmed.***

We depend not only on sufficient foundry manufacturing capacity and wafer prices, but also on good production yields (the number of good die per wafer) and timely wafer delivery to meet customer demand and maintain profit margins. The fabrication of our products is a complex and technically demanding process. Minor deviations in the manufacturing process can cause substantial decreases in yields and, in some cases, cause production to be suspended. From time to time, our foundries experience manufacturing defects and reduced manufacturing yields. Changes in manufacturing processes or the inadvertent use of defective or contaminated materials by our foundries could result in lower than anticipated manufacturing yields, which would harm our revenue or increase our costs. For example, in the past, one of our foundries produced ICs and met its process specification range but did not meet our customer's specifications causing us to write off a portion of our production lot. Many of these problems are difficult to detect at an early stage of the manufacturing process and may be time consuming and expensive to correct. Poor yields from our foundry, or defects, integration issues or other performance problems in our ICs, could cause us significant customer relations and business reputation problems, harm our operating results and give rise to financial or other damages to our customers. Our customers might consequently seek damages from us for their losses. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly to defend.

***We may experience difficulties in transitioning to new wafer fabrication process technologies or in achieving higher levels of design integration, which may result in reduced manufacturing yields, delays in product deliveries and increased costs.***

We aim to use the most advanced manufacturing process technology appropriate for our solutions that is available from our foundries. As a result, we periodically evaluate the benefits of migrating our solutions to other technologies in order to improve performance and reduce costs. These ongoing efforts require us from time to time to modify the manufacturing processes for our products and to redesign some products, which in turn may result in delays in product deliveries. We are dependent on our foundries to support the production of wafers for future versions of our IC. Such production may require changes to the foundry's existing process technology. If the foundry elects to not alter their process technology to support future versions of our ICs, we would need to identify a new foundry.

For example, our 1T-SRAM technology used in our Accelerator Engine products is not available at process nodes below 40 nanometers. To date, we have not developed any memory products below the 40-nanometer process node and have no plans to continue the product roadmap for our Accelerator Engine products. We do not consider this to adversely affect our current product offerings, but our inability to continue our product roadmap can adversely affect, and has in the past affected, our efforts to win new customers for these products, secure additional design wins and grow our future revenues.

If Taiwan Semiconductor Manufacturing, or TSMC, which is the sole foundry for producing our memory ICs were to discontinue the foundry process used to produce our Accelerator Engine products, we would not be in a position to transition production of these products to a new foundry and continue to manufacture our products. This would require us to discontinue production of these products and would negatively impact our future revenues, results of operations and cash flows.

***To date, we have not achieved the anticipated benefits of a fabless semiconductor company.***

Our primary goal has been to increase our total available market by creating high-performance ICs and modules for mmWave applications using our proprietary technology and design expertise. Historically, this development effort required that we add headcount and design resources, such as expensive software tools, which increased our losses from, and cash used in, operations. Our efforts to increase our revenue and expand our markets have been subject to various risks and uncertainties, including, but not limited to:

- a lack of working capital;
- customer acceptance;
- difficulties and delays in our product development, manufacturing, testing and marketing activities;
- timeliness of new product introductions;



- the anticipated costs and technological risks of developing and bringing our products to market;
- the willingness of our manufacturing partners to assist successfully with fabrication;
- our ability to qualify our products for mass production and achieve wafer yield levels and the final test results necessary to be price competitive;
- the availability of quantities of our products supplied by our manufacturing partners at a competitive cost;
- our ability to generate the desired gross margin percentages and return on our product development investment;
- competition from established competitors;
- the adequacy of our IP protection for our proprietary IC designs and technologies;
- customer concerns over our financial condition and viability to be a long-term profitable supplier; and
- the vigor and growth of markets served by our current and prospective customers.

If we experience significant delays in bringing our products to market, if customer adoption of our products is delayed or if our customers' products that include our products are not successful, this could have a material adverse effect on our anticipated revenues in upcoming years due to the potential loss of design wins and future revenues.

***Our main objective is the development and sale of our technologies to service providers, cloud networking, security, test and video system providers and their subsystem and component vendors and, if demand for these products does not grow, we may not achieve revenue growth and our strategic objectives.***

We market and sell our products and technology to mmWave, cloud networking, communications, data center and other equipment providers and their subsystem and component vendors. We believe our future business and financial success depends on market acceptance and increasing sales of these products. To meet our growth and strategic objectives, networking infrastructure OEMs must incorporate our products into their systems and the demand for their systems must grow as well. We cannot provide assurance that sales of our products to these OEMs will increase substantially in the future or that the demand for our customers' systems will increase. Our future revenues from these products may not increase in accordance with our growth and strategic objectives if, instead, our OEM customers modify their product designs, select products sold by our competitors or develop their own proprietary technologies. Moreover, demand for their products that incorporate our technologies may not grow or result in significant sales of such products due to factors affecting the customers and their business such as industry downturns, declines in capital spending in the enterprise and carrier markets or unfavorable macroeconomic conditions. Thus, the future success of our business depends in large part on factors outside our control, and sales of our products may not meet our revenue growth and strategic objectives.

***Our failure to continue to develop new products and enhance our products on a timely basis could diminish our ability to attract and retain customers.***

The existing and potential markets for our products are characterized by ever-increasing performance requirements, evolving industry standards, rapid technological change and product obsolescence. These characteristics lead to periodic changes in customer requirements, shorter product life cycles and changes in industry demands and mandate new product introductions and enhancements to maintain customer engagements and design wins. In order to attain and maintain a significant position in the market, we will need to continue to enhance and evolve our products and the underlying proprietary technologies in anticipation of these market trends although we do not have a large engineering staff.

Our future performance depends on a number of factors, including our ability to:

- identify target markets and relevant emerging technological trends;
- develop and maintain competitive technology by improving performance and adding innovative features that differentiate our products from alternative technologies;

- enable the incorporation of our products into customers' products on a timely basis and at competitive prices; and
- respond effectively to new technological developments or new product introductions by others.

Our failure to enhance our existing products and develop future products that achieve broad market acceptance will harm our competitive position and impede our future growth.

***Our products have a lengthy sales cycle, which makes it difficult to predict success in this market and the timing of future revenue.***

Our products have a lengthy sales cycle, ranging from six to 24 months from the date of our initial proposal to a prospective customer until the date on which the customer confirms that it has designed our product into its system. An even lengthier period could ensue before we would know the volume of products that such customer will, or is likely to, order. A number of factors can contribute to the length of the sales cycle including technical evaluations of our products by the customers, the design process required to integrate our products into the customers' products and the timing of the customers' new product announcements. In anticipation of product orders, we may incur substantial costs before the sales cycle is complete and before we receive any customer payments. As a result, in the event that a sale is not completed or is cancelled or delayed, we may have incurred substantial expenses, making it more difficult for us to become profitable or otherwise negatively impacting our financial results. Furthermore, because of this lengthy sales cycle, the recording of revenues from our selling efforts may be substantially delayed, our ability to forecast our future revenue may be more limited and our revenue may fluctuate significantly from quarter to quarter. We cannot provide any assurances that our efforts to build a strong and profitable business based on the sale of ICs will succeed. If these efforts are not successful, in light of the substantial resources that we have invested, our future operating results and cash flows could be materially and adversely affected.

***The semiconductor industry is cyclical in nature and subject to periodic downturns, which can negatively affect our revenue.***

The semiconductor industry is cyclical and has experienced pronounced downturns for sustained periods of up to several years. To respond to any downturn, many semiconductor manufacturers and their customers will slow their research and development activities, cancel or delay new product developments, reduce their workforces and inventories and take a cautious approach to acquiring new equipment and technologies. As a result, our business has been in the past and could be adversely affected in the future by an industry downturn which could negatively impact our future revenue and profitability. Also, the cyclical nature of the semiconductor industry may cause our operating results to fluctuate significantly from year-to-year.

***Our revenue has been highly concentrated among a small number of customers, and our results of operations could be harmed if we lose a key revenue source and fail to replace it.***

Our overall revenue has been highly concentrated, with a few customers accounting for a significant percentage of our total revenue. For the year ended December 31, 2022, our three largest customers represented approximately 74% of total revenue. We expect that a relatively small number of customers will continue to account for a substantial portion of our revenue for the foreseeable future.

As a result of this revenue concentration, our results of operations could be adversely affected by the decision of a single key customer to cease using our technology or products or by a decline in the number of products that incorporate our technology that are sold by a single licensee or customer or by a small group of licensees or customers.

***Our revenue concentration may also pose credit risks which could negatively affect our cash flow and financial condition.***

We might also face credit risks associated with the concentration of our revenue among a small number of licensees and customers. At December 31, 2022, four customers represented approximately 79% of total trade receivables. Our failure to collect receivables from any customer that represents a large percentage of receivables on a timely basis, or at all, could adversely affect our cash flow or results of operations.

***Our products must meet exact specifications and defects and failures may occur, which may cause customers to return or stop buying our products.***

Our customers generally establish demanding specifications for quality, performance and reliability that our products must meet. However, our products are highly complex and may contain defects and failures when they are first introduced or as new versions are released. If defects and failures occur in our products during the design phase or after, we could experience lost revenues, increased costs, including warranty and customer support expenses and penalties for non-performance stipulated in customer purchase agreements, delays in or cancellations or rescheduling of orders or shipments, product returns or discounts, diversion of management resources or damage to our reputation and brand equity, and in some cases consequential damages, any of which would harm our operating results. In addition, delays in our ability to fill product orders as a result of quality control issues may negatively impact our relationship with our customers. We cannot assure you that we will have sufficient resources to satisfy any asserted claims. Furthermore, any such defects, failures or delays may be particularly damaging to us as we attempt to establish our reputation as a reliable provider of IC and module products.

***Because we sell our products on a purchase order basis and rely on estimated forecasts of our customers' needs, inaccurate forecasts could adversely affect our business.***

We sell our products pursuant to individual purchase orders rather than long-term purchase commitments. Therefore, we will rely on estimated demand forecasts, based upon input from our customers, to determine how much product to manufacture. Because our sales are based primarily on purchase orders, our customers may cancel, delay or otherwise modify their purchase commitments with little or no notice to us. For these reasons, we will generally have limited visibility regarding our customers' product needs. In addition, the product design cycle for our customers can be lengthy and it may be difficult for us to accurately anticipate when they will commence commercial shipments of products that include our ICs or modules.

Furthermore, if we experience substantial warranty claims, our customers may cancel existing orders or cease to place future orders. Any cancellation, delay or other modification in our customers' orders could significantly reduce our revenue, cause our operating results to fluctuate from period to period and make it more difficult for us to predict our revenue. In the event of a cancellation or reduction of an order, we may not have enough time to reduce operating expenses to mitigate the effect of the lost revenue on our business.

If we overestimate customer demand for our products, we may purchase products from our manufacturers that we cannot sell. Conversely, if we underestimate customer demand or if sufficient manufacturing and testing capacity are unavailable, we would forego revenue opportunities and could lose market share in the markets served by our products and could incur penalty payments under our customer purchase agreements. In addition, our inability to meet customer requirements for our products could lead to delays in product shipments, force customers to identify alternative sources and otherwise adversely affect our ongoing relationships with our customers.

***We depend on contract manufacturers for a significant portion of our revenue from the sale of our products.***

Many of our current and prospective OEM customers use third party contract manufacturers to manufacture their systems and these contract manufacturers purchase our products directly from us on behalf of the OEMs. Although we expect to work with our OEM customers in the design and development phases of their systems, these OEMs often give contract manufacturers some authority in product purchasing decisions. If we cannot compete effectively for the business of these contract manufacturers, or if any of the contract manufacturers that work with our OEM customers experience financial or other difficulties in their businesses, our revenue and our business could be adversely affected. For example, if a contract manufacturer becomes subject to bankruptcy proceedings, we may not be able to obtain our products held by the contract manufacturer or recover payments owed to us by the contract manufacturer for products already delivered to the contract manufacturer. If we are unable to persuade contract manufacturers to purchase our products, or if the contract manufacturers are unable to deliver systems with our products to OEMs on a timely basis, our business would be adversely affected.

***We rely on independent foundries and contractors for the manufacture, assembly, testing and packaging of our integrated circuits and modules, and the failure of any of these third parties to deliver products or otherwise perform as requested could damage our relationships with our customers and harm our sales and financial results.***

As a fabless semiconductor company, we rely on third parties for substantially all of our manufacturing operations. We depend on these parties to supply us with material in a timely manner that meets our standards for yield, cost and quality. We do not have long-term supply contracts with any of our suppliers or manufacturing service providers, and therefore they are not obligated to manufacture products for us for any specific period, in any specific quantity or at any specified price except as may be provided in a particular purchase order. Any problems with our manufacturing supply chain, including disruptions due to the COVID-19 global pandemic, could adversely impact our ability to ship our products to our customers on time and in the quantity required which in turn could damage our customer relationships and impede market acceptance of our IC products.

***Our third-party wafer foundry and testing and assembly vendors are located in regions at high risk for earthquakes and other natural disasters and adverse consequences related to the outbreak of contagious diseases such as COVID-19. Any disruption to the operations of these foundries and vendors resulting from earthquakes or other natural disasters could cause significant delays in the development, production, shipment and sales of our IC products.***

Certain vendors that we utilize to manufacture our products are located in Asia, as are other foundries we may use in the future. Our vendors that provide substrates and wafer sorting and handle the testing of our products are headquartered in either Asia or the San Francisco Bay Area of California. The risk of an earthquake in the Pacific Rim region is significant due to the proximity of major earthquake fault lines. The occurrence of earthquakes or other natural disasters could result in the disruption of the wafer foundry or assembly and test capacity of the third parties that supply these services to us and may impede our research and development efforts as well as our ability to market and sell our products. We may not be able to obtain alternate capacity on favorable terms, if at all.

The COVID-19 global pandemic, along with outbreaks of new contagious diseases or the resurgence of existing diseases that significantly affect the Asia-Pacific region could disrupt the operations of our key suppliers and manufacturing partners.

***Disruptions in our supply chain due to shortages in the global semiconductor supply chain could cause delays for customers and impact revenue.***

We have and may continue to experience disruptions in our global semiconductor supply chain, with suppliers increasing lead times or placing products on allocation, including procuring necessary components, wafers, substrates and assembly services in a timely fashion. As a result of these supply chain disruptions, we have had to increase customer order lead times, and we may be required some products on allocation. We may be unable to satisfy all of the demand for our products, which may adversely affect customer relationships and impact revenue.

***Price increases from our supply chain can adversely impact revenue or reduce margins.***

Our suppliers can increase the price of products and services provided to us. Finding and qualifying alternate or additional suppliers in response to increased pricing from suppliers can be a lengthy process and can lead to production delays or additional costs, and such alternatives are sometimes not available. If we are unable to increase the price of our products to our customers in response to increased costs, we would face reduced margins.

***Any claim that our products or technology infringe third party IP rights could increase our costs of operation and distract management and could result in expensive settlement costs or the discontinuance of our technology licensing or product offerings. In addition, we may incur substantial litigation expense which would adversely affect our profitability.***

The semiconductor industry is characterized by vigorous protection and pursuit of IP rights or positions which has resulted in often protracted and expensive litigation. We are not aware of any third party IP that our products or technology would infringe. However, like many companies of our size with limited resources, we have not searched for all potentially applicable IP in the public databases. It is possible that a third party now has, or may in the future obtain, patents or other intellectual property rights that our products or technology may now, or in

the future, infringe. Our licensees and IC customers, or we, might, from time to time, receive notice of claims that we have infringed patents or other IP rights of others. Litigation against us can result in significant expense and divert the efforts of our technical and management personnel whether or not the litigation has merit or results in a determination adverse to us.

***The discovery of defects in our technology and products could expose us to liability for damages.***

The discovery of a defect in our technologies and products could lead our customers to seek damages from us. Many of our agreements with customers include provisions waiving implied warranties regarding our technology and products and limiting our liability to our customers. We cannot be certain, however, that the waivers or limitations of liability contained in our agreements with customers will be enforceable.

***We might not be able to protect and enforce our IP rights which could impair our ability to compete and reduce the value of our technology.***

Our technology is complex and is intended for use in complex systems. For example, our licensees' products utilize our embedded memory and/or interface technology and a large number of companies manufacture and market these products. Because of these factors, policing the unauthorized use of our IP is difficult and expensive. We cannot be certain that we will be able to detect unauthorized use of our technology or prevent other parties from designing and marketing unauthorized products based on our technology. In the event we identify any past or present infringement of our patents, copyrights or trademarks, or any violation of our trade secrets, confidentiality procedures or licensing agreements, we cannot assure you that the steps taken by us to protect our proprietary information will be adequate to prevent misappropriation of our technology. Our inability to adequately protect our IP would reduce significantly the barriers of entry for directly competing technologies and could reduce the value of our technology. Furthermore, we might initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Litigation by us could result in significant expense and divert the efforts of our technical and management personnel whether or not such litigation results in a determination favorable to us.

***Our existing patents might not provide us with sufficient protection of our IP, and our patent applications might not result in the issuance of patents, either of which could reduce the value of our core technology and harm our business.***

We rely on a combination of patents, trademarks, trade secret laws and confidentiality procedures to protect our IP rights. We cannot be sure that any patents will be issued from any of our pending applications or that any claims allowed from pending applications will be of sufficient scope or strength, or issued in all countries where our products can be sold, to provide meaningful protection or any commercial advantage to us. Failure of our patents or patent applications to provide meaningful protection might allow others to utilize our technology without any compensation to us.

***If our intangible assets become impaired, we would be required to record a charge to earnings.***

We review our intangible assets for impairment when events or changes in circumstances, such as a decline in our stock price and/or market capitalization, indicate the carrying value may not be recoverable. If our intangible assets are deemed to be impaired, an impairment loss equal to the amount by which the carrying amount exceeds the fair value of the assets would be recognized. We would be required to record an impairment charge in our financial statements during the period in which any impairment of our intangible assets is determined, which would negatively affect our results of operations.

***If we fail to retain key personnel, our business and growth could be negatively affected.***

Our business has been dependent to a significant degree upon the services of a small number of executive officers and technical employees. The loss of key personnel could negatively impact our technology development efforts, our ability to deliver products under our existing agreements, maintain strategic relationships with our partners and obtain new customers. We generally have not entered into employment or non-competition agreements with any of our employees and do not maintain key-man life insurance on the lives of any of our key personnel.



***Our ability to utilize our net operating loss carryforwards is limited as a result of an “ownership change,” as defined in Section 382 of the Internal Revenue Code of 1986, as amended.***

As of December 31, 2022, we had over \$238 million of net operating loss, or NOL, carryforwards for U.S. federal tax purposes. Under U.S. federal income tax law, we generally can use our NOL carryforwards (and certain related tax credits) to offset ordinary taxable income, thereby reducing our U.S. federal income tax liability, for up to 20 years from the year in which the losses were generated, after which time they will expire. Our California NOL carryforwards (and certain related tax credits) generally may be used to offset future state taxable income for 20 years from the year in which the losses are generated, depending on the state, after which time they will expire. The rate at which we can utilize our NOL carryforwards is limited (which could result in NOL carryforwards expiring prior to their use) each time we experience an “ownership change,” as determined under Section 382 of the Internal Revenue Code. A Section 382 ownership change generally occurs if a shareholder or a group of shareholders who are deemed to own at least 5% of our common stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. If an ownership change occurs, Section 382 generally would impose an annual limit on the amount of post-ownership change taxable income that may be offset with pre-ownership change NOL carryforwards equal to the product of the total value of our outstanding equity immediately prior to the ownership change (reduced by certain items specified in Section 382) and the U.S. federal long-term tax-exempt interest rate in effect at the time of the ownership change. A number of special and complex rules apply in calculating this Section 382 limitation. While the complexity of Section 382 makes it difficult to determine whether and when an ownership change has occurred, and a formal study has not been performed, we believe that a Section 382 ownership change occurred as a result of our business combination with Peraso Technologies Inc. in 2021. The Company believes this Section 382 limitation will result in substantially all of our federal and state NOLs federal tax credit carryforwards incurred prior to December 2021 expiring before they can be utilized. In addition, our ability to use our NOL carryforwards will be limited to the extent we fail to generate enough taxable income in the future before they expire. Existing and future Section 382 limitations and our inability to generate enough taxable income in the future could result in a substantial portion of our NOL carryforwards expiring before they are used. We have recorded a full valuation allowance for our deferred tax assets.

***Acquisitions or other business combinations that we pursue in the future, whether or not consummated, could result in other operating and financial difficulties.***

In the future we may seek to acquire additional product lines, technologies or businesses in an effort to increase our growth, enhance our ability to compete, complement our product offerings, enter new and adjacent markets, obtain access to additional technical resources, enhance our IP rights or pursue other competitive opportunities. If we seek acquisitions or other business combinations, we may not be able to identify suitable candidates at prices we consider appropriate. We cannot readily predict the timing or size of our future acquisitions or combinations, or the success of any such transactions.

To the extent that we consummate acquisitions, combinations or investments, we may face financial risks as a result, including increased costs associated with merged or acquired operations, increased indebtedness, economic dilution to gross and operating profit and earnings per share, or unanticipated costs and liabilities. Acquisitions may involve additional risks, including:

- the acquired product lines, technologies or businesses may not improve our financial and strategic position as planned;
- we may determine we have overpaid for the product lines, technologies or businesses, or that the economic conditions underlying our acquisition have changed;
- we may have difficulty integrating the operations and personnel of the acquired company;
- we may have difficulty retaining the employees with the technical skills needed to enhance and provide services with respect to the acquired product lines or technologies;
- the acquisition may be viewed negatively by customers, employees, suppliers, financial markets or investors;
- we may have difficulty incorporating the acquired product lines or technologies with our existing technologies;



- we may encounter a competitive response, including price competition or IP litigation;
- we may become a party to product liability or IP infringement claims as a result of our sale of the acquired company's products;
- we may incur one-time charges, such as for acquired in-process research and development costs, and restructuring charges;
- we may acquire goodwill and other intangible assets that are subject to impairment tests, which could result in future impairment charges;
- our ongoing business and management's attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises; and
- our due diligence process may fail to identify significant existing issues with the target business.

From time to time, we may enter into negotiations for acquisitions or investments that are not ultimately consummated. These negotiations could result in significant diversion of management time, as well as substantial out-of-pocket costs, any of which could have a material adverse effect on our business, operating results and financial condition.

***Provisions of our certificate of incorporation and bylaws or Delaware law might delay or prevent a change-of-control transaction and depress the market price of our stock.***

Various provisions of our certificate of incorporation and bylaws might have the effect of making it more difficult for a third party to acquire, or discouraging a third party from attempting to acquire, control of our company. These provisions could limit the price that certain investors might be willing to pay in the future for shares of our common stock. Certain of these provisions eliminate cumulative voting in the election of directors, limit the right of stockholders to call special meetings and establish specific procedures for director nominations by stockholders and the submission of other proposals for consideration at stockholder meetings.

We are also subject to provisions of Delaware law that could delay or make more difficult a merger, tender offer or proxy contest involving our company. In particular, Section 203 of the Delaware General Corporation Law prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years unless specific conditions are met. Any of these provisions could have the effect of delaying, deferring or preventing a change in control, including without limitation, discouraging a proxy contest or making more difficult the acquisition of a substantial block of our common stock.

Under our certificate of incorporation, our board of directors may issue up to 20,000,000 shares of preferred stock, potentially without stockholder approval on such terms as the board might determine. The rights of the holders of common stock will be subject to, and might be adversely affected by, the rights of the holders of any preferred stock that might be issued in the future.

***Potential volatility of the price of our common stock could negatively affect your investment.***

We cannot assure you that there will continue to be an active trading market for our common stock. Historically, the stock market, as well as our common stock, has experienced significant price and volume fluctuations. Market prices of securities of technology companies have been highly volatile and frequently reach levels that bear no relationship to the operating performance of such companies. These market prices generally are not sustainable and are subject to wide variations. If our common stock trades to unsustainably high levels, it is likely that the market price of our common stock will thereafter experience a material decline.

In the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. We could be the target of similar litigation in the future. Securities litigation could cause us to incur substantial costs, divert management's attention and resources, harm our reputation in the industry and the securities markets and negatively impact our operating results.

***Certain of our common stock warrants are accounted for as a warrant liability and recorded at fair value with changes in fair value each period reported in earnings, which may have an adverse effect on the market price of our common stock.***

In accordance with generally accepted accounting principles in the United States (“GAAP”), we are required to evaluate our common stock warrants to determine whether they should be accounted for as a warrant liability or as equity. At each reporting period (1) the warrants will be reevaluated for proper accounting treatment as a liability or equity and (2) the fair value of the liability of the warrants will be re-measured. The change in the fair value of the liability will be recorded as other income (expense) in our statement of operations and comprehensive loss. This accounting treatment may adversely affect the market price of our securities, as we may incur additional expense. In addition, changes in the inputs and assumptions for the valuation model we use to determine the fair value of such liability may have a material impact on the estimated fair value of the warrant liability. As a result, our financial statements and results of operations will fluctuate quarterly, based on various factors, many of which are outside of our control, including the share price of our common stock. We expect that we will recognize non-cash gains or losses on our warrants or any other similar derivative instruments in each reporting period and that the amount of such gains or losses could be material. The impact of changes in fair value on earnings may have an adverse effect on the market price of our common stock.

***If we are unable to satisfy the continued listing requirements of The Nasdaq Stock Market, our common stock could be delisted and the price and liquidity of our common stock may be adversely affected.***

Our common stock may lose value and our common stock could be delisted from Nasdaq due to several factors or a combination of such factors. While our common stock is currently listed on Nasdaq, there can be no assurance that we will be able to maintain such listing. To maintain the listing of our common stock on Nasdaq, we are required to meet certain listing requirements, including, among others, a requirement to maintain a minimum closing bid price of \$1.00 per share. If our common stock trades below the \$1.00 minimum closing bid price requirement for 30 consecutive business days or if we do not meet other listing requirements, we may be notified by Nasdaq of non-compliance. On February 1, 2023, we received a notice from Nasdaq, indicating that, based upon the closing bid price of our common stock for the previous 30 business days, we no longer meet the requirement to maintain a minimum bid price of \$1 per share, as set forth in Nasdaq Listing Rule 5550(a)(2) (the “Notice”).

In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we have been provided a period of 180 calendar days, or until July 31, 2023, in which to regain compliance. In order to regain compliance with the minimum bid price requirement, the closing bid price of our common Stock must be at least \$1 per share for a minimum of ten consecutive business days during this 180-day period. In the event that we do not regain compliance within this 180-day period, we may be eligible to seek an additional compliance period of 180 calendar days if we meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for the Nasdaq Capital Market, with the exception of the bid price requirement, and provide written notice to Nasdaq of our intent to cure the deficiency during this second compliance period, by effecting a reverse stock split, if necessary. However, if it appears to the Nasdaq Staff that we will not be able to cure the deficiency, or if we are otherwise not eligible, Nasdaq will provide notice to us that our common stock will be subject to delisting.

The above mentioned notice does not result in the immediate delisting of our common stock from the Nasdaq Capital Market. We intend to monitor the closing bid price of our common stock and consider our available options in the event that the closing bid price of our common stock remains below \$1 per share. There can be no assurance that we will be able to regain compliance with the minimum bid price requirement or maintain compliance with the other listing requirements. As of the date of this Report, we have not regained compliance. There can be no assurance that we would pursue a reverse stock split or be able to obtain the approvals necessary to effect a reverse stock split. In addition, there can be no assurance that, following any reverse stock split, the per share trading price of our common stock would remain above \$1.00 per share or that we would be able to continue to meet other listing requirements. If we were to be delisted, we would expect our common stock to be traded in the over-the-counter market which could adversely affect the liquidity of our common stock. Additionally, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our common stock;
- a reduced amount of analyst coverage;

- a decreased ability to issue additional securities or obtain additional financing in the future;
- reduced liquidity for our stockholders;
- potential loss of confidence by customers, collaboration partners and employees; and
- loss of institutional investor interest.

***Holders of exchangeable shares are expected to experience a delay in receiving shares of our common stock from the date they request an exchange, which may affect the value of the shares the holder receives in an exchange.***

Holders of exchangeable shares who request to receive shares of our common stock in exchange for their exchangeable shares will not receive shares of our common stock until several business days after the applicable request is received. During this period, the market price of our common stock may increase or decrease. Any such increase or decrease would affect the value of the consideration to be received by such holder of exchangeable shares upon a subsequent sale of the common stock received in the exchange.

***We are a “smaller reporting company” and, as a result of the reduced disclosure and governance requirements applicable to smaller reporting companies, our common stock may be less attractive to investors.***

We are a “smaller reporting company,” and are subject to lesser disclosure obligations in our SEC filings compared to other issuers. Specifically, “smaller reporting companies” are able to provide simplified executive compensation disclosures in their filings, are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control over financial reporting and have certain other decreased disclosure obligations in their SEC filings, including, among other things, only being required to provide two years of audited financial statements in annual reports. Decreased disclosures in our SEC filings due to our status as a “smaller reporting company” may make it harder for investors to analyze our operating results and financial prospects.

***The invasion of Ukraine by Russia could negatively impact our business.***

Russia’s military invasion of Ukraine in 2022 has led to, and may lead to, additional sanctions being levied by the United States, European Union and other countries against Russia. Russia’s military invasion and the resulting sanctions have had an adverse effect on global markets. We cannot predict the progress or outcome of the situation in Ukraine, as the conflict and governmental reactions are rapidly developing and beyond our control. Prolonged unrest, intensified military activities, or more extensive sanctions impacting the region could have a material adverse effect on the global economy, and such effect could in turn have a material adverse effect on the operations, results of operations, financial condition, liquidity and business outlook of our business.

***Sustained inflation could have a material adverse effect on our business, financial condition, results of operations and liquidity.***

Inflation rates in the markets in which we operate have increased and may continue to rise. Inflation over the last several months has led us to experience higher costs, including, among others, labor, wafer and transportation. Our suppliers have raised their prices and may continue to raise prices, and, although we have made minimal price increases thus far, in the competitive markets in which we operate, we may not be able to make corresponding price increases to preserve our gross margins and profitability. In addition, inflationary pressures could cause customers to delay or reduce purchases of our products or delay payments to us. If inflation rates continue to rise or remain elevated for a sustained period of time, they could have a material adverse effect on our business, financial condition, results of operations and liquidity.

***The full effects of COVID-19 and other potential future public health crises, epidemics, pandemics or similar events are uncertain and could have a material and adverse effect on our business, financial condition, operating results and cash flows.***

The global outbreak of the coronavirus disease 2019, or COVID-19, was declared a pandemic by the World Health Organization and a national emergency by the U.S. government in March 2020. This has negatively affected the world economy, disrupted global supply chains, significantly restricted travel and transportation, resulted in

mandated closures and orders to “shelter-in-place” from time to time and created significant disruption of the financial markets. The extent of the impact on our operational and financial performance will depend on future developments, including the duration and spread of the pandemic and related actions U.S. and foreign government agencies continue to take to prevent disease spread, all of which are uncertain, out of our control and cannot be predicted.

As required, we have complied with state and county orders, and we have implemented a teleworking policy for our employees and contractors when such orders were in place. However, a facility closure, work slowdowns or temporary stoppage at one of our suppliers could occur, which could have a longer-term impact and could delay our prototype production and ability to conduct business.

If our workforce is unable to work effectively, including because of illness, quarantines, absenteeism, government actions, facility closures, travel restrictions or other restrictions in connection with the COVID-19 pandemic, our operations will be negatively impacted. We may be unable to produce and sell our IC products, and our costs may increase as a result of the COVID-19 outbreak. The impacts could worsen if there is an extended duration of any COVID-19 outbreak or a resurgence of COVID-19 infection in affected regions after they have begun to experience improvement.

The continued spread of COVID-19 has also led to occasional disruption and volatility in the global capital markets. While we were able to access the capital markets in November 2022, we may be unable to access the capital markets, and additional capital may only be available to us on terms that could be significantly detrimental to our existing stockholders and to our business.

#### **Item 1B. Unresolved Staff Comments**

None.

#### **Item 2. Properties**

We currently maintain leased facilities in San Jose, California and Toronto and Markham, Ontario, Canada. Our administrative, sales, marketing, support and research and development functions are located in these leased facilities. We occupy approximately 10,000 square feet of space in the San Jose facility, and the lease extends until January 2024. We occupy approximately 12,700 square feet of space in the Toronto, Ontario facility, and the lease extends until December 2023. We also occupy approximately 9,500 square feet of space in the Markham facility for research and development functions, and the lease extends until September 2027. We believe that our existing facilities are adequate to meet our current needs.

#### **Item 3. Legal Proceedings**

The information set forth under the “Legal Matters” subheading in Note 5 (Commitments and Contingencies) of the Notes to Consolidated Financial Statements in Part II, Item 15, of this Annual Report on Form 10-K is incorporated herein by reference.

#### **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 for Common Stock*

Our common stock is currently listed on the Nasdaq Stock Market under the symbol "PRSO."

#### *Holders of Record*

As of December 31, 2022, there were 49 holders of record of our common stock and 18 holders of record of our exchangeable shares. The actual number of common stockholders is significantly greater than this number of record stockholders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. This number of stockholders of record also does not include stockholders whose shares may be held in trust by other entities.

#### *Securities Authorized for Issuance under Equity Compensation Plan*

For information regarding securities authorized for issuance under equity compensation plans, please refer to Item 12-Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

### **Item 6. [Reserved]**

### **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

*This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the accompanying consolidated financial statements and notes included in this Report.*

#### **Overview**

We were formerly known as MoSys, Inc. (MoSys) and were incorporated in California in 1991 and reincorporated in 2000 in Delaware. On September 14, 2021, we and our subsidiaries, 2864552 Ontario Inc. and 2864555 Ontario Inc., entered into an Arrangement Agreement (the Arrangement Agreement) with Peraso Technologies Inc. (Peraso Tech), a corporation existing under the laws of the province of Ontario, to acquire all of the issued and outstanding common shares of Peraso Tech (the Peraso Shares), including those Peraso Shares to be issued in connection with the conversion or exchange of secured convertible debentures and common share purchase warrants of Peraso Tech, as applicable, by way of a statutory plan of arrangement (the Arrangement) under the Business Corporations Act (Ontario). On December 17, 2021, following the satisfaction of the closing conditions set forth in the Arrangement Agreement, the Arrangement was completed and we changed our name to "Peraso Inc." and began trading on the Nasdaq Stock Market (the Nasdaq) under the symbol "PRSO."

For accounting purposes, the legal subsidiary, Peraso Tech, was treated as the accounting acquirer and we, the legal parent, have been treated as the accounting acquiree. The transaction was accounted for as a reverse acquisition in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 805, *Business Combinations* (ASC 805). Accordingly, the financial condition and results of operations discussed herein are a continuation of Peraso Tech's financial results prior to December 17, 2021 and exclude the financial results of us prior to December 17, 2021. See Note 2 to the consolidated financial statements for additional disclosure.

Our strategy and primary business objective is to be a profitable, IP-rich fabless semiconductor company offering integrated circuits, or ICs, modules and related non-recurring engineering services. We specialize in the development of mmWave semiconductors, primarily in the 60 GHz spectrum band for 802.11ad/ay compliant devices and in the 28/39 GHz spectrum bands for 5G-compliant devices. We derive our revenue from selling semiconductor devices, as well as modules based on using those mmWave semiconductor devices. We have pioneered a high-volume mmWave production test methodology using standard low cost production test equipment. It has taken us several years to refine performance of this production test methodology, and we believe this places us in a leadership position in addressing operational challenges of delivering mmWave products into high-volume



markets. During 2021, we augmented our business model by selling complete mmWave modules. The primary advantage provided by a module is the silicon and the antenna are integrated into a single device. A differentiating characteristic of mmWave technology is that the RF amplifiers must be as close as possible to the antenna to minimize loss, and by providing a module, we can guarantee the performance of the amplifier/antenna interface.

We also acquired a memory product line marketed under the Accelerator Engine name. This memory product line comprises our Bandwidth Engine and Quad Partition Rate IC products, which integrate our proprietary, 1T-SRAM high-density embedded memory and a highly-efficient serial interface protocol resulting in a monolithic memory IC solution optimized for memory bandwidth and transaction access performance.

We incurred net losses of approximately \$32.4 million and \$10.9 million for the years ended December 31, 2022 and 2021, respectively, and had an accumulated deficit of approximately \$149.6 million as of December 31, 2022. These and prior year losses have resulted in significant negative cash flows for almost a decade and have necessitated that we raise substantial amounts of additional capital during this period.

We will need to increase revenues substantially beyond levels that we have attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time.

### ***COVID-19 and Russian Invasion of Ukraine***

The global outbreak of the coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization and a national emergency by the U.S. government in March 2020. This has negatively affected the U.S. and global economy, disrupted global supply chains, significantly restricted travel and transportation, resulted in mandated closures and orders to “shelter-in-place” and created significant disruption of the financial markets. The full extent of the COVID-19 impact on our operational and financial performance will depend on future developments, including the duration and spread of the pandemic and related actions taken by the U.S. and foreign government agencies to prevent disease spread, all of which are uncertain, out of our control, and cannot be predicted.

Since March 2020, certain jurisdictions in which we operate have from time to time issued “shelter-in-place” orders. As required, we have complied with these orders and, when such orders were in place, minimized business activities at our facilities. We have implemented a teleworking policy for our employees and contractors to comply with such orders.

As the COVID-19 pandemic evolves, we continue to closely monitor impacts, especially to customer programs and our supply chain. We are working internally and with suppliers on programs (i.e., new production flows, etc.) to allow us to increase our peak throughput to better handle unplanned disruptions to our supply chain. To date, we have not experienced a material impact on our cash flows, liquidity, capital resources, cash requirements, financial position, or results of operations, attributable to the global semiconductor supply chain disruption and inflation. We have experienced increased prices from our suppliers, and, for certain products, we have increased prices to our customers to mitigate the impacts, although during 2022 the impacts of these price increases were minimal. We have and continue to experience longer lead times for certain components used to manufacture our products, and, therefore, and, in response, we have identified second and third sources for certain components used in our module products. Also, we have increased lead times for our customers. We have not experienced any issues over our product quality and product development activities, as we do not rely significantly on outside vendors to manage and perform these activities for us. We currently have not identified any current impacts of the supply chain disruption and inflation that will affect our future results, and it is difficult to differentiate whether higher prices are due to supply chain disruption, inflation or a mix of both.

While we believe that our operations personnel are currently in a position to meet expected customer demand levels in the coming quarters, we recognize that unpredictable events could create difficulties in the months ahead. We may not be able to address these difficulties in a timely manner, which could negatively impact our business, results of operations, financial condition and cash flows.

The continued spread of COVID-19 has also led to disruption and volatility in the global capital markets. The Russian invasion of Ukraine in February 2022 has led to further economic disruptions. Mounting inflationary cost pressures and recessionary fears have negatively impacted the global economy. During the third and fourth quarters



of 2022, the U.S. Federal Reserve continued to aggressively address elevated inflation by increasing interest rates. The U.S. Federal Reserve increased interest rates by 75 basis points in each of its meetings held in July, September and November 2022, with an additional increase of 50 basis points in December 2022, as inflation remains elevated. Given current market conditions, we may be unable to access the capital markets, and additional capital may only be available to us on terms that could be significantly detrimental to our existing stockholders and to our business.

### ***Critical Accounting Policies and Use of Estimates***

Our consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America. Note 1 to the consolidated financial statements included in Item 15 of this Report describes the significant accounting policies and methods used in the preparation of our consolidated financial statements.

We have identified the accounting policies below as some of the more critical to our business and the understanding of our results of operations. These policies may involve estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. Although we believe our judgments and estimates are appropriate, actual future results may differ from our estimates, and if different assumptions or conditions were to prevail, the results could be materially different from our reported results.

### ***Business Combination***

We allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill to reporting units based on the expected benefit from the business combination. Allocation of purchase consideration to identifiable assets and liabilities affects the amortization expense, as acquired finite-lived intangible assets are amortized over the useful life, whereas any indefinite-lived intangible assets, including goodwill, are not amortized. During the measurement period, which is not to exceed one year from the acquisition date, our records adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings. Acquisition-related expenses are recognized separately from business combinations and are expensed as incurred.

### ***Acquired Intangibles***

Acquired intangible assets consist of developed technology and customer relationships that are measured at fair value at date of acquisition. In valuing acquired intangible assets, we make assumptions and estimates based in part on projected financial information, which makes assumptions and estimates inherently uncertain, particularly for early-stage technology companies. The significant estimates and assumptions used by us in the determination of the fair value of acquired intangible technology assets include the revenue growth rate, the royalty rate and the discount rate. The significant estimates and assumptions used by us in the determination of the fair value of acquired customer contract intangible assets include the revenue growth rate and the discount rate.

As a result of the judgments that need to be made, we obtain the assistance of independent valuation firms. We complete these assessments as soon as practical after the closing dates. Any excess of the purchase price over the estimated fair values of the identifiable net assets acquired is recorded as goodwill.

### ***Revenue Recognition***

We recognize revenue in accordance with FASB ASC Topic 606, *Revenue from Contracts with Customers*, and its amendments (ASC 606). As described below, the analysis of contracts under ASC 606 supports the recognition of revenue at a point in time, resulting in revenue recognition timing that is materially consistent with our historical practice of recognizing product revenue when title and risk of loss pass to the customer.

We generate revenue primarily from sales of integrated circuits and module products, performance of engineering services and licensing of its intellectual property. Revenues are recognized when control is transferred to customers in amounts that reflect the consideration we expect to be entitled to receive in exchange for those goods. Revenue recognition is evaluated through the following five steps: (i) identification of the contract, or contracts, with

a customer; (ii) identification of the performance obligations in the contract; (iii) determination of the transaction price; (iv) allocation of the transaction price to the performance obligations in the contract; and (v) recognition of revenue when or as a performance obligation is satisfied.

#### *Product revenue*

Revenue is recognized when performance obligations under the terms of a contract with a customer are satisfied. The majority of our contracts have a single performance obligation to transfer products. Accordingly, we recognize revenue when title and risk of loss have been transferred to the customer, generally at the time of shipment of products. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring products and is generally based upon a negotiated, formula, list or fixed price. We sell our products both directly to customers and through distributors generally under agreements with payment terms typically 60 days or less.

We may record an estimated allowance, at the time of shipment, for future returns and other charges against revenue consistent with the terms of sale.

#### *Royalty and other*

Our licensing contracts typically provide for royalties based on the licensee's use of our memory technology in its currently shipping commercial products. We estimate its royalty revenue in the calendar quarter in which the licensee uses the licensed technology. Payments are received in the subsequent quarter. We also generate revenue from licensing its technology. We recognize License fee as revenue at the point of time when the control of the license has been transferred and we have no continuing performance obligations to the customer.

#### *Engineering services revenue*

Engineering and development contracts with customers generally contain a single performance obligation that is delivered over time. Revenue is recognized using an output method that is consistent with the satisfaction of the performance obligation as a measure of progress.

#### *Deferred cost of net revenue*

During the year ended December 31, 2022, the Company had \$1.1 million of product shipments for which the revenue recognition criteria under ASC 606 had not been met. Accordingly, the Company deferred the cost of net revenue associated with these shipments, and the amount deferred has been presented as deferred cost of net revenue in the consolidated balance sheets.

#### *Contract liabilities — deferred revenue*

Our contract liabilities consist of advance customer payments and deferred revenue. We classify advance customer payments and deferred revenue as current or non-current based on the timing of when we expect to recognize revenue. As of December 31, 2022, contract liabilities were in a current position and included in deferred revenue.

#### *Fair Value Measurements of Financial Instruments*

We measure the fair value of financial instruments using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels, as follows:

- Level 1 — Inputs used to measure fair value are unadjusted quoted prices that are available in active markets for the identical assets or liabilities as of the reporting date.
- Level 2 — Pricing is provided by third party sources of market information obtained from investment advisors rather than models. We do not adjust for or apply any additional assumptions or estimates to the pricing information we receive from advisors. Our Level 2 securities include cash equivalents and available-for-sale securities, which consisted primarily of corporate debt, and government agency

and municipal debt securities from issuers with high quality credit ratings. Our investment advisors obtain pricing data from independent sources, such as Standard & Poor's, Bloomberg and Interactive Data Corporation, and rely on comparable pricing of other securities because the Level 2 securities we hold are not actively traded and have fewer observable transactions. We consider this the most reliable information available for the valuation of the securities.

- Level 3 — Unobservable inputs that are supported by little or no market activity and reflect the use of significant management judgment are used to measure fair value. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions. The determination of fair value for Level 3 investments and other financial instruments involves the most management judgment and subjectivity.

The carrying amounts of financial assets and liabilities, such as cash and cash equivalents, accounts receivable, accounts payable, notes payable and other payables, approximate their fair values because of the short maturity of these instruments. The carrying values of lease obligations and long-term financing obligations approximate their fair values because interest rates on these obligations are based on prevailing market interest rates. We measure the fair value of our warrant liabilities using Level 3 inputs.

#### *Valuation of long-lived assets*

We evaluate our long-lived assets for impairment at least annually, or more frequently when a triggering event is deemed to have occurred. This assessment is subjective in nature and requires significant management judgment to forecast future operating results, projected cash flows and current period market capitalization levels. If our estimates and assumptions change in the future, it could result in a material write-down of long-lived assets. We amortize our finite-lived intangible assets, such as developed technology and patent license, on a straight-line basis over their estimated useful lives of three to seven years. We recognize an impairment charge as the difference between the net book value of such assets and the fair value of the assets on the measurement date.

#### *Deferred tax valuation allowance*

When we prepare our consolidated financial statements, we estimate our income tax liability for each of the various jurisdictions where we conduct business. This requires us to estimate our actual current tax exposure and to assess temporary differences that result from differing treatment of certain items for tax and accounting purposes. These differences result in deferred tax assets, which we show on our consolidated balance sheet under the category of other assets. The net deferred tax assets are reduced by a valuation allowance if, based upon weighted available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. We must make significant judgments to determine our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance to be recorded against our net deferred tax asset. We believe that utilization of our net operating loss and tax credit carryforwards, which comprise the majority of our deferred tax assets, may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. See Note 4 to the consolidated financial statements in Item 15 of this report for an additional description of these limitations.

#### *Derivatives and liability-classified instruments*

We account for common stock warrants as either equity-classified or liability-classified instruments based on an assessment of the specific terms of the warrants and the guidance provided by FASB ASC 480, *Distinguishing Liabilities from Equity* (ASC 480) and ASC 815, *Derivatives and Hedging* (ASC 815). The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, meet the definition of a liability pursuant to ASC 480, and meet all of the requirements for equity classification under ASC 815, including whether the warrants are indexed to our stock and whether the holders of the warrants could potentially require net cash settlement in a circumstance outside of our control, among other conditions for equity classification. This assessment, which requires the use of professional judgment, is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

## Stock-based compensation

We recognize stock-based compensation for equity awards on a straight-line basis over the requisite service period, usually the vesting period, based on the grant-date fair value. We estimate the value of employee stock options on the date of grant using the Black-Scholes option pricing model. The determination of fair value of share-based payment awards on the date of grant using an option pricing model is affected by our stock price, as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The expected term of options granted is derived from historical data on employee exercises and post-vesting employment termination behavior. The expected volatility is based on the historical volatility of our stock price.

## Results of Operations

### Net Revenue

	Years Ended December 31,		Year-Over-Year Change	
	2022	2021	2021 to 2022	
	(dollar amounts in thousands)			
Product . . . . .	\$ 14,199	\$ 4,906	\$ 9,293	189%
Percentage of total net revenue . . . . .	96%	86%		

The following table details revenue by product category:

(amounts in thousands)		Years Ended December 31,		
Product category		2022	2021	change
Memory ICs . . . . .	\$	7,722	\$ 150	7,572
mmWave ICs . . . . .		3,289	3,566	(277)
mmWave modules . . . . .		3,170	1,101	2,069
mmWave other products . . . . .		18	89	(71)
	\$	14,199	\$ 4,906	\$ 9,293

Product revenue increased for the year ended December 31, 2022 compared with the same period of 2021 primarily due to the increase in both memory IC and mmWave module sales volumes as a result of the acquisition of the memory IC product line in December 2021 and the roll-out of the mmWave antenna module product line in the second half of 2021. As previously discussed in this Report, for reverse-acquisition accounting purposes, Peraso Tech, was treated as the accounting acquirer, and MoSys was treated as the accounting acquiree. Accordingly, the results of operations discussed herein are a continuation of Peraso Tech's historical financial results and exclude the results of operations of MoSys prior to December 17, 2021. The increase in memory IC sales volumes, which was due to the acquisition of this product line, resulted in a \$7.6 million increase in revenues for the year ended December 31, 2022, as compared with the prior year due to the significant increase in sales volumes year over year. Additionally, we began selling our mmWave module products during the second half of 2021 and realized a 100% increase in sales volumes in 2022, which contributed \$2.1 million of increased revenue for the year ended December 31, 2022. We initiated price increases on certain of our module products in 2022, however, through December 31, 2022, we had not realized any material increase in revenue as a result of those price increases. These revenue increases were partially offset by a decrease of \$0.3 million in sales of our mmWave IC products due to a 39% reduction in volumes shipped during the year ended December 31, 2022, compared with the same period in 2021. Although, stand-alone mmWave IC volumes decreased, shipments of our mmWave modules, that include the mmWave ICs, have increased and each module we ship includes two of our mmWave ICs and an antenna. We began shipping modules as it provides an integrated solution that we believe can shorten our revenue cycle by enabling our customers to accelerate time to production. In addition, we generate higher revenue from the sale of modules compared to sales of stand-alone ICs. Going forward, we expect sales of our mmWave ICs on a stand-alone basis to decline as a percentage of total product revenue, as we anticipate sales of our modules to be our primary source of revenue growth.

We expect revenues to increase in 2023, as we anticipate increased sales of our mmWave products, including the benefits of price increases implemented in 2022. We also expect sales of our memory products to decrease from a volume and revenue perspective over the next 12 months. Our memory products have been in production since

2014, and, given that we have not developed new products, the long-term outlook for these products is uncertain. We have implemented modest price increases on our memory products that we expect to begin taking effect in the first half of 2023. We expect sales of our mmWave products to increase from a volume and revenue perspective over the next 12 months, as our primary sales focus is on obtaining new customers for our mmWave products.

	Years Ended December 31,		Year-Over-Year Change	
	2022	2021	2021 to 2022	
	(dollar amounts in thousands)			
Royalty and other . . . . .	\$ 669	\$ 773	\$ (104)	(13)%
Percentage of total net revenue . . . . .	4%	14%		

Royalty and other includes royalty, non-recurring engineering services and licenses revenues. The decrease in royalty and other revenue for the year ended December 31, 2022 compared with the same period of 2021 was primarily due to a decrease in non-recurring engineering services revenue related to our mmWave technology. Such decrease was partially offset by a full twelve-month contribution of royalty revenues from licensees of our memory technology. As the reverse acquisition occurred on December 17, 2021, the results of operations for the year ended December 31, 2021 include approximately \$113,000 of royalty revenue from licensing of memory technology compared with \$480,000 for the year ended December 31, 2022.

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

	Years Ended December 31,		Year-Over-Year Change	
	2022	2021	2021 to 2022	
	(dollar amounts in thousands)			
Cost of net revenue . . . . .	\$ 8,915	\$ 3,270	\$ 5,645	173%
Percentage of total net revenue . . . . .	60%	58%		

	<u>Years Ended December 31,</u>		<u>Year-Over-Year Change</u>	
	<u>2022</u>	<u>2021</u>	<u>2021 to 2022</u>	
	(dollar amounts in thousands)			
Gross profit . . . . .	\$ 5,953	\$ 2,409	\$ 3,544	147%
Percentage of total net revenue . . . . .	40%	42%		

Cost of net revenue is primarily comprised of direct and indirect costs related to the sale of our products, including amortization of intangible assets and depreciation of production-related fixed assets. Cost of net revenue increased for the year ended December 31, 2022 when compared with the same period of 2021, primarily due to increased shipment volumes of our memory and mmWave ICs and antenna module products. Our antenna module products have higher cost of goods sold per unit and generate lower gross profit margin than our IC products.

Gross profit increased for the year ended December 31, 2022 compared with the same period of 2021 due to the increased product shipments. The decrease in our gross profit margin for the year ended December 31, 2022 compared with the prior year periods was primarily attributable to the increased volume shipments of our mmWave modules, which carry lower gross margins than our IC products.

#### *Research and Development (R&D)*

	Years Ended December 31,		Year-Over-Year Change	
	2022	2021	2021 to 2022	
	(dollar amounts in thousands)			
Research and development . . . . .	\$ 19,768	\$ 11,471	\$ 8,297	72%
Percentage of total net revenue . . . . .	133%	202%		

Our R&D expenses include costs related to the development of our products. We expense R&D costs as they are incurred. The increase for the year ended December 31, 2022 compared with the same period of 2021 was primarily due to the inclusion of a full twelve months of expenses of \$4.3 million related to the acquired operations of MoSys, \$2.1 million of amortization of acquired intangible assets from the reverse acquisition, which closed

on December 17, 2021, and recognition of \$2.0 million of Canadian government refundable tax credits and wage and rent subsidies during the twelve months ended 2021 that reduced operating expenses. We expect that total R&D expenses will decrease in 2023 compared with 2022, as we began implementing cost reductions during the three months ended December 31, 2022. The reductions in R&D expense in 2023 will primarily result from lower headcount, including a reduction of employees and consulting positions, as well as targeted reductions in expenditures for certain longer-term research and development projects.

*Selling, General and Administrative (SG&A)*

	Years Ended December 31,		Year-Over-Year Change	
	2022	2021	2021 to 2022	
	(dollar amounts in thousands)			
SG&A . . . . .	\$ 11,108	\$ 7,016	\$ 4,092	58%
Percentage of total net revenue . . . . .	75%	124%		

SG&A expenses consist primarily of personnel and related overhead costs for sales, marketing, finance, human resources and general management and amortization of certain intangible assets. The increase for the year ended December 31, 2022 compared with 2021 was primarily due to the inclusion of a year of expenses related to the acquired operations of MoSys, which amounted to \$5.7 million, and included all costs of being a publicly-traded company as well as a recognition of \$0.1 million of Canadian government wage and rent subsidies during the year ended December 31, 2021 that reduced SG&A expense. This increase was partially offset by a \$1.1 million decrease in transaction costs incurred during 2021 related to the reverse acquisition. We expect that total SG&A expenses will decrease in 2023 compared with 2022, as we implemented cost reductions during the three months ended March 31, 2023. The reductions in SG&A expense in 2023 will primarily result from lower headcount, including a reduction of employees and reductions of other discretionary operating expenses.

*Interest expense*

Interest expense was primarily incurred on our loans payable and convertible debentures, which were retired during 2021. See Note 11 to the consolidated financial statements in Item 15 of this Report for additional disclosure.

**Liquidity and Capital Resources; Changes in Financial Condition**

At December 31, 2022, we had cash, cash equivalents and investments totaling \$2.9 million compared with cash, cash equivalents and investments of \$18.1 million as of December 31, 2021.

In 2022, we used \$16.0 million in cash from operating activities, which primarily resulted from the net loss of \$32.4 million and changes to operating assets and liabilities of approximately \$2.4 million, adjusted for non-cash charges and gains, including stock-based compensation expenses of \$5.7 million, depreciation and amortization expenses of \$3.1 million, a \$9.9 million goodwill impairment charge and \$0.1 million of other changes. The changes in assets and liabilities primarily related to the timing of the collection of receivables from customers, payments to vendors and increases in inventory balances.

In 2021, we used \$12.0 million in cash from operating activities, which primarily resulted from the net loss of \$10.9 million, changes to operating assets and liabilities of approximately \$1.4 million, and an adjustment for a non-cash gain on the change in fair value of warrant liability of \$8.1 million, adjusted for non-cash charges, including stock-based compensation expenses of \$4.5 million, depreciation and amortization expenses of \$1.1 million, accrued interest of \$0.7 million and amortization of debt discount of \$2.1 million. The changes in assets and liabilities primarily related to the timing of the collection of receivables from customers, payments to vendors and increases in inventory balances.

In 2022, net cash provided from investing activities of \$10.0 million represented \$11.5 million of proceeds from maturities and sales of short-term investments, partially offset by \$0.5 million purchases of short and long-term investments and \$1.0 million of purchases of fixed assets and intangible assets.

In 2021, net cash provided from investing activities of \$6.6 million represented \$6.5 million of proceeds from the Arrangement, \$0.4 million of proceeds from maturities of short-term investments, partially offset by \$0.2 million of purchases of fixed assets and intangible assets.



In 2022, net cash provided by financing activities was \$1.9 million and consisted of \$2.1 million in net proceeds from a registered direct offering of our common stock and common stock purchase warrants completed in November 2022, partially offset by \$0.1 million of taxes paid to net share settle equity awards and \$0.1 million of repayment of finance lease.

In 2021, net cash provided by financing activities was \$9.6 million and consisted of \$9.1 million in net proceeds received from convertible debentures and net proceeds of \$1.3 million from a loan facility, partially offset by \$0.8 million for the repayment of loans.

Our future liquidity and capital requirements are expected to vary from quarter-to-quarter, depending on numerous factors, including:

- level of revenue;
- cost, timing and success of technology development efforts;
- inventory levels, as supply chain disruption has required us to maintain higher inventory levels and place purchase orders with our suppliers longer into the future, which exposes us to additional inventory risk;
- timing of product shipments, which may be impacted by supply chain disruptions;
- length of billing and collection cycles, which may be impacted in the event of a global recession or economic downturn;
- fabrication costs, including mask costs, of our ICs, currently under development;
- variations in manufacturing yields, material lead time and costs and other manufacturing risks;
- costs of acquiring other businesses and integrating the acquired operations; and
- profitability of our business.

#### *Going Concern — Working Capital*

We incurred net losses of approximately \$32.4 million and \$10.9 million for the years ended December 31, 2022 and 2021, respectively, and we had an accumulated deficit of approximately \$149.6 million as of December 31, 2022. These and prior year losses have resulted in significant negative cash flows and have required us to raise substantial amounts of additional capital. To date, we have primarily financed our operations through loans, offerings of common stock and issuance of convertible notes.

We expect to continue to incur operating losses during 2023 as we continue to secure new customers for and continue to invest in the development of our products, and we expect our cash expenditures to continue to exceed receipts for at least the next 12 months, as our revenues will not be sufficient to offset our operating expenses.

We will need to increase revenues beyond the levels that we have attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time. As a result of our expected operating losses and cash burn and recurring losses from operations, if we are unable to raise sufficient capital through additional debt or equity arrangements, there will be uncertainty regarding our ability to maintain liquidity sufficient to operate our business effectively, which raises substantial doubt as to our ability to continue as a going concern within one year from the date of issuance of these consolidated financial statements. The consolidated financial statements presented in Item 8 of this Report have been prepared assuming that we will continue as a going concern, and do not include any adjustments that might result from the outcome of this uncertainty. There can be no assurance that such additional capital, whether in the form of debt or equity financing, will be sufficient or available and, if available, that such capital will be offered on terms and conditions acceptable to us. We are currently seeking additional financing in order to meet our cash requirements for the foreseeable future. If the Company is unsuccessful in these efforts, it will need to implement additional cost reduction strategies, which could further affect its near- and long-term business plan. These efforts may include, but are not limited to, reducing headcount and curtailing business activities. As further discussed in Note 13 to the consolidated financial statements, in August 2022, we entered into an exclusive technology license and patent assignment agreement with Intel Corporation, under which we collected \$3.1 million in August 2022 and we

collected \$0.4 million in January 2023. We expect this transaction to result in a reduction of operating expenses of approximately \$2.7 million on annual basis. Further, in February 2023, we announced that we had implemented cost-reduction initiatives to reduce operating expenses by approximately \$5 million on an annualized basis.

If we were to raise additional capital through sales of our equity securities, our stockholders would suffer dilution of their equity ownership. If we engage in debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, prohibit us from paying dividends, repurchasing our stock or making investments, and force us to maintain specified liquidity or other ratios, any of which could harm our business, operating results and financial condition. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things:

- develop or enhance our products;
- continue to expand our product development and sales and marketing organizations;
- acquire complementary technologies, products or businesses;
- expand operations, in the United States or internationally;
- hire, train and retain employees; or
- respond to competitive pressures or unanticipated working capital requirements.

Our failure to do any of these things could seriously harm our ability to execute our business strategy and may force us to curtail our existing operations.

#### **Off-Balance Sheet Arrangements**

We do not maintain any off-balance sheet arrangements or obligations that are reasonably likely to have a material current or future effect on our financial condition, results of operations, liquidity or capital resources.

#### **Indemnifications**

In the ordinary course of business, we enter into contractual arrangements under which we may agree to indemnify the counter-party from losses relating to a breach of representations and warranties, a failure to perform certain covenants, or claims and losses arising from certain external events as outlined within the contract, which may include, for example, losses arising from litigation or claims relating to past performance. Such indemnification clauses may not be subject to maximum loss clauses. We have also entered into indemnification agreements with our officers and directors. No material amounts related to these indemnifications are reflected in our consolidated financial statements for the years ended December 31, 2022 or 2021.

#### **Recent Accounting Pronouncements**

See Note 1 to the consolidated financial statements in Item 15 of this Report for a description of recent accounting pronouncements.

#### **Item 8. Financial Statements and Supplementary Data**

Reference is made to the consolidated financial statements listed under the heading (a) (1) Consolidated Financial Statements and Report of Independent Registered Public Accounting Firm of Item 15, which consolidated financial statements are incorporated by reference in response to this Item 8.

#### **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

**Item 9A. Controls and Procedures***Evaluation of 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 Securities Exchange Act of 1934. Based on this evaluation, our management concluded that as of December 31, 2022, our disclosure controls and procedures were effective.

*Management's Annual Report on Internal Control over Financial Reporting*

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls. 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 *Internal Control-Integrated Framework (2013 Framework)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

*Changes in Internal Control over Financial Reporting*

There were no changes in our internal controls over financial reporting during the fourth fiscal quarter of 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

None.

**Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections**

Not Applicable.

### Part III

#### Item 10. Directors, Executive Officers and Corporate Governance

The names of our directors and certain information about each of them are set forth below.

Name	Age	Position(s) with the Company
Ronald Glibbery	61	Chief Executive Officer and Director
Daniel Lewis	73	Director
Ian McWalter <sup>(1)(2)</sup>	71	Director
Andreas Melder <sup>(1)(2)</sup>	64	Director
Robert Y. Newell <sup>(1)(2)</sup>	74	Director

(1) Member of Audit Committee

(2) Member of Compensation Committee

The principal occupations and positions for at least the past five years of our directors are described below. There are no family relationships among any of our directors or executive officers.

*Ronald Glibbery.* Mr. Glibbery was appointed as our chief executive officer and to our board of directors in December 2021. He founded Peraso Technologies Inc. (Peraso Tech) in 2008 and served as its chief executive officer. In June 2020, Peraso Tech applied for and obtained an order under the Companies' Creditors Arrangement Act (the CCAA), providing certain relief. Pursuant to the Initial Order issued by the Ontario Superior Court of Justice (Commercial List) (the Court), Ernst & Young Inc. was appointed as the Monitor of Peraso Tech. In addition, the Monitor, in its capacity as Foreign Representative, filed a voluntary petition in the United States under Chapter 15 of the U.S. Bankruptcy Code, seeking recognition of the CCAA proceeding. In October 2020, the Court granted an order authorizing the termination of Peraso Tech's CCAA proceedings upon the completion of certain defined steps. In December 2020, the United States Bankruptcy Court for the Southern District of New York issued an Order that: (i) recognized and gave full force and effect in the United States to the Court's order approving the Settlement Agreement; and (ii) terminated the Chapter 15 Proceedings. Mr. Glibbery has over 25 years of experience in the semiconductor industry. Prior to co-founding Peraso Tech, Mr. Glibbery held executive positions at Kleer Semiconductor, a fabless semiconductor company focused on wireless audio technology and Intellon, a pioneer and leader in the development of semiconductor devices used for powerline communications. He has held other executive roles at Cogency Semiconductor, LSI Logic Canada, Inc. and LSI Logic Corporation. Mr. Glibbery holds a B.E.Sc. in Electrical and Electronics Engineering from the University of Western Ontario.

We believe that Mr. Glibbery's qualifications to serve on the board of directors include his service as an officer of ours and his extensive general management and technical expertise in the semiconductor industry, as well as his experience as a chief executive officer.

*Daniel Lewis.* Mr. Lewis has served as a member of the board of directors since September 2017. He served as our Vice President, General Manager of Memory Products from April 2022 until his retirement effective December 16, 2022. Mr. Lewis previously served as our President from August 2018 until April 2022 and chief executive officer from August 2018 until the business combination with Peraso Tech in December 2021. Before joining MoSys, Mr. Lewis served as the managing member and an owner of GMS Manufacturing Solution LLC, a firm focused on providing engineering services to manufacturing companies. He previously held various executive and leadership roles at View Box Group, Xicor, Integrated Device Technology, Accelerant Networks, Intel Corporation, Zilog and Digital Equipment Corporation. Mr. Lewis holds a B.S. in Electrical Engineering from the University of Michigan. We believe that Mr. Lewis's qualifications to serve on the board of directors include his service as an officer of ours and his extensive business experience, having held senior management positions at several companies in the semiconductor, computer and networking industries. He brings strategic and operational insight to the board of directors.

*Ian McWalter.* Dr. McWalter was appointed to our board of directors in December 2021. He currently serves as a member of the board of directors for Evertz Technologies, a publicly traded manufacturer of video and audio infrastructure solutions for television, telecom and new-media industries. Dr. McWalter served as the president and chief executive officer of CMC Microsystems from 2007 until 2018. Prior to this role, Dr. McWalter was chief executive officer of Toumaz Technology. Before joining Toumaz, Dr. McWalter spent 15 years at Gennum

Corporation, including five years as president and chief executive officer from 2000 to 2005. Previously, he held management and technical positions at Bell Northern Research Ltd., the research and development arm of Northern Telecom and Bell Canada, and Plessey Semiconductors. Dr. McWalter was awarded a B.Sc. in physics and a Ph.D. in Electrical Engineering from the Imperial College of Science and Technology in London, England. We believe that Dr. McWalter's qualifications to serve on the board of directors include his extensive general management and technical expertise in the semiconductor industry, as well as his experience as a chief executive officer and his experience serving as a director on public-company boards of directors.

*Andreas Melder.* Mr. Melder was appointed to our board of directors in December 2021. He is a veteran technology executive in the semiconductor, communications and consumer electronics industries and previously served as vice president of business development at Gige Networks, which was acquired in 2011 by Broadcom, where he continued to serve in executive marketing roles. Prior to Broadcom, Mr. Melder served as senior vice president of sales, marketing and business development for Intellon, which was acquired by Atheros/Qualcom. Previously, he was founder and vice president of marketing and business development for Microtune, a designer of RF integrated circuits and subsystem modules, which was acquired by Zoran Semiconductor, and vice president of sales & marketing for Tripath, an audio controller company acquired by Etelos. Additionally, Mr. Melder was a senior executive for companies that were acquired by Broadcom, Cirrus Logic and RFMD. Mr. Melder earned a B.S. in Electrical Engineering/Business from Carnegie-Mellon University and a M.S. in Electrical Engineering and Operations Research from Southern Methodist University. We believe that Mr. Melder's qualifications to serve on the board of directors include his extensive business experience, having held senior management positions at several companies in the semiconductor, computer and networking industries. Additionally, he brings additional operational, and fund-raising expertise, and business development and mergers and acquisitions experience. public markets, participated in investor roadshows and positioned additional companies for M&A exits through proper strategic industry positioning.

*Robert Y. Newell.* Mr. Newell has served as a member of our board of directors since October 2018 and is currently a consultant and advisor to emerging technology and healthcare companies. He has held financial management positions for companies in Silicon Valley for over 25 years. From 2003 to 2018, Mr. Newell was chief financial officer of Dextera Surgical, Inc. (Dextera) a developer of advanced surgical stapling and medical devices. In December 2017, after entering into an agreement to sell substantially all of its assets, Dextera filed a voluntary petition for reorganization under Chapter 11 of Title 11 of the United States Code in the United States Bankruptcy Court for the District of Delaware. He served on the board of directors of ARI Network Services, a leading publicly traded supplier of SaaS and data as a service solutions. Previously, Mr. Newell served as chief financial officer of Omnicell, an automated medication and hospital supply management company, and prior to 2000, he held executive positions with the Beta Group and Cardiometrics. Prior to his business career, he was a pilot in the United States Air Force. Mr. Newell holds a B.A. in mathematics from the College of William & Mary and an MBA from Harvard Business School. We believe that Mr. Newell's qualifications to serve on the board of directors include his substantial financial and public-company experience, as he has served as chief financial officer at multiple medical device and other technology companies. He also has previous experience serving as a director on public-company boards of directors.

The names of our executive officers and certain information about them are set forth either above or below, as the case may be:

<b>Name</b>	<b>Age</b>	<b>Position(s) with the Company</b>
Ronald Glibbery	61	Chief Executive Officer and Director
James W. Sullivan	54	Chief Financial Officer
Bradley Lynch	50	Chief Operating Officer
Alexander Tomkins	39	Chief Technology Officer
Mark Lunsford	65	Chief Revenue Officer

*James Sullivan.* Mr. Sullivan has served as our chief financial officer since January 2008. From July 2006 until January 2008, Mr. Sullivan served as Vice President of Finance and Chief Financial Officer at Apptera, Inc., a venture-backed company providing software for mobile advertising, search and commerce. From July 2002 until June 2006, Mr. Sullivan was the chief financial officer at 8x8, Inc., a publicly-traded SAAS provider of VoIP



and unified communication solutions. Mr. Sullivan's prior experience includes various positions at 8x8, Inc. and PricewaterhouseCoopers LLP. He received a Bachelor of Science degree in Accounting from New York University and is a certified public accountant.

*Bradley Lynch.* Mr. Lynch has served as chief operating officer since December 2021. He co-founded Peraso Tech in 2009 and served as executive vice president of engineering and operations. In June 2020, Peraso Tech applied for and obtained an order under the Companies' Creditors Arrangement Act (the CCAA), providing certain relief. Pursuant to the Initial Order issued by the Ontario Superior Court of Justice (Commercial List) (the Court), Ernst & Young Inc. was appointed as the Monitor of Peraso Tech. In addition, the Monitor, in its capacity as Foreign Representative, filed a voluntary petition in the United States under Chapter 15 of the U.S. Bankruptcy Code, seeking recognition of the CCAA proceeding. In October 2020, the Court granted an order authorizing the termination of Peraso Tech's CCAA proceedings upon the completion of certain defined steps. In December 2020, the United States Bankruptcy Court for the Southern District of New York issued an Order that: (i) recognized and gave full force and effect in the United States to the Court's order approving the Settlement Agreement; and (ii) terminated the Chapter 15 Proceedings. Prior to founding Peraso Tech, Mr. Lynch worked as a system architect at Kleer Semiconductor, a fabless company focused on wireless audio technology. Before Kleer, he was director of software engineering at Intellon Corporation, a pioneer and leader in the development of semiconductor devices used for powerline communications. Previously, Mr. Lynch held various technical roles at Cogency Semiconductor and Power Trunk. Mr. Lynch holds a B.A.Sc in Computer Engineering from the University of Waterloo.

*Alexander Tomkins.* Mr. Tomkins has served as our chief technology officer since December 2021. He co-founded Peraso Tech in 2009 and served as its chief technology officer. In June 2020, Peraso Tech applied for and obtained an order under the Companies' Creditors Arrangement Act (the CCAA), providing certain relief. Pursuant to the Initial Order issued by the Ontario Superior Court of Justice (Commercial List), Ernst & Young Inc. was appointed as the Monitor of Peraso Tech. In addition, the Monitor, in its capacity as Foreign Representative, filed a voluntary petition in the United States under Chapter 15 of the U.S. Bankruptcy Code, seeking recognition of the CCAA proceeding. In October 2020, the Court granted an order authorizing the termination of Peraso Tech's CCAA proceedings upon the completion of certain defined steps. In December 2020, the United States Bankruptcy Court for the Southern District of New York issued an Order that: (i) recognized and gave full force and effect in the United States to the Court's order approving the Settlement Agreement; and (ii) terminated the Chapter 15 Proceedings. Mr. Tomkins holds a Masters of Applied Science from the University of Toronto and a B.S. in Engineering Physics from Carleton University. He also attended the University of Toronto as a doctoral candidate in Applied Science.

*Mark Lunsford.* Mr. Lunsford was appointed as our chief revenue officer in October 2022. Prior to joining Peraso, Mr. Lunsford held numerous positions of responsibility with companies in the semiconductor industry. From 1988 to 1999, he worked for Asia Pacific at Monolithic Memories, where he served in multiple roles, including vice president of sales for the Americas and director of marketing. From 1999 to 2001, Mr. Lunsford was the vice president of worldwide sales and director of business development at Pivotal Technologies. In 2001, and for a period of eight years, he served as vice president of worldwide sales at Micrel Semiconductor. From 2009 to 2013, he worked at NXP, where he served as vice president of sales and marketing for the Americas. In 2013, and for a period of six years, he served as the executive vice president of worldwide sales at SiTime Inc., a provider of MEMS-based timing devices. From January 2019 until April 2020, he provided consulting services for a range of high-technology businesses. Finally, he served as the vice president of global sales at Chasm Advanced Materials, a provider of carbon nano tube based product solutions, from November 2020 until April 2022. Mr. Lunsford holds a degree in Mechanical Engineering from the University of California at Davis.

## **Code of Ethics**

We have adopted a code of ethics that applies to all of our employees. The code of ethics is designed to deter wrongdoing and to promote, among other things, honest and ethical conduct, full, fair, accurate, timely, and understandable disclosures in reports and documents submitted to the SEC and other public communications, compliance with applicable governmental laws, rules and regulations, the prompt internal reporting of violations of the code to an appropriate person or persons identified in the code and accountability for adherence to such code.

The code of ethics is available on our website, [www.perasoinc.com](http://www.perasoinc.com). If we make any substantive amendments to the code of ethics or grant any waiver, including any implicit waiver, from a provision of the code to our chief executive officer or chief financial officer, or persons performing similar functions, where such amendment or waiver is required to be disclosed under applicable SEC rules, we intend to disclose the nature of such amendment or waiver on our website.

### **Audit Committee**

Our board of directors established the Audit Committee for the purpose of overseeing the accounting and financial reporting processes and audits of our financial statements. The Audit Committee also is charged with reviewing reports regarding violations of our code of ethics and complaints with respect thereto, and internal control violations under our whistleblower policy are directed to the members of the Audit Committee. The responsibilities of our Audit Committee are described in the Audit Committee Charter adopted by our board of directors, a current copy of which can be found on the investors section of our website, [www.perasoinc.com](http://www.perasoinc.com).

Robert Y. Newell, Ian McWalter and Andreas Melder are the current members of the Audit Committee. All are independent, as determined in accordance with Rule 5605(a)(2) of the Nasdaq listing rules and Rule 10A-3 of the Exchange Act. Mr. Newell serves as the chairman and has been designated by the board of directors as the “audit committee financial expert,” as defined by Item 407(d)(5) of Regulation S-K under the Securities Act and the Exchange Act. That status does not impose duties, liabilities or obligations that are greater than the duties, liabilities or obligations otherwise imposed on him as a member of the Audit Committee and the board of directors, however. The Audit Committee has delegated authority to Mr. Newell for review and pre-approval of services proposed to be provided by our independent registered public accounting firm.

### **Compensation Committee**

Ian McWalter, Andreas Melder and Robert Y. Newell are the current members of the Compensation Committee, and Dr. McWalter serves as the chairman. The Compensation Committee is responsible for reviewing, recommending and approving our compensation policies and benefits, including the compensation of all of our executive officers and directors. Our Compensation Committee also has the principal responsibility for the administration of our equity incentive and stock purchase plans. The responsibilities of our Compensation Committee are described in the Compensation Committee Charter adopted by our board of directors, a current copy of which can be found on the investors section of our website, [www.perasoinc.com](http://www.perasoinc.com).

### **Nominations Process**

We do not have a nominating committee, as we are a small company and currently only have five directors. Instead of having such a committee, our board of directors historically has appointed all of the independent directors on our board to search for and evaluate qualified individuals to become nominees for director and board committee members. The independent directors recommend candidates for nomination for election or reelection at each annual meeting of stockholders and, as necessary, to fill vacancies and newly created directorships, and evaluate candidates for appointment to and removal from committees. The independent directors operate in this capacity under authority granted by resolution of the board of directors, rather than by charter.

When new candidates for our board of directors are sought, the independent directors evaluate each candidate for nomination as a director within the context of the needs and the composition of the board of directors as a whole. The independent directors conduct any appropriate and necessary inquiries into the backgrounds and qualifications of candidates. When evaluating director nominees, our board of directors generally seeks to identify individuals with diverse, yet complementary business backgrounds. Although we have no formal policy regarding diversity, our directors consider both the personal characteristics and experience of director nominees, including each nominee’s independence, diversity, age, skills, expertise, time availability and industry background in the context of the needs of the board of directors and the Company. The board of directors believes that director nominees should exhibit proven leadership capabilities and experience at a high level of responsibility within their chosen fields and must have the experience and ability to analyze the complex business issues facing us, and specifically, the issues inherent in the semiconductor industry. In addition to business expertise, the board of directors requires that director nominees have the highest personal and professional ethics, integrity and values and, above all, are committed to representing the long-term interests of our stockholders and other stakeholders. To date, we have not paid any fee to a third party to assist in the process of identifying or evaluating director candidates. Our independent directors will

consider candidates for nomination as director who are recommended by a stockholder and will not evaluate any candidate for nomination for director differently because the candidate was recommended by a stockholder. To date, we have not received or rejected any suggestions for a director candidate recommended by any stockholder or group of stockholders owning more than 5% of our common stock. The recommendation must include the information specified in our bylaws for stockholder nominees to be considered at an annual meeting, including the following:

- The stockholder's name and address and the beneficial owner, if any, on whose behalf the nomination is proposed;
- The stockholder's reason for making the nomination at the annual meeting, and the signed consent of the nominee to serve if elected;
- The number of shares owned by, and any material interest of, the record owner and the beneficial owner, if any, on whose behalf the record owner is proposing the nominee;
- A description of any arrangements or understandings between the stockholder, the nominee and any other person regarding the nomination; and
- Information regarding the nominee that would be required to be included in our proxy statement by the rules of the SEC, including the nominee's age, business experience for the past five years and any other directorships held by the nominee.

The information listed above is not a complete list of the information required by our bylaws. The secretary will forward any timely recommendations containing the required information to our independent directors for consideration.

## **Item 11. Executive Compensation**

### *Compensation Committee*

Ian McWalter, Andreas Melder and Robert Y. Newell are the current members of our Compensation Committee, with Dr. McWalter serving as the chairman. The Compensation Committee is responsible for reviewing, recommending and approving our compensation policies and benefits, including the compensation of all of our executive officers and directors. Our Compensation Committee also has the principal responsibility for the administration of our equity incentive and stock purchase plans and the approval of equity awards to the named executive officers. The responsibilities of our Compensation Committee are described in the Compensation Committee Charter adopted by our board of directors, a current copy of which can be found on the investors section of our website, [www.perasoinc.com](http://www.perasoinc.com).

### *Overview of Compensation Program*

The Compensation Committee of the board of directors has responsibility for establishing, implementing and monitoring adherence to our compensation philosophy. The board of directors has delegated to the Compensation Committee the responsibility for determining our compensation policies and procedures for senior management, including the named executive officers, periodically reviewing these policies and procedures, and making recommendations concerning executive compensation to be considered by the full board of directors, when such approval is required under any of our plans or policies or by applicable laws.

The compensation received by our named executive officers in fiscal year 2022 is set forth in the Summary Compensation Table, below. For 2022, the named executive officers included Ronald Glibbery, our chief executive officer, Daniel Lewis, our former vice president and president, and James Sullivan, our chief financial officer.

### *Compensation Philosophy*

In general, our executive compensation policies are designed to recruit, retain and motivate qualified executives by providing them with a competitive total compensation package based in large part on the executive's contribution to our financial and operational success, the executive's personal performance and increases in stockholder value, as measured by the price of our common stock. We believe that the total compensation paid to our executives should be fair, reasonable and competitive.

We seek to have a balanced approach to executive compensation with each primary element of compensation (base salary, variable compensation and equity incentives) designed to play a specific role. Overall, we design our compensation programs to allow for the recruitment, retention and motivation of the key executives and high-level talent required in order for us to:

- supply high-value and high-quality integrated circuit solutions to our customer base;
- achieve or exceed our annual financial plan and be profitable;
- make continuous progression towards achieving our long-term strategic objectives to be a high-growth company with growing profitability; and
- increase our share price to provide greater value to our stockholders.

#### *Role of Executive Officers in Compensation Decisions*

The chief executive officer (CEO) makes recommendations for equity and non-equity compensation for executives to be approved by the Compensation Committee. The Compensation Committee reviews these guidelines annually. The CEO annually reviews the performance of our executives (other than himself) and presents his recommendations for proposed salary adjustments, bonuses and equity awards to the Compensation Committee once a year. In its discretion, the Compensation Committee may accept, modify or reject the CEO's recommendations. The Compensation Committee evaluates the compensation of the CEO on its own without the participation or involvement of the CEO. Only the Compensation Committee and the board of directors are authorized to approve the compensation for any named executive officer. Compensation of new executives is based on hiring negotiations between the individuals and our CEO and/or Compensation Committee.

#### *Elements of Compensation*

Consistent with our compensation philosophy and objectives, we offer executive compensation packages consisting of the following three components:

- base salary;
- annual incentive compensation; and
- equity awards.

In each fiscal year, the Compensation Committee determines the amount and relative weighting of each component for all executives, including the named executive officers. Base salaries are paid in fixed amounts and thus do not encourage risk taking. Our widespread use of long-term compensation consisting of restricted stock units (RSUs) focuses recipients on the achievement of our longer-term goals and conserves cash for other operating expenses. Historically, the RSUs granted to our executives have vested in increments over three years. The Compensation Committee does not believe that these awards encourage unnecessary or excessive risk taking because the ultimate value of the awards is tied to our stock price, and the use of multi-year vesting schedules helps to align our employees' interests even more closely with those of our long-term investors.

#### *Base Salary*

Because our compensation philosophy stresses performance-based awards, base salary is intended to be a smaller portion of total executive compensation relative to long-term equity. The Compensation Committee takes into account the executive's scope of responsibility and significance to the execution of our long-term strategy, past accomplishments, experience and personal performance and compares each executive's base salary with those of the other members of senior management. The Compensation Committee may give different weighting to each of these factors for each executive, as it deems appropriate. The Compensation Committee did not retain a compensation consultant or determine a compensation peer group for 2022.

In February 2022, the Compensation Committee approved increases to the annual base salaries of certain of our executive officers, effective retroactively as of December 17, 2021. The annual base salary for our chief financial officer, James Sullivan, was increased from \$260,000 to \$305,000. The annual base salary for our chief operating officer, Brad Lynch, was increased from CAD\$200,000 to \$275,000. The annual base salary for our chief technology officer, Alex Tomkins, was increased from CAD\$252,000 to \$250,000.

In April 2022, the Compensation Committee approved an increase to the annual base salary for our then president, Daniel Lewis, from \$250,000 to \$275,000, effective retroactively as of December 17, 2021.

#### *Annual Incentive Compensation*

In February 2022, the Compensation Committee authorized incentive compensation targets for the named executive officers. Mr. Sullivan, under the terms of his 2022 annual performance-based bonus, will be eligible to receive a target amount of up to 60% of his base salary, payable in the form of cash, the Company's stock or a combination of both. Similarly, Mr. Lynch, under the terms of his 2022 annual performance-based bonus, will be eligible to receive a target amount of up to 50% of his base salary, also payable in the form of cash, the Company's stock or a combination of both.

In April 2022, the Compensation Committee authorized incentive compensation targets for Mr. Lewis. Mr. Lewis, under the terms of his 2022 annual performance-based bonus, will be eligible to receive (i) a target amount of up to 50% of his base salary based upon the achievement of certain goals and performance criteria determined by our CEO and the Compensation Committee and (ii) a cash bonus equal to 3% of (a) the cash proceeds received by the Company (the "VAE Bonus") in the event the Company sells all or any part of the Company's Virtual Accelerator Engine intellectual property (the "VAE Sale") or (b) the royalties paid to the Company during the 24 month period following the VAE Sale (the "VAE Royalty Payments" and, together with the VAE Bonus, the "VAE Incentive Payments"); provided, however, that in no event will the aggregate VAE Incentive Payments exceed \$300,000. In January 2023, upon receipt of the final proceeds from the VAE Sale, we paid Mr. Lewis \$105,000 for the VAE Bonus.

#### *Equity Awards*

Although we do not have a mandated policy regarding the ownership of shares of common stock by officers and directors, we believe that granting equity awards to executives and other key employees on an ongoing basis gives them a strong incentive to maximize stockholder value and aligns their interests with those of our other stockholders on a long-term basis. Our Amended and Restated Peraso Inc. 2019 Stock Incentive Plan (the "Peraso Stock Incentive Plan"), which was approved by our stockholders and became effective in August 2019, enables us to grant equity awards, as well as other types of stock-based compensation, to our executive officers and other employees. The Compensation Committee reviews and approves all equity awards granted under the Peraso Stock Incentive Plan to the named executive officers. We grant equity awards to achieve retention and motivation:

- upon the hiring of key executives and other personnel;
- annually, when we review progress against corporate and personal goals; and
- when we believe that competitive forces or economic conditions threaten to cause our key executives to lose their motivation and/or where retention of these key executives is in jeopardy.

With the Compensation Committee's approval, we grant equity awards to acquire shares of common stock when we initially hire executives and other employees, as a long-term performance incentive. The Compensation Committee has determined the size of the initial equity awards to newly hired executives with reference to equity awards held by existing executives, the percentage that such award represents of our total shares outstanding and hiring negotiations with the individual. In addition, the Compensation Committee would consider other relevant information regarding the size and type of compensation package considered necessary to enable us to recruit, retain and motivate the executive.

Typically, when we hire an executive, the equity awards vest on over a three-year period. The options granted to executives in connection with annual performance reviews typically vest monthly over a three-to-four year period, and RSUs granted typically vest annually over a period of from one-to-three years, as the Compensation Committee



may decide. As matters of policy and practice, we grant stock options with an exercise price equal to fair market value, although the 2019 Plan allows us to use a different exercise price. In determining fair market value, we use the closing price of the common stock on the Nasdaq on the grant date.

Historically, no employee has been eligible for an annual performance grant until the employee has been employed for at least six months. Annual performance reviews are generally conducted in the first half of each fiscal year. Our CEO conducts the performance review of all other executives and makes his recommendations to the Compensation Committee. The Compensation Committee also reviews the CEO's annual performance and determines whether he should receive additional equity awards. Aside from equity award grants in connection with annual performance reviews, we do not have a policy of granting additional awards to executives during the year. The board of directors and Compensation Committee have not adopted a policy with respect to setting the dates of award grants relative to the timing of the release of material non-public information. Our policy with respect to prohibiting insider trading restricts sales of shares during specified black-out periods, including at all times that our insiders are considered to possess material non-public information.

In determining the size of equity awards in connection with the annual performance reviews of our executives, the Compensation Committee takes into account the executive's current position with and responsibilities to us, and current and past equity awards to the executive.

In April 2022, our Compensation Committee authorized the following awards of restricted stock units to the named executive officers:

- Mr. Glibbery — 200,000;
- Mr. Lewis — 75,000; and
- Mr. Sullivan — 100,000.

The awards vest over semiannually over the 36-month period commencing December 17, 2021.

Going forward, we intend to continue to evaluate and consider equity grants to our executives on an annual basis. We expect to consider potential equity awards for executives at the same time as we annually review our employees' performance and determine whether to award grants for all employees.

#### *Accounting and Tax Considerations*

Our Compensation Committee has reviewed the impact of tax and accounting treatment on the various components of our executive compensation program. Section 162(m) of the Internal Revenue Code, as amended (the "Code"), generally disallows a tax deduction to publicly-held companies for compensation paid to "covered" executive officers, to the extent that compensation paid to such an officer exceeds \$1 million during the taxable year. The Tax Cuts and Jobs Act repealed the performance-based exception to the deduction limit for remuneration that is deductible in tax years commencing after December 31, 2017. However, certain remuneration is specifically exempt from the deduction limit under a transition rule to the extent that it is "performance-based," as defined in Section 162(m) of the Code, and subject to a "written binding contract" in effect as of November 2, 2017 that is not later modified in any material respect. We endeavor to award compensation that will be deductible for income tax purposes, though other factors will also be considered. None of the compensation paid to our covered executive officers for the year ended December 31, 2022 that would be taken into account for purposes of Section 162(m) exceeded the \$1 million limitation for 2021. Because of ambiguities and uncertainties as to the application and interpretation of Section 162(m) of the Code and the regulations issued thereunder, including the uncertain scope of the transition relief under the Tax Cuts and Jobs Act, no assurance can be given that compensation intended to satisfy the requirements for exemption from Section 162(m) of the Code in fact will satisfy such requirements. Our Compensation Committee may authorize compensation payments that do not comply with the exemptions to Section 162(m) when we believe that such payments are appropriate to attract and retain executive talent.

### *Say-on-Pay*

In 2020, we gave our stockholders an opportunity to provide feedback on our executive compensation through an advisory vote at our annual stockholder meeting. Stockholders were asked to approve, on an advisory basis, the compensation paid to our named executive officers. A majority of stockholders indicated approval of the compensation of the named executive officers, with approximately 90% of the shares that voted on such matter voting in favor of the proposal. Additionally, in 2017, stockholders were asked to approve, on an advisory basis, in favor of having a stockholder vote to approve the compensation of our named executive officers every three years. A majority of stockholders indicated approval of having a stockholder vote to approve the compensation of our named executive officers every three years, with approximately 60% of the shares that voted on such matter voting in favor of the proposal. Based on these results and consistent with the previous recommendation and determination of its board of directors, we will hold non-binding advisory votes on executive compensation every three years until the next vote on the frequency of the stockholder advisory vote on executive compensation.

In light of the results of the advisory vote, the Compensation Committee continued to apply principles that were substantially similar to those applied historically in determining compensation policies and decisions and did not make any significant changes to executive compensation decisions and policies with respect to 2022 executive compensation.

## SUMMARY COMPENSATION TABLE

The following table sets forth compensation information for fiscal years 2022 and 2021 for each of our named executive officers. Compensation paid by Peraso Tech prior to the closing of the Arrangement is not reflected in the Summary Compensation Table.

Name and principal position	Year	Salary (\$)	Stock Option Awards (\$) <sup>(1)</sup>	Restricted Stock Awards (\$) <sup>(1)</sup>	Non-Equity Incentive Plan Compensation (\$)	Total (\$)
Ronald Glibbery	2022	400,000	—	430,000	—	830,000
Chief Executive Officer <sup>(2)</sup>	2021	16,667	—	—	—	16,667
Daniel Lewis	2022	279,316	—	161,250	—	440,566
Vice President, General Manager of Memory Products and Director <sup>(3)</sup>	2021	266,667	—	32,500	500,000	799,167
James Sullivan	2022	306,719	—	215,000	—	521,719
Chief Financial Officer	2021	256,668	—	—	200,000	456,668

- (1) Award amounts reflect the aggregate grant date fair value with respect to awards granted during the years indicated, as determined pursuant to FASB ASC Topic 718. The assumptions used to calculate the aggregate grant date fair value of option and stock awards are set forth in the notes to the consolidated financial statements included in item 15 of this Report. These amounts do not reflect actual compensation earned or to be earned by our named executive officers.
- (3) Mr. Lewis resigned as our Vice President, General Manager of Memory Products in December 2022.

## GRANTS OF PLAN-BASED AWARDS

Name	Grant Date	All Other Stock Awards: Number of Shares of Stock or Units (#) <sup>(1)</sup>	Grant Date Fair Value of Stock Awards (\$)
Ronald Glibbery . . . . .	4/15/2022	200,000	430,000
Daniel Lewis <sup>(2)</sup> . . . . .	4/15/2022	75,000	161,250
James Sullivan. . . . .	4/15/2022	100,000	215,000

- (1) Represents restricted stock units granted pursuant to the Equity Plan.
- (2) Mr. Lewis resigned as our Vice President, General Manager of Memory Products in December 2022.

## OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table sets forth information regarding the outstanding equity awards held by our named executive officers as of December 31, 2022.

Name	Option Awards					Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price (\$)	Option Expiration Date <sup>(1)</sup>	Number of Units That Have Not Vested (#)	Market Value of Units That Have Not Vested (\$)
Ron Glibbery. . . .	22,619 <sup>(2)</sup>	—	—	1.73	11/17/2024	—	—
	18,095 <sup>(2)</sup>	—	—	2.59	12/29/2025	—	—
	278,891 <sup>(2)</sup>	—	—	2.59	9/17/2030	—	—
	109,599 <sup>(2)</sup>	—	—	2.59	12/16/2031	—	—
						133,333 <sup>(11)</sup>	97,333 <sup>(12)</sup>
Daniel Lewis. . . .	4,000 <sup>(3)</sup>	—	—	15.00	10/19/2023	—	—
	1,000 <sup>(4)</sup>	—	—	25.60	1/4/2024	—	—
	15,000 <sup>(5)</sup>	—	—	3.92	2/6/2029	—	—
	60,000 <sup>(6)</sup>	—	—	1.57	11/20/2029	—	—
						50,000 <sup>(11)</sup>	36,500 <sup>(12)</sup>
James Sullivan. . .	300 <sup>(7)</sup>	—	—	410.00	3/30/2025	—	—
	787 <sup>(8)</sup>	—	—	144.00	8/23/2026	—	—
	5,500 <sup>(9)</sup>	—	—	3.92	2/6/2029	—	—
	20,000 <sup>(10)</sup>	—	—	1.57	11/20/2029	—	—
						66,667 <sup>(11)</sup>	48,667 <sup>(12)</sup>

- (1) The standard option term is generally ten years, but all of the options expire automatically unless exercised within 90 days after the cessation of service as an employee, director or consultant.
- (2) The stock options were acquired on December 17, 2021 as consideration for the person's securities of Peraso Technologies Inc., which we acquired by way of reverse takeover pursuant to the Arrangement.
- (3) The stock option was granted on October 19, 2017 for service as a non-employee director, and the shares subject to this option vest annually over three years beginning September 26, 2017 subject to continued employment (or service as a director or consultant).
- (4) The stock option was granted on January 4, 2018 for service as a non-employee director, and the shares subject to this option vest annually over three years beginning September 26, 2017 subject to continued service as an employee, director or consultant.
- (5) The stock option was granted on February 6, 2019, and the shares subject to this option vest monthly over three years subject to continued service as an employee, director or consultant. The shares were fully vested on December 17, 2021 per the Arrangement Agreement.
- (6) The stock option was granted on November 20, 2019, and the shares subject to this option vested monthly over three years subject to continued service as an employee, director or consultant. The shares were fully vested on December 17, 2021 per the Arrangement Agreement.
- (7) The stock option was granted on March 30, 2015, and the shares subject to this option vested monthly over 48 months subject to continued employment (or service as a director or consultant).
- (8) In August 2016, officers tendered their eligible options and received new options at a rate of 1 replacement option share for each 1.75 option shares tendered. The stock option was granted on August 23, 2016, and the shares subject to this option vested monthly over 48 months subject to continued employment (or service as a director or consultant).
- (9) The stock option was granted on February 6, 2019, and the shares subject to this option vest monthly over three years subject to continued service as an employee, director or consultant).
- (10) The stock option was granted on November 20, 2019, and the shares subject to this option vested monthly over three years subject to continued service as an employee, director or consultant.
- (11) The shares subject to each restricted stock unit grant vest on each semi-annual anniversary over a three-year period commencing on December 17, 2021 subject to continued employment (or service as a director or consultant).
- (12) The amount is calculated using the Company's closing price on the Nasdaq of \$0.73 per share of common stock on December 30, 2022.

## OPTION EXERCISES AND STOCK VESTED

The following table sets forth the number of shares acquired and aggregate dollar amount realized pursuant to the vesting of stock awards by our named executive officers during 2022.

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$) <sup>(1)</sup>
Ronald Glibbery . . . . .	—	—	66,667	92,333
Daniel Lewis . . . . .	—	—	25,000	34,625
James Sullivan. . . . .	—	—	34,708	49,714

(1) The aggregate dollar value realized upon vesting represents the closing price of a share of common stock on the Nasdaq at the date of vesting, multiplied by the total number of shares vested.

### *Employment and Change-in-Control Arrangements and Agreements*

Our Executive Change-in-Control and Severance Policy (the “Policy”) provides benefits that are intended to encourage the continued dedication of our executive officers and to mitigate potential disincentives to the consideration of a transaction that would result in a change in control, particularly where the services of our named executive officers may not be required by a potential acquirer. The Policy provides for benefits for our named executive officers in the event of a “Change-in-Control,” which is generally defined as:

- an acquisition of 45% or more of our common stock or voting securities by any “person” as defined under the Exchange Act; or
- consummation of a complete liquidation or dissolution of the Company or a merger, consolidation, reorganization or sale of all or substantially all of our assets (collectively, a “Business Combination”) other than a Business Combination in which (A) our stockholders receive 50% or more of the stock of the corporation resulting from the Business Combination and (B) at least a majority of the board of directors of such resulting corporation were our incumbent directors immediately prior to the consummation of the Business Combination, and (C) after which no individual, entity or group (excluding any corporation or other entity resulting from the Business Combination or any employee benefit plan of such corporation or of ours) who did not own 45% or more of the stock of the resulting corporation or other entity immediately before the Business Combination owns 45% or more of the stock of such resulting corporation or other entity.

Under the Policy, the following compensation and benefits are to be provided to our chief executive officer upon the occurrence of a Change-in-Control, and in the case of our other named executive officers, upon a Change-in-Control combined with a termination of the named executive officer’s employment without cause, or due to disability or resignation for good reason (as defined in the Policy) in connection with the Change-in-Control or within 24 months after it:

- any base salary earned but not yet paid through the date of termination;
- any annual or discretionary bonus earned but not yet paid to him for any calendar year prior to the year in which his termination occurs;
- any compensation under any deferred compensation plan of ours or deferred compensation agreement with us then in effect;
- a single lump sum payment equal to the sum of (a) one year of his or her then-current base salary plus (b) the average of his or her annual bonus payments in the preceding three years or such shorter time as he or she has been employed by us (with prorated weighting assigned to any bonus earned for a partial year of employment), which payment will be made within 60 days following the Change-in-Control (in the case of the chief executive officer), or 60 days following the date of employment termination (in the case of all other named executive officers).



- vesting in 100% of all outstanding equity awards as of the date of the Change-in-Control for the chief executive officer, or as of the date of termination of employment for all other named executive officers;
- reimbursement of any business expenses incurred by him through the date of termination but not yet paid;
- reimbursement of the cost of continuation of medical benefits for a period of 12 months; and
- outstanding equity awards that are structured as stock options, stock appreciation rights or similar awards shall be amended effective as of the date of termination to provide that such awards will remain outstanding and exercisable until the earlier of (a) 12 months following the date of the Change-in-Control for the chief executive officer, or the termination of employment for the other named executive officers, and (b) the expiration of the award's initial term.

Under the Policy, "cause" means the executive's:

- willful failure to attend to the executive's duties that is not cured by the executive within 30 days of receiving written notice from the CEO (or, in the case of the CEO, from the board of directors) specifying such failure;
- material breach of the executive's then-current employment agreement (if any) that is not cured by the executive within 30 days of receiving written notice from the CEO (or, in the case of the CEO, from the board of directors) specifying such breach;
- conviction of (or plea of guilty or nolo contendere to) any felony or any misdemeanor involving theft or embezzlement; or
- misconduct resulting in material harm to our business or reputation, including fraud, embezzlement, misappropriation of funds or a material violation of the executive's Employment, Confidential Information, Invention Assignment and Arbitration Agreement; and

Under the Policy, "good reason" means the occurrence of any of the following conditions without the executive's consent, but only if such condition is reported by the executive within 90 days of the executive's knowledge of such condition and remains uncured 30 days after written notice from the executive to the board of directors of said condition:

- a material reduction in the executive's then-current base salary or annual target bonus (expressed as a percentage of Executive's then-current base salary), except for a reduction proportionate to reductions concurrently imposed on all other members of the Company's executive management;
- a material reduction in the executive's then-current employee benefits package, taken as a whole, except for a reduction proportionate to reductions concurrently imposed on all other members of executive management;
- a material reduction in the executive's responsibilities with respect to our overall operations, such that continuity of responsibilities with respect to business operations existing prior to a corporate transaction will serve as a material reduction in responsibilities if such business operations represent only a subsidiary or business unit of the larger enterprise after the corporate transaction;
- a material reduction in the responsibilities of the executive's direct reports, including a requirement for the chief executive officer to report to another officer as opposed to our board of directors or a requirement for any other executive to report to any officer other than our chief executive officer;
- a material breach by us of any material provision of the executive's then-current employment agreement (if any);
- a requirement that the executive relocate to a location more than 35 miles from the executive's then-current office location, unless such office relocation results in the distance between the new office and Executive's home being closer or equal to the distance between the prior office and the executive's home;

- a failure of a successor or transferee to assume our obligations under this Policy; or
- a failure to nominate the executive for election as a Board director, if, at the proper time for nomination, the executive is a member of the board of directors.

Notwithstanding the above, in lieu of the payments and benefits payable under the Policy to Mr. Glibbery as the Company's chief executive officer, Mr. Glibbery will receive change-in control payments and benefits in accordance with the terms and conditions of his employment agreement. The table below summarizes the payments Mr. Glibbery would be entitled to depending on the respective type of termination of his employment.

<b>Termination Type</b>	<b>Payments and Benefits</b>
Termination for Cause or Voluntary Resignation	<ul style="list-style-type: none"> <li>(i) accrued and unpaid base salary and any other payments required by law, including those in connection with accrued vacation; and</li> <li>(ii) reimbursement for business expenses.</li> </ul>
Termination Without Cause, for Good Reason, upon Change of Control, Death or Disability	<ul style="list-style-type: none"> <li>(i) accrued and unpaid base salary and any other payments required by law including those in connection with accrued vacation;</li> <li>(ii) reimbursement for business expenses;</li> <li>(iii) the payment of the greater of (A) the sum of: (x) pay in lieu of notice of termination, in the amount required pursuant to the ESA (as defined in Mr. Glibbery's employment agreement), and (y) statutory severance pay (if applicable) in the amount required to be provided pursuant to the ESA; or (B) twenty-four (24) months of base salary in lieu of notice, calculated solely by reference to the base salary except and only to the extent as otherwise minimally required by the ESA, to be paid in the form of a lump sum;</li> <li>(iv) any bonus awarded but not yet paid in respect of the fiscal year preceding the termination date;</li> <li>(v) bonus for the year in which the employment terminates, prorated pursuant to the employment agreement;</li> <li>(vi) all benefits (as existed on the date notice of termination is provided) for the duration of the Severance Period (as defined in the employment agreement);</li> <li>(vii) any unvested equity and equity-related compensation that has been issued pursuant to the Plan will be immediately accelerated and vested as of the termination date;</li> <li>(viii) any vested equity and equity-related compensation that has been issued under the Plan will remain exercisable until 24 months following such termination; and</li> <li>(ix) any other benefits and/or perquisites shall continue until the end of the ESA Notice Period (as defined in the employment agreement).</li> </ul>

The information below describes the severance benefits payable to (i) Mr. Glibbery under his employment agreement and (ii) Mr. Sullivan under the Policy, as if such arrangements had been in effect and a Change-in-Control occurred on December 31, 2022, and the employment of each of our named executive officers was terminated without cause immediately following the Change-in-Control:

<b>Name</b>	<b>Base Salary (\$)<sup>(1)</sup></b>	<b>Incentive Plans (\$)<sup>(2)</sup></b>	<b>Continuation of Benefits (\$)<sup>(3)</sup></b>	<b>Stock Option Vesting (\$)<sup>(4)</sup></b>	<b>Stock Award Vesting (\$)<sup>(5)</sup></b>	<b>Total (\$)</b>
Ronald Glibbery . . . . .	800,000	300,000	13,766	—	97,333	1,211,099
James Sullivan. . . . .	305,000	183,000	24,506	—	48,667	561,173

- (1) Represents cash severance payments based on the executive's salary at December 31, 2022, in an amount equal to two years of base salary for Mr. Glibbery and one year of base salary for Mr. Sullivan.

- (2) For Mr. Glibbery, the amount represents payment of his annual target bonus amount. For Mr. Sullivan, the amount represents the average of his annual performance incentive payments in the preceding three years.
- (3) Represents the aggregate amount of all premiums payable for the continuation of the executive's health benefits for one or two years, as applicable, based on the amounts of such premiums at December 31, 2022.
- (4) The value is calculated as the intrinsic value per share, multiplied by the number of shares that would become fully vested upon the Change-in-Control. The intrinsic value per share would be calculated as the excess of the closing price of the common stock on the Nasdaq of \$0.73 on December 30, 2022 over the exercise price of the option. If the value is less than zero, it is deemed to be zero for the purposes of these calculations.
- (5) The value is calculated as the intrinsic value per share, multiplied by the number of shares that would become fully vested upon the Change-in-Control. The intrinsic value per share is considered as the closing price of our common stock on the Nasdaq of \$0.73 on December 30, 2022.

If a Change-in-Control occurred on December 31, 2022, under the Policy, the following numbers of option and award shares would have vested immediately as a result of acceleration on December 31, 2022:

Name	Number of Accelerated Option and Award Shares
Ronald Glibbery . . . . .	215,532
James Sullivan . . . . .	66,667

### Employment Agreements

In addition to the agreements containing the Change-in-Control provisions summarized above, we have entered into our standard form of employment, confidential information, invention assignment and arbitration agreement with each of the named executive officers.

We also have entered into agreements to indemnify our current and former directors and certain executive officers, in addition to the indemnification provided for in our certificate of incorporation and bylaws. These agreements, among other things, provide for indemnification of our directors and certain executive officers for many expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by any such person in any action or proceeding, including any action by or in the right of the Company, arising out of such person's services as a director or executive officer of the Company, any subsidiary of the Company or any other company or enterprise to which the person provided services at our request.

### Director Compensation

The following table summarizes the compensation we paid to our non-employee directors in 2022:

Name	Fee Compensation (\$)	Restricted Stock Awards (\$) <sup>(1)</sup>	Option Awards (\$) <sup>(2)</sup>	All Other Compensation	Total (\$)
Robert Y. Newell . . . . .	42,175	—	—	—	42,175
Ian McWalter. . . . .	34,793	—	—	—	34,793
Andreas Melder. . . . .	31,630	—	—	—	31,630

- (1) As of December 31, 2022, restricted stock unit awards held on December 31, 2022 consist of: awards granted to Messrs. Newell, McWalter and Melder on December 22, 2021 for 20,000 shares each.
- (2) As of December 31, 2022, Messrs. McWalter and Melder each held 19,724 outstanding options to purchase of shares of our common stock. Mr. Newell held 24,724 outstanding options to purchase of shares of our common stock.

#### *Director Fee Compensation*

The challenges our business has faced have made it challenging for us to attract new non-employee directors. Nasdaq and SEC regulations require that a majority of the directors on our board of directors and its committees be independent, non-employee directors, as defined by each entity. In December 2021, we amended our director

compensation structure and adopted our Outside Director Compensation Plan (the Director Plan). Under the Director Plan, we pay the following annual cash retainer fees, payable in quarterly installments, to our non-employee directors for their service on our board of directors and, as applicable, for service on committees of our board of directors:

- \$35,000 for service on the board of directors;
- \$8,000 for service as chairperson of the Audit Committee; and
- \$6,000 for service as chairperson of the Compensation Committee.

#### *Director Equity Compensation*

Under the Director Plan, upon initial appointment to our board of directors, each non-employee director will receive a stock option with a value of \$100,000, calculated by dividing the \$100,000 by the closing trading price of our common stock on the date of grant. The initial stock option will have an exercise price equal to the closing price of our common stock on the date of grant and will vest as to one-third of the shares on the first annual anniversary of the grant and the remaining shares quarterly over the subsequent two years, provided the non-employee director continues to serve on the board of directors. In the event of a merger, sale of substantially all of our assets or similar transaction, vesting of all director options would accelerate as to 100% of the unvested shares subject to the award.

Non-employee directors will also receive an annual equity award of restricted stock units of common stock equal to \$50,000 of value per non-employee director. The restricted stock unit award will be made upon initial appointment to our board of directors and then subsequently at the first scheduled meeting of the board of directors following our annual meeting of stockholders. The number of restricted stock units will be calculated by dividing \$50,000 by the closing trading price of our common stock on the date of the award. The restricted stock unit award will vest in full on the earlier to occur of the next annual meeting of stockholders or the one-year anniversary of the award. All equity awards granted under the Director Plan will be made from the 2019 Plan.

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

The following table sets forth certain information as of March 1, 2023 concerning the ownership of our common stock by:

- each stockholder known by us to be the beneficial owner of more than 5% of the outstanding shares of our common stock (currently our only class of voting securities);
- each of our directors;
- each of our executive officers; and
- all directors and executive officers as a group.

Beneficial ownership is determined in accordance with Rule 13d-3 of the Exchange Act and includes all shares over which the beneficial owner exercises voting or investment power. Shares that are issuable upon the exercise of options, warrants and other rights to acquire common stock that are presently exercisable or exercisable within 60 days of March 1, 2023 are reflected in a separate column in the table below. These shares are taken into account in the calculation of the total number of shares beneficially owned by a particular holder and the total number of shares outstanding for the purpose of calculating percentage ownership of the particular holder. We have relied on information supplied by our officers, directors and certain stockholders and on information contained in filings with the SEC. Except as otherwise indicated, and subject to community property laws where applicable, we believe, based on information provided by these persons, that the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. The percentage of beneficial ownership is based on 23,376,466 shares of our common stock and exchangeable shares outstanding as of March 1, 2023.

Unless otherwise stated, the business address of each of our directors and executive officers listed in the table is 2309 Bering Drive, San Jose, California 95131.

Name and Principal Position	Amount and Nature of Beneficial Ownership		Percent of Class
	Number of Shares Beneficially Owned (Excluding Outstanding Options) <sup>(1)</sup>	Number of Shares Issuable on Exercise of Outstanding Options or Convertible Securities <sup>(2)</sup>	
Entities affiliated with Roadmap Capital General Partner Ltd. . .	8,562,520 <sup>(3)</sup>	—	36.63%
Armistice Capital, LLC. . . . .	1,438,834 <sup>(4)</sup>	—	6.16%
<b>Directors and Officers:</b>			
Ronald Glibbery . . . . .	110,344	347,007	1.9%
Daniel Lewis . . . . .	61,677	80,000	*
Robert Y. Newell . . . . .	97,862	11,575	*
Ian McWalter. . . . .	39,880	6,575	*
Andreas Melder. . . . .	14,012	6,575	*
James Sullivan. . . . .	34,351	26,587	*
Bradley Lynch. . . . .	39,694	123,685	*
Alexander Tomkins . . . . .	28,093	137,328	*
All current directors and executive officers as a group (8 persons). . . . .	425,913	739,332	4.8%

\* Represents holdings of less than one percent.

- (1) Excludes shares subject to outstanding options, warrants, convertible securities or other rights to acquire common stock that are exercisable within 60 days of March 1, 2023.
- (2) Represents the number of shares subject to outstanding options, restricted stock units, convertible securities or other rights to acquire common stock that are exercisable within 60 days of March 1, 2023.
- (3) Based on information reported by Roadmap Capital General Partner Ltd. (“Roadmap GP”) on Schedule 13D filed with the SEC on December 27, 2021, Roadmap GP reported that it has shared dispositive power with respect to 8,562,520 shares, and shared voting power with respect to 8,562,520 shares. Roadmap GP is the general partner of Roadmap Innovation I, Roadmap Innovation II, Roadmap Peraso, Roadmap Peraso (U.S. and Offshore), Roadmap Peraso II, Roadmap Peraso II (U.S. and Offshore), Roadmap Peraso III and Roadmap Peraso III (U.S. and Offshore) (collectively, the “Roadmap Funds”), which own these shares. Roadmap Capital Inc. is the sole shareholder of Roadmap GP. Because of the relationship between Roadmap GP and each of the Roadmap Funds, Roadmap GP may be deemed to beneficially own securities beneficially owned by each of the Roadmap Funds. Because of the relationship between Roadmap Capital and Roadmap GP, Roadmap Capital may be deemed to beneficially own the securities beneficially owned by Roadmap GP. Roadmap GP listed its address as 130 Bloor Street West, Suite 603, Toronto, Ontario, Canada M5S 1N5.
- (4) Based on information reported by Armistice Capital, LLC on Schedule 13G filed with the SEC on February 14, 2023.



### *Securities Authorized for Issuance under Equity Compensation Plans*

The following table provides information as of December 31, 2022 regarding equity compensation plans approved by our security holders. As of December 31, 2022, we had no awards outstanding under equity compensation plans that have not been approved by our security holders.

<b>Plan Category</b>	<b>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</b>	<b>Weighted Average Exercise Price of Outstanding Options, Warrants and Rights</b>	<b>Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (excluding Securities reflected in Column (a))<sup>(1)</sup></b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>
Equity compensation plans approved by security holders . . . . .	2,556,063 <sup>(2)</sup>	\$ 3.38	1,551,074

(1) Consists of shares of common stock available for future issuance under the 2019 Plan.

(2) Consists of 61,787 shares of common stock subject to outstanding equity awards under the 2010 Plan, 1,195,954 shares of common stock subject to outstanding equity awards under the 2019 Plan and 1,298,322 of common stock subject to outstanding options assumed by us in connection with the business combination with Peraso Technologies Inc. that was completed in December 2021.

### **Item 13. Certain Relationships and Related Transactions and Director Independence**

#### **Related Party Transactions**

A family member of one of our executive officers serves as a consultant to us. During the year ended December 31, 2022 and 2021, we paid approximately \$162,000 and \$208,000, respectively, to the consultant. Additionally, a family member of one of our executive officers is an employee of the Company. During the year ended December 31, 2022, we paid approximately \$101,000 to the employed family member, which includes the aggregate grant date fair value, as determined pursuant to FASB ASC Topic 718, of an RSU awarded in April 2022. During the year ended December 31, 2021, we paid approximately \$94,000 to the employed family member.

#### **Director Independence**

Our board of directors has determined that each of the current directors, with the exception of Daniel Lewis and Ronald Glibbery, is “independent,” as defined by the listing rules of the NASDAQ Stock Market, or Nasdaq, and the rules and regulations of the SEC. Our board of directors has standing Audit and Compensation Committees, each of which is comprised solely of independent directors in accordance with the Nasdaq listing rules. No director qualifies as independent unless the board of directors affirmatively determines that he has no direct or indirect relationship with us that would impair his independence. We independently review the relationship of the Company to any entity employing a director or on whose board of directors he is serving currently.

#### Item 14. Principal Accountant Fees and Services

Weinberg & Co., P.A. (“Weinberg”) was our independent registered public accounting firm for the years ended December 31, 2022 and 2021.

The following table shows the fees billed (in thousands of dollars) to us by Weinberg for the financial statement audits and other services provided for fiscal 2022 and 2021.

	<b>2022</b>	<b>2021</b>
Audit Fees <sup>(1)</sup> .....	\$ 223	\$ 121
Audit-Related Fees <sup>(2)</sup> .....	13	13
Total <sup>(3)</sup> .....	<u>\$ 236</u>	<u>\$ 134</u>

- (1) Audit fees consisted of fees for professional services rendered for the audit of our annual consolidated financial statements, review of our quarterly financial statements and services normally provided in connection with statutory and regulatory filings.
- (2) Audit-related fees consisted of fees related to the issuance of SEC registration statements.
- (3) Weinberg did not provide any non-audit or other services other than those reported under “Audit Fees” and “Audit-Related Fees.”

The Audit Committee meets with our independent registered public accounting firm at least four times a year. At such times, the Audit Committee reviews both audit and non-audit services performed by the independent registered public accounting firm, as well as the fees charged for such services. The Audit Committee is responsible for pre-approving all auditing services and non-auditing services (other than non-audit services falling within the *de minimis* exception set forth in Section 10A(i)(1)(B) of the Exchange Act and non-audit services that independent auditors are prohibited from providing to us) in accordance with the following guidelines: (1) pre-approval policies and procedures must be detailed as to the particular services provided; (2) the Audit Committee must be informed about each service; and (3) the Audit Committee may delegate pre-approval authority to one or more of its members, who shall report to the full committee, but shall not delegate its pre-approval authority to management. Among other things, the Audit Committee examines the effect that performance of non-audit services may have upon the independence of the auditors.

## Part IV

### Item 15. Exhibits

#### (a)(1) Consolidated Financial Statements:

The following documents are filed as part of this Report:

Consolidated Financial Statements and Report of Independent Registered Public Accounting Firm, all of which are set forth on pages F-1 through F-33 of this Report.

#### (2) Financial Statement Schedules:

Financial statement schedules are omitted because they are not required, not applicable or because the required information is shown in the consolidated financial statements or notes thereto.

#### (3) Exhibits:

Required exhibits are incorporated by reference or are filed with this Report.

- 2.1<sup>(1)\*\*</sup> Arrangement Agreement with Peraso Technologies Inc.
- 2.2<sup>(2)</sup> First Amending Agreement dated October 21, 2021
- 3.1<sup>(3)</sup> Restated Certificate of Incorporation of the Company
- 3.1.1<sup>(4)</sup> Certificate of Amendment to Restated Certificate of Incorporation of the Company
- 3.1.2<sup>(5)</sup> Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Peraso Inc., filed with the Secretary of State of the State of Delaware on August 27, 2019
- 3.1.3<sup>(6)</sup> Certificate of Amendment to Articles of Incorporation (Name Change)
- 3.1.4<sup>(7)</sup> Certificate of Designation of Series A Special Voting Preferred Stock
- 3.2<sup>(8)</sup> Amended and Restated Bylaws of the Company
- 4.1<sup>(9)</sup> Specimen Common Stock Certificate
- 4.2<sup>(10)</sup> Form of Common Stock Purchase Warrant
- 4.3<sup>(11)</sup> Form of Securities Purchase Agreement
- 4.5<sup>(12)</sup> Form of Common Stock Purchase Warrant
- 4.6+ Description of the Registrant's Securities
- 4.7.1<sup>(13)\*</sup> Peraso Inc. 2010 Amended and Restated Equity Incentive Plan
- 4.7.2<sup>(14)\*</sup> Amended and Restated Peraso Inc. 2019 Stock Incentive Plan
- 4.8.1<sup>(15)</sup> Form of Agreement for Stock Option Grant pursuant to the Peraso Inc. Amended and Restated 2010 Equity Incentive Plan
- 4.8.2<sup>(16)</sup> Form of Notice of Grant of Stock Option Award and Agreement pursuant to the Peraso Inc. 2019 Stock Incentive Plan
- 4.9.1<sup>(17)</sup> Form of Notice of Grant of Restricted Stock Unit Award and Agreement under the Peraso Inc. Amended and Restated 2010 Equity Incentive Plan
- 4.9.2<sup>(18)</sup> Form of Notice of Grant of Restricted Stock Unit Award and Agreement under the Peraso Inc. 2019 Stock Incentive Plan
- 4.10<sup>(19)\*</sup> Amended Peraso Technologies Inc. 2009 Share Option Plan
- 4.11<sup>(20)</sup> Form of Pre-Funded Common Stock Purchase Warrant
- 4.12<sup>(21)</sup> Form of Common Stock Purchase Warrant
- 10.1<sup>(22)\*</sup> Employment offer letter agreement between the Company and James Sullivan dated December 21, 2007
- 10.2<sup>(23)\*</sup> Change-in-control Agreement between the Company and James Sullivan dated January 18, 2008
- 10.3<sup>(24)\*</sup> Form of Option Agreement for Stock Option Grant pursuant to 2010 Equity Incentive Plan
- 10.4<sup>(25)\*</sup> Form of Notice of Restricted Stock Unit Award and Agreement under the Peraso Inc. 2010 Amended and Restated Equity Incentive Plan

10.5 <sup>(26)*</sup>	Form of New Employee Inducement Grant Stock Option Agreement (revised February 2012)
10.6 <sup>(27)</sup>	Form of Indemnification Agreement used from June 2012 to present
10.7 <sup>(28)</sup>	Sublease Agreement with Cyren, Inc. dated October 3, 2017
10.8 <sup>(29)*</sup>	Executive Change-in-Control and Severance Policy
10.9 <sup>(30)*</sup>	Employment offer letter agreement between the Company and Daniel Lewis dated August 8, 2018
10.10 <sup>(31)</sup>	Securities Purchase Agreement
10.11 <sup>(32)</sup>	Securities Purchase Agreement
10.12 <sup>(33)</sup>	Sublease Addendum #2 to the Lease between Cyren Ltd. and Peraso Inc., dated September 30, 2020, by and between Peraso Inc., and Cyren Ltd.
10.13 <sup>(34)</sup>	Form of Lock-Up Agreement
10.14 <sup>(35)</sup>	Intercompany Services Agreement
10.15 <sup>(36)*</sup>	Employment Agreement (Ronald Glibbery)
10.17*+	Employment offer letter agreement between the Company and Mark Lunsford dated October 7, 2023
10.18*+	Employment Agreement (Brad Lynch)
10.19*+	Employment Agreement (Alexander Tomkins)
10.20 <sup>(37)*</sup>	Amendment to offer of employment between the Company and Daniel Lewis dated April 15, 2022
10.21 <sup>(38)*</sup>	Amendment to offer of employment between the Company and James Sullivan dated April 15, 2022
10.22 <sup>(39)*</sup>	Amendment to employment agreement between Peraso Technologies Inc. and Brad Lynch dated April 15, 2022
10.23 <sup>(40)</sup>	Technology License and Patent Assignment Agreement By and Between Intel Corporation and the Company dated August 5, 2022
10.24 <sup>(41)</sup>	Form of Securities Purchase Agreement
10.25 <sup>(42)</sup>	Form of Registration Rights Agreement
21.1+	List of Subsidiaries
23.1+	Consent of Independent Registered Public Accounting Firm-Weinberg & Co., P.A.
24.1	Power of Attorney (see signature page)
31.1+	Rule 13a-14 certification
31.2+	Rule 13a-14 certification
32+	Section 1350 certification
101.INS	Inline XBRL Instance 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 Labels Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

- 
- (1) Incorporated by reference to the same-numbered exhibit to Form 8-K, filed by the Company on September 15, 2021 (Commission File No. 000-32929).
- (2) Incorporated by reference to Exhibit 2.1 to Form 8-K, filed by the Company on October 22, 2021 (Commission File No. 000-32929)
- (3) Incorporated by reference to Exhibit 3.6 to Form 8-K filed by the Company on November 12, 2010 (Commission File No. 000-32929)
- (4) Incorporated by reference to Exhibit 3.1 to Form 8-K filed by the Company on February 14, 2017 (Commission File No. 000-32929).
- (5) Incorporated by reference to Exhibit 3.1 to Form 8-K filed by the Company on August 27, 2019 (Commission File No. 000-32929).
- (6) Incorporated by reference to Exhibit 3.1 to Form 8-K filed by the Company on December 20, 2021 (Commission File No. 000-32929).
- (7) Incorporated by reference to Exhibit 3.2 to Form 8-K filed by the Company on December 20, 2021 (Commission File No. 000-32929).

- (8) Incorporated by reference to Exhibit 3.1 to Form 8-K filed by the Company on November 23, 2021 (Commission File No. 000-32929).
- (9) Incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1, as amended, originally filed August 4, 2000, declared effective June 27, 2001 (Commission File No. 333-43122).
- (10) Incorporated by reference to Exhibit 4.1 to Form 8-K filed by the Company on June 30, 2017 (Commission File No. 000-32929).
- (11) Incorporated by reference to Exhibit 10.1 to Form 8-K filed by the Company on June 30, 2017 (Commission File No. 000-32929).
- (12) Incorporated by reference to Exhibit 4.6 to Form 8-K filed by the Company on October 3, 2018 (Commission File No. 000-32929).
- (13) Incorporated by reference to Exhibit 3.1 to Form 8-K filed by the Company on August 27, 2019 (Commission File No. 000-32929).
- (14) Incorporated by reference to Exhibit 4.2 to Form S-8 filed by the Company on January 7, 2022 (Commission File No. 333-262062).
- (15) Incorporated by reference to Exhibit 4.10 to the Company's Registration Statement on Form S-8, filed July 28, 2010 (Commission File No. 333-168358).
- (16) Incorporated by reference to Exhibit 4.10 to the Company's Current Report on Form S-8, filed on November 13, 2019 (Commission File No. 000-32929).
- (17) Incorporated by reference to Exhibit 10.23 to the Company's Form 10-Q filed on August 8, 2013 (Commission File No. 000-32929).
- (18) Incorporated by reference to Exhibit 4.10 to the Company's Current Report on Form S-8, filed November 13, 2019 (Commission File No. 000-32929).
- (19) Incorporated by reference to Exhibit 4.5 to the registration statement on Form S-8 filed by the Company on January 7, 2022 (Commission File No. 333-262062).
- (20) Incorporated by reference to Exhibit 4.1 to Form 8-K filed by the Company on November 30, 2022 (Commission File No. 000-32929).
- (21) Incorporated by reference to Exhibit 4.2 to Form 8-K filed by the Company on November 30, 2022 (Commission File No. 000-32929).
- (22) Incorporated by reference to Exhibit 10.26 to Form 10-K filed by the Company on March 17, 2008 (Commission File No. 000-32929).
- (23) Incorporated by reference to Exhibit 10.27 to Form 10-K filed by the Company on March 17, 2008 (Commission File No. 000-32929).
- (24) Incorporated by reference to Exhibit 4.10 to Form S-8 filed by the Company on July 28, 2010 (Commission File No. 333-168358).
- (25) Incorporated by reference to Exhibit 4.8 to Form S-8 filed by the Company on June 5, 2009 (Commission File No. 333-159753).
- (26) Incorporated by reference to Exhibit 10.19 to Form 10-K filed by the Company on March 15, 2012 (Commission File No. 000-32929).
- (27) Incorporated by reference to Exhibit 10.22 to Form 10-Q filed by the Company on August 9, 2012 (Commission File No. 000-32929).
- (28) Incorporated by reference to Exhibit 99.2 to Form 10-Q filed by the Company on November 14, 2017 (Commission File No. 000-32929).
- (29) Incorporated by reference to Exhibit 99 to Schedule TO filed by the Company on July 26, 2016 (Commission File No. 005-78033).
- (30) Incorporated by reference to Exhibit 10.28 to Form S-1/A filed by the Company on September 17, 2018 (Commission File No. 333-225193).
- (31) Incorporated by reference to Exhibit 10.26 to Form 8-K filed by the Company on October 3, 2018 (Commission File No. 000-32929).
- (32) Incorporated by reference to Exhibit 10.1 to Form 8-K filed by the Company on April 17, 2020 (Commission File No. 000-32929).
- (33) Incorporated by reference to Exhibit 10.21 to Form 10-K filed by the Company on March 18, 2021 (Commission File No. 000-32929).
- (34) Incorporated by reference to Exhibit 10.1 to Form 8-K filed by the Company on December 20, 2021 (Commission File No. 000-32929).
- (35) Incorporated by reference to Exhibit 10.2 to Form 8-K filed by the Company on December 20, 2021 (Commission File No. 000-32929).
- (36) Incorporated by reference to Exhibit 10.3 to Form 8-K filed by the Company on December 20, 2021 (Commission File No. 000-32929).

- (37) Incorporated by reference to Exhibit 10.1 to Form 10-Q filed by the Company on August 15, 2022 (Commission File No. 000-32929).
- (38) Incorporated by reference to Exhibit 10.2 to Form 10-Q filed by the Company on August 15, 2022 (Commission File No. 000-32929).
- (39) Incorporated by reference to Exhibit 10.3 to Form 10-Q filed by the Company on August 15, 2022 (Commission File No. 000-32929).
- (40) Incorporated by reference to Exhibit 10.1 to Form 10-Q filed by the Company on November 14, 2022 (Commission File No. 000-32929).
- (41) Incorporated by reference to Exhibit 10.1 to Form 8-K filed by the Company on November 30, 2022 (Commission File No. 000-32929).
- (42) Incorporated by reference to Exhibit 10.1 to Form 8-K filed by the Company on November 30, 2022 (Commission File No. 000-32929).
- + Filed herewith.
- \* Management contract, compensatory plan or arrangement.
- \*\* Certain schedules, exhibits and similar attachments have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish copies of such omitted materials supplementally upon request by the SEC.

**Item 16. Form 10-K Summary**

Not applicable.



## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, on the 29<sup>th</sup>, day of March, 2023.

PERASO INC.

By: /s/ Ronald Glibbery  
Ronald Glibbery  
*Chief Executive Officer*

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Ronald Glibbery and James Sullivan as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, 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 report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Ronald Glibbery</u> Ronald Glibbery	Chief Executive Officer and Director (principal executive officer)	March 29, 2023
<u>/s/ James Sullivan</u> James Sullivan	Chief Financial Officer (principal financial and accounting officer)	March 29, 2023
<u>/s/ Daniel Lewis</u> Daniel Lewis	Director	March 29, 2023
<u>/s/ Ian McWalter</u> Ian McWalter	Director	March 29, 2023
<u>/s/ Andreas Melder</u> Andreas Melder	Director	March 29, 2023
<u>/s/ Robert Y. Newell</u> Robert Y. Newell	Director	March 29, 2023

**PERASO INC.**  
**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

	<b>Page</b>
Report of Independent Registered Public Accounting Firm (PCAOB ID 572) . . . . .	F-2
Consolidated Balance Sheets . . . . .	F-4
Consolidated Statements of Operations and Comprehensive Loss. . . . .	F-5
Consolidated Statements of Stockholders' Equity . . . . .	F-6
Consolidated Statements of Cash Flows. . . . .	F-7
Notes to Consolidated Financial Statements. . . . .	F-8 – F-33

## **Report of Independent Registered Public Accounting Firm**

Board of Directors and Stockholders  
Peraso Inc.  
San Jose, California

### **Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated balance sheets of Peraso Inc. (the “Company”) and subsidiaries as of December 31, 2022 and 2021, the related consolidated statements of operations, stockholders’ equity (deficit), and cash flows for the years ended December 31, 2022 and 2021, 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 financial position of the Company and its subsidiaries as of December 31, 2022 and 2021, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

### **Going Concern**

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, during the year ended December 31, 2022, the Company incurred a net loss and utilized cash in operations. These conditions raise substantial doubt about the Company’s ability to continue as a going concern. Management’s plans to alleviate these conditions are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

### **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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit 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 that 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.

### **Critical Audit Matters**

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

#### Amortizable intangible assets impairment assessment

As described in Notes 1 and 2 to the consolidated financial statements, the Company’s amortizable definite-lived intangible assets consisting of acquired technology and customer relationships had a carrying value of \$6.3 million as of December 31, 2022. Management conducts an impairment assessment annually on December 31,

or more frequently if impairment indicators exist. An impairment exists when the carrying value of the long-lived group containing acquired technology and customer relationships exceeds its fair value. The Company's evaluation of the recoverability of acquired technology and customer relationships intangible assets first involves the comparison of undiscounted future cash flows expected to be generated by the acquired technology and customer lists over the remaining useful life of the assets to their respective carrying amounts. The Company's recoverability analysis requires management to make significant estimates and assumptions related to forecasted sales growth rates and cash flows over the remaining useful life of the assets. Based on the results of the impairment assessment, management determined that its amortizable definite-lived intangible assets were not impaired.

We identified the evaluation of acquired technology and customer relationships intangible assets for potential impairment as a critical audit matter because of the significant estimates and assumptions management makes related to future cash flows expected to be generated over the intangible assets' lives. Auditing the impairment evaluation required a high degree of auditor judgment and an increased extent of effort when performing audit procedures to evaluate the reasonableness of management's future cash flows over the remaining useful life of the long-lived asset group.

The primary procedures we performed to address this critical audit matter included: (i) obtained an understanding of management's processes related to its impairment assessment of intangibles, (ii) evaluated the reasonableness of management's forecasts of undiscounted future cash flows by comparing management's projections to the Company's historical results and evaluating the appropriateness of projected revenue growth, margin and cost rates (iii) tested the completeness and accuracy of underlying data used in the projections, and (iv) evaluated whether the estimated future cash flows over the remaining useful life were consistent with evidence obtained in other areas of the audit.

#### Goodwill Impairment Assessment

As described in Notes 1 and 2 to the consolidated financial statements, on December 17, 2021 the Company completed a reverse acquisition of Peraso Tech. The Company has accounted for the reverse acquisition using the acquisition method of accounting in accordance with Accounting Standards Codification (ASC) Topic 805, Business Combinations, with the Company as the accounting acquiree and Peraso Tech as the accounting acquirer. The acquisition method of accounting requires the assets acquired and liabilities assumed to be recorded at fair value as of the transaction date. The excess of the fair value of the purchase consideration over the estimated fair values of the net assets acquired was determined to be \$9.6 million and was recorded as goodwill.

Management tests its goodwill for impairment on December 31 or more frequently if circumstances indicate that the carrying value of a reporting unit may exceed its fair value. If the carrying amount of the Company, as a sole reporting unit, including goodwill, exceeds its fair value, an impairment loss is recognized in an amount equal to that excess up to the amount of the recorded goodwill. During the fourth quarter of 2021, the Company experienced a sustained decrease in its share price, and as of December 31, 2022, the Company's market capitalization was below the carrying value of the Company's net assets. Pursuant to current accounting guidance, management concluded that this was an impairment triggering event, and first evaluated its amortizable intangible assets, and then performed an impairment assessment of its goodwill. Based on the results of the impairment assessment, management determined that its goodwill was impaired and recognized an impairment charge of \$9.6 related to goodwill during the year ended December 31, 2021. Following the impairment, the Company had no remaining goodwill as of December 31, 2022.

We identified the evaluation of goodwill impairment as a critical audit matter because of the significant judgment by management when determining the fair value of the reporting unit. This required a high degree of auditor judgment and increased auditor effort in auditing such assumptions.

The primary procedures we performed to address this critical audit matter included: (i) obtained an understanding of management's process for determining the fair value of the reporting unit, (ii) we evaluated the allocation of the Company's estimated fair value to its reporting units and the comparison of the Company's estimated fair value to its market capitalization, and (iii) we recalculated the impairment recorded for goodwill of \$9.6 million based on the excess of the carrying values of goodwill over its estimated fair value as of December 31, 2022.

We have served as the Company's auditor since 2020.

/s/ Weinberg & Company

Los Angeles, California  
March 29, 2023

## PART I — FINANCIAL INFORMATION

### Item 1. Financial Statements

#### PERASO INC. CONSOLIDATED BALANCE SHEETS (In thousands, except par value)

	December 31,	
	2022	2021
<b>ASSETS</b>		
Current assets		
Cash and cash equivalents . . . . .	\$ 1,828	\$ 5,893
Short-term investments . . . . .	1,078	9,267
Accounts receivable, net . . . . .	3,244	2,436
Inventories . . . . .	5,348	3,824
Tax credits and receivables . . . . .	41	1,099
Deferred cost of net revenue . . . . .	600	—
Prepaid expenses and other . . . . .	574	1,159
Total current assets . . . . .	12,713	23,678
Long-term investments . . . . .	—	2,928
Property and equipment, net . . . . .	2,225	2,349
Right-of-use lease assets . . . . .	1,147	617
Intangible assets, net . . . . .	6,278	8,355
Goodwill . . . . .	—	9,946
Other . . . . .	123	78
Total assets . . . . .	\$ 22,486	\$ 47,951
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities		
Accounts payable . . . . .	\$ 1,844	\$ 1,937
Accrued expenses and other . . . . .	1,817	2,903
Deferred revenue . . . . .	332	375
Short-term lease liabilities . . . . .	687	379
Total current liabilities . . . . .	4,680	5,594
Long-term lease liabilities . . . . .	470	288
Warrant liability . . . . .	2,079	—
Total liabilities . . . . .	7,229	5,882
Commitments and contingencies (Note 5)		
Stockholders' equity		
Preferred stock, \$0.01 par value; 20,000 shares authorized; none issued and outstanding . . . . .	—	—
Series A, special voting preferred stock, \$0.01 par value; one share authorized; and one share issued and outstanding at December 31, 2022 and 2021 . . . . .	—	—
Common stock, \$0.001 par value; 120,000 shares authorized; 14,270 shares and 12,284 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively . . . . .	14	12
Exchangeable shares, no par value; unlimited shares authorized; 9,107 shares and 9,295 shares outstanding at December 31, 2022 and December 31, 2021, respectively . . . . .	—	—
Additional paid-in capital . . . . .	164,865	159,256
Accumulated other comprehensive loss . . . . .	(25)	—
Accumulated deficit . . . . .	(149,597)	(117,199)
Total stockholders' equity . . . . .	15,257	42,069
Total liabilities and stockholders' equity . . . . .	\$ 22,486	\$ 47,951

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

**PERASO INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS**  
(In thousands, except per share data)

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Net revenue		
Product .....	\$ 14,199	\$ 4,906
Royalty and other .....	669	773
Total net revenue .....	14,868	5,679
Cost of net revenue .....	8,915	3,270
Gross profit .....	5,953	2,409
Operating expenses		
Research and development .....	19,768	11,471
Selling, general and administrative .....	11,108	7,016
Gain on license and asset sale .....	(2,557)	—
Impairment of goodwill .....	9,946	—
Total operating expenses .....	38,265	18,487
Loss from operations .....	(32,312)	(16,078)
Interest expense .....	(16)	(2,979)
Change in fair value of warrant liability .....	1,595	8,102
Financing cost – warrant issuance .....	(1,576)	—
Other income (expense), net .....	(89)	44
Net loss .....	\$ (32,398)	\$ (10,911)
Other comprehensive loss, net of tax:		
Net unrealized loss on available-for-sale-securities .....	(25)	—
Comprehensive loss .....	\$ (32,423)	\$ (10,911)
Net loss per share		
Basic and diluted .....	\$ (1.61)	\$ (1.86)
Shares used in computing net loss per share		
Basic and diluted .....	20,100	5,869

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



**PERASO INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)**  
(In thousands)

	Series A Special Voting Preferred Stock		Common Stock		Exchangeable Shares		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2020. . .	—	—	5,241	5	—	—	102,362	—	(106,288)	(3,921)
Exchangeable shares. . . . .	—	—	(9,295)	(9)	9,295	—	9	—	—	—
Issuance of common stock under stock plans, net of taxes paid related to net share settlements of restricted stock units . . . . .	—	—	30	—	—	—	37	—	—	37
Settlement of warrants to common stock. . . . .	—	—	287	—	—	—	1,208	—	—	1,208
Conversion of convertible debentures to common stock . . . .	—	—	7,305	7	—	—	13,538	—	—	13,545
Effect of business combination. . . .	—	—	8,716	9	—	—	37,618	—	—	37,627
Stock-based compensation . . . . .	—	—	—	—	—	—	4,484	—	—	4,484
Net loss . . . . .	—	—	—	—	—	—	—	—	(10,911)	(10,911)
Balance as of December 31, 2021. . .	—	—	12,284	12	9,295	—	159,256	—	(117,199)	42,069
Exchange of exchangeable shares. . .	—	—	188	—	(188)	—	—	—	—	—
Issuance of common stock under stock plans, net of taxes paid related to net share settlements of restricted stock units . . . . .	—	—	498	1	—	—	(120)	—	—	(119)
Sale of common stock and warrants . . . . .	—	—	1,300	1	—	—	2,098	—	—	2,099
Initial recognition of fair value of warrant liability . . . . .	—	—	—	—	—	—	(2,099)	—	—	(2,099)
Unrealized loss on available-for-sale securities . . . . .	—	—	—	—	—	—	—	(25)	—	(25)
Stock-based compensation . . . . .	—	—	—	—	—	—	5,730	—	—	5,730
Net loss . . . . .	—	—	—	—	—	—	—	—	(32,398)	(32,398)
Balance as of December 31, 2022. . .	—	\$ —	14,270	\$ 14	9,107	\$ —	\$ 164,865	\$ (25)	\$ (149,597)	\$ 15,257

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

**PERASO INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In thousands)

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
<b>Cash flows from operating activities:</b>		
Net loss . . . . .	\$ (32,398)	\$ (10,911)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization . . . . .	3,057	1,116
Stock-based compensation . . . . .	5,730	4,484
Change in fair value of warrant liability . . . . .	(1,595)	(8,102)
Financing costs – warrant issuances . . . . .	1,576	—
Impairment of goodwill . . . . .	9,946	—
Accrued interest on debt obligation . . . . .	9	721
Interest portion of financing lease repayment . . . . .	(16)	—
Amortization of debt discount . . . . .	—	2,091
Other . . . . .	89	27
Changes in assets and liabilities		
Accounts receivable . . . . .	(808)	(848)
Inventories . . . . .	(1,525)	(1,418)
Prepaid expenses and other assets . . . . .	(59)	560
Tax credits and receivables . . . . .	1,160	(484)
Accounts payable . . . . .	(94)	804
Right-of-use assets . . . . .	578	252
Lease liabilities – operating . . . . .	(542)	(236)
Deferred revenue and other liabilities . . . . .	(1,128)	(72)
Net cash used in operating activities . . . . .	<u>(16,020)</u>	<u>(12,016)</u>
<b>Cash flows from investing activities:</b>		
Purchases of property and equipment . . . . .	(988)	(71)
Purchases of intangible assets . . . . .	(21)	(165)
Proceeds from maturities of marketable securities . . . . .	11,534	400
Purchases of marketable securities . . . . .	(488)	—
Cash acquired in business combination . . . . .	—	6,464
Net cash provided by investing activities . . . . .	<u>10,037</u>	<u>6,628</u>
<b>Cash flows from financing activities:</b>		
Proceeds from sale of common stock, net . . . . .	2,099	—
Repayment of financing lease . . . . .	(61)	—
Repayment of loans . . . . .	—	(785)
Proceeds from exercise of stock options . . . . .	—	37
Net proceeds from loan facility . . . . .	—	1,262
Net proceeds from convertible debentures . . . . .	—	9,055
Taxes paid to net share settle equity awards . . . . .	(120)	—
Net cash provided by financing activities . . . . .	<u>1,918</u>	<u>9,569</u>
Net increase (decrease) in cash and cash equivalents . . . . .	<u>(4,065)</u>	<u>4,181</u>
Cash and cash equivalents at beginning of year . . . . .	5,893	1,712
Cash and cash equivalents at end of year . . . . .	<u>\$ 1,828</u>	<u>\$ 5,893</u>
<b>Supplemental disclosure:</b>		
Noncash investing and financing activities:		
Initial recognition of warrant liability . . . . .	\$ 3,673	\$ —
Recognition of right-of-use assets and lease liabilities . . . . .	\$ 1,003	\$ —
Unrealized loss on available-for-sale securities . . . . .	\$ 26	\$ —
Fair value of new warrant liability issued recognized as debt discount . . . . .	\$ —	\$ 2,604
Settlement of loan facility against tax receivables . . . . .	\$ —	\$ 1,097
Effect of business combination . . . . .	\$ —	\$ 37,627
Settlement of warrants to common stock . . . . .	\$ —	\$ 1,208
Conversion of convertible debentures into common stock . . . . .	\$ —	\$ 13,545

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

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies**

Peraso Inc., formerly known as MoSys, Inc. (the Company), was incorporated in California in 1991 and reincorporated in 2000 in Delaware. The Company is a fabless semiconductor company specializing in the development of millimeter wave (mmWave), which is generally described as the frequency band from 24 Gigahertz (GHz) to 300GHz, wireless technology. The Company derives revenue from selling its semiconductor devices and modules and performance of non-recurring engineering services. The Company also manufactures and sells high-performance memory semiconductor devices for a wide range of markets and receives royalties from licensees of its memory technology.

On September 14, 2021, the Company and its subsidiaries, 2864552 Ontario Inc. (Calco) and 2864555 Ontario Inc. (Canco), entered into an Arrangement Agreement (the Arrangement Agreement) with Peraso Technologies Inc. (Peraso Tech), a corporation existing under the laws of the province of Ontario, to acquire all of the issued and outstanding common shares of Peraso Tech (the Peraso Shares), including those Peraso Shares to be issued in connection with the conversion or exchange of secured convertible debentures and common share purchase warrants of Peraso Tech, as applicable, by way of a statutory plan of arrangement (the Arrangement) under the Business Corporations Act (Ontario). On December 17, 2021, following the satisfaction of the closing conditions set forth in the Arrangement Agreement, the Arrangement was completed and, the Company changed its name to “Peraso Inc.” and began trading on the Nasdaq Stock Market (the Nasdaq) under the symbol “PRSO.”

For accounting purposes, Peraso Tech, the legal subsidiary, was treated as the accounting acquirer and the Company, the legal parent, was treated as the accounting acquiree. The transaction was accounted for as a reverse acquisition in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 805, *Business Combinations (ASC 805)*. Accordingly, these consolidated financial statements are a continuation of Peraso Tech’s consolidated financial statements prior to December 17, 2021 and exclude the statements of operations and comprehensive loss, statement of stockholders’ equity and statements of cash flows of the Company prior to December 17, 2021. See Note 2 for additional disclosure.

***Liquidity and Going Concern***

The Company incurred net losses of approximately \$32.4 million and \$10.9 million for the years ended December 31, 2022 and December 31, 2021, respectively, and had an accumulated deficit of approximately \$149.6 million as of December 31, 2022. These and prior year losses have resulted in significant negative cash flows and have required the Company to raise substantial amounts of additional capital. To date, the Company has primarily financed its operations through multiple offerings of common stock and issuance of convertible notes and loans to investors and affiliates.

The Company expects to continue to incur operating losses for the foreseeable future as it secures additional customers and continues to invest in the commercialization of its products. The Company will need to increase revenues substantially beyond levels that it has attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time. As a result of the Company’s expected operating losses and cash burn for the foreseeable future, as well as recurring losses from operations, if the Company is unable to raise sufficient capital through additional debt or equity arrangements, there will be uncertainty regarding the Company’s ability to maintain liquidity sufficient to operate its business effectively, which raises substantial doubt as to the Company’s ability to continue as a going concern within one year from the date of issuance of these consolidated financial statements. These consolidated financial statements do not include any adjustments that might result from this uncertainty. There can be no assurance that such additional capital, whether in the form of debt or equity financing, will be sufficient or available and, if available, that such capital will be offered on terms and conditions acceptable to the Company. The Company’s primary focus is producing and selling its products. If the Company is unsuccessful in these efforts, it will need to implement additional cost reduction strategies, which could further affect its near- and long-term business plan. These efforts may include, but are not limited to, reducing headcount and curtailing business activities.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

***Basis of Presentation***

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation. The Company's fiscal year ends on December 31 of each calendar year. Certain prior year amounts have been reclassified for consistency with the current period presentation. These reclassifications had no effect on the reported results of operations or cash flows.

***Risks and Uncertainties***

The Company is subject to risks from, among other things, competition associated with the industry in general, other risks associated with financing, liquidity requirements, rapidly changing customer requirements, limited operating history and the volatility of public markets.

***COVID-19***

The global outbreak of the coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization and a national emergency by the U.S. government in March 2020. This has negatively affected the U.S. and global economy, disrupted global supply chains, significantly restricted travel and transportation, resulted in mandated closures and orders to "shelter-in-place" and created significant disruption of the financial markets. The full extent of the COVID-19 impact on the Company's operational and financial performance will depend on future developments, including the duration and spread of the pandemic and related actions taken by U.S. and foreign government agencies to prevent disease spread, all of which are uncertain, out of the Company's control, and cannot be predicted.

***Use of Estimates***

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses recognized during the reported period. Material estimates may include assumptions made in determining reserves for uncollectible receivables, inventory write-downs, impairment of long-term assets, purchase price allocations, valuation allowance on deferred tax assets, accruals for potential liabilities and assumptions made in valuing equity instruments. Actual results could differ from those estimates.

***Cash Equivalents and Investments***

The Company has invested its excess cash in money market accounts, certificates of deposit, corporate debt, government-sponsored enterprise bonds and municipal bonds and considers all highly liquid debt instruments purchased with an original maturity of three months or less to be cash equivalents. Investments with original maturities greater than three months and remaining maturities less than one year are classified as short-term investments. Investments with remaining maturities greater than one year are classified as long-term investments. Management generally determines the appropriate classification of securities at the time of purchase. All securities are classified as available-for-sale. The Company's available-for-sale short-term and long-term investments are carried at fair value, with the unrealized holding gains and losses reported in accumulated other comprehensive income (loss). Realized gains and losses and declines in the value judged to be other-than-temporary are included in the other income, net line item in the consolidated statements of operations. The cost of securities sold is based on the specific identification method.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

***Fair Value Measurements***

The Company measures the fair value of financial instruments using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

Level 1 — Inputs used to measure fair value are unadjusted quoted prices that are available in active markets for the identical assets or liabilities as of the reporting date.

Level 2 — Pricing is provided by third party sources of market information obtained through the Company's investment advisors, rather than models. The Company does not adjust for, or apply, any additional assumptions or estimates to the pricing information it receives from advisors. The Company's Level 2 securities include cash equivalents and available-for-sale securities, which consisted primarily of certificates of deposit, corporate debt, and government agency and municipal debt securities from issuers with high-quality credit ratings. The Company's investment advisors obtain pricing data from independent sources, such as Standard & Poor's, Bloomberg and Interactive Data Corporation, and rely on comparable pricing of other securities because the Level 2 securities are not actively traded and have fewer observable transactions. The Company considers this the most reliable information available for the valuation of the securities.

Level 3 — Unobservable inputs that are supported by little or no market activity and reflect the use of significant management judgment are used to measure fair value. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions. The determination of fair value for Level 3 investments and other financial instruments involves the most management judgment and subjectivity.

The carrying amounts of financial assets and liabilities, such as cash and cash equivalents, accounts receivable, accounts payable, notes payable and other payables, approximate their fair values because of the short maturity of these instruments. The carrying values of lease obligations and long-term financing obligations approximate their fair values because interest rates on these obligations are based on prevailing market interest rates. The Company measures the fair value of its warrant liabilities using Level 3 inputs.

***Derivatives and Liability-Classified Instruments***

The Company accounts for common stock warrants as either equity-classified or liability-classified instruments based on an assessment of the specific terms of the warrants and the guidance provided by the Financial Accounting Standards Board (FASB) in ASC 480, *Distinguishing Liabilities from Equity (ASC 480)* and ASC 815, *Derivatives and Hedging (ASC 815)*. The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, meet the definition of a liability pursuant to ASC 480, and meet all of the requirements for equity classification under ASC 815, including whether the warrants are indexed to the Company's own stock and whether the holders of the warrants could potentially require net cash settlement in a circumstance outside of the Company's control, among other conditions for equity classification. This assessment, which requires the use of professional judgment, is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

***Allowance for Doubtful Accounts***

The Company establishes an allowance for doubtful accounts to ensure that its trade receivables balances are not overstated due to uncollectibility. The Company performs ongoing customer credit evaluations within the context of the industry in which it operates and generally does not require collateral from its customers. A specific allowance of up to 100% of the invoice value is provided for any problematic customer balances. Delinquent account balances are written off after management has determined that the likelihood of collection is remote. The

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

Company grants credit only to customers deemed creditworthy in the judgment of management. The allowance for doubtful accounts receivable was approximately \$183,000 and \$61,000 as of December 31, 2022 and December 31, 2021, respectively.

***Inventories***

The Company values its inventories at the lower of cost, which approximates actual cost on a first-in, first-out basis, or net realizable value. Costs of inventories primarily consisted of material and third party assembly costs. The Company records inventory reserves for estimated obsolescence or unmarketable inventories based upon assumptions about future demand and market conditions. Once a reserve is established, it is maintained until the product to which it relates is sold or otherwise disposed of. If actual market conditions are less favorable than those expected by management, additional adjustment to inventory valuation may be required. Charges for obsolete and slow-moving inventories are recorded based upon an analysis of specific identification of obsolete inventory items and quantification of slow moving inventory items. The Company recorded write-downs of inventory of approximately \$420,000 during the year ended December 31, 2022. The Company recorded no inventory write-downs for the year ended December 31, 2021.

***Tax Credits and Receivables***

The Company is registered for the Canadian federal and provincial goods and services taxes. As such, the Company is obligated to collect from third parties and is entitled to claim sales taxes paid on its expenses and capital expenditures incurred in Canada.

The Company participates in the Canadian government's Scientific Research and Experimental Development (SRED) Program, which uses tax incentives to encourage Canadian businesses to conduct research and development (R&D) in Canada. As a part of the program, the Company may be entitled to a receivable in the form of tax credits or incentives. The Company records refundable tax credits as a reduction of expense and receivable when the Company can reasonably estimate the amounts and it is more likely than not, the credit will be received.

A government refund or subsidy that is compensation for expenses or losses already incurred, or for which there are no future related costs, is recognized in the statement of operations in the period in which it becomes receivable.

On December 17, 2021, Peraso Tech ceased to be a Canadian Controlled Private Corporation, as defined by the government of Canada, and the Company was no longer eligible for the expenditure refund program. However, it is eligible for a tax credit of 15% on qualified SRED expenditures. Unused SRED tax credits can be carried back three years or forward for 20 years.

***Property and Equipment***

Property and equipment are originally recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally three to six years. Depreciation is recorded in cost of sales and operating expenses in the consolidated statements of operations and comprehensive loss. Leasehold improvements and assets acquired through capital leases are amortized over the shorter of their estimated useful life or the lease term, and related amortization is recorded in operating expenses in the consolidated statements of operations.

***Intangible and Long-lived Assets***

Intangible assets are recorded at cost and amortized on a straight-line method over their estimated useful lives of three to ten years. Amortization of developed technology and other intangibles directly related to the Company's products is included in cost of net revenue, while amortization of customer relationships and other intangibles not associated with the Company's products is included in selling, general and administrative expenses in the consolidated statements of operations and comprehensive loss.



**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

The Company regularly reviews the carrying value and estimated lives of its long-lived assets and finite-lived intangible assets to determine whether indicators of impairment may exist which warrant adjustments to carrying values or estimated useful lives. The determinants used for this evaluation include management's estimate of the asset's ability to generate positive income from operations and positive cash flow in future periods as well as the strategic significance of the assets to the Company's business objective. Should an impairment exist, the impairment loss would be measured based on the excess of the carrying amount of the long-lived asset group over the asset's fair value.

***Purchased Intangible Assets***

Intangible assets acquired in business combinations are accounted for based on the fair value of assets purchased and are amortized over the period in which economic benefit is estimated to be received. Intangible assets subject to amortization, including those acquired in business combinations were as follows (amounts in thousands):

	<b>December 31, 2022</b>		
	<b>Gross Carrying Amount</b>	<b>Accumulated Amortization</b>	<b>Net Carrying Amount</b>
Developed technology . . . . .	\$ 5,726	\$ (1,491)	\$ 4,235
Customer relationships . . . . .	2,556	(666)	1,890
Other . . . . .	186	(33)	153
Total . . . . .	<u>\$ 8,468</u>	<u>\$ (2,190)</u>	<u>\$ 6,278</u>

  

	<b>December 31, 2021</b>		
	<b>Gross Carrying Amount</b>	<b>Accumulated Amortization</b>	<b>Net Carrying Amount</b>
Developed technology . . . . .	\$ 5,726	\$ (60)	\$ 5,666
Customer relationships . . . . .	2,556	(27)	2,529
Other . . . . .	165	(5)	160
Total . . . . .	<u>\$ 8,447</u>	<u>\$ (92)</u>	<u>\$ 8,355</u>

Developed technology primarily consisted of MoSys' products that have reached technological feasibility and primarily relate to its memory semiconductor products and technology. The value of the developed technology was determined by discounting estimated net future cash flows of these products. The Company is amortizing the developed technology on a straight-line basis over four years. Amortization related to developed technology of approximately \$1,431,000 and \$60,000 for the years ended December 31, 2022 and 2021, respectively, has been included in cost of net revenue in the consolidated statements of operations and comprehensive loss.

Customer relationships relate to the Company's ability to sell existing and future versions of products to MoSys' customers existing at the time of the arrangement. The fair value of the customer relationships was determined by discounting estimated net future cash flows from the customer relationships. The Company is amortizing customer relationships on a straight-line basis over an estimated life of four years. Amortization related to customer relationships of approximately \$639,000 and \$27,000 for the years ended December 31, 2022 and 2021, respectively, has been included in selling, general and administrative expenses in the consolidated statements of operations and comprehensive loss.

Other amortization expense was approximately \$28,000 and \$5,000 for the years ended December 31, 2022 and 2021, respectively.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

As of December 31, 2022, estimated future amortization expense related to intangible assets was (in thousands):

<b>Year ending December 31,</b>	
2023. ....	\$ 2,099
2024. ....	2,099
2025. ....	2,011
2026. ....	28
2027. ....	10
Thereafter . . . . .	31
	<u>\$ 6,278</u>

***Business Combinations***

The Company allocates the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill to reporting units based on the expected benefit from the business combination. Allocation of purchase consideration to identifiable assets and liabilities affects the amortization expense, as acquired finite-lived intangible assets are amortized over the useful life, whereas any indefinite-lived intangible assets, including goodwill, are not amortized. During the measurement period, which is not to exceed one year from the acquisition date, the Company records adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings. Acquisition-related expenses are recognized separately from business combinations and are expensed as incurred.

***Goodwill***

The Company determines the amount of a potential goodwill impairment by comparing the fair value of the reporting unit with its carrying amount. To the extent the carrying value of a reporting unit exceeds its fair value, a goodwill impairment charge is recognized.

The Company has determined that it has a single reporting unit for purposes of performing its goodwill impairment test. As the Company uses the market approach to determine the step one fair value of the reporting unit, the price of its common stock is an important component of the fair value calculation. If the Company's stock price experiences significant price and volume fluctuations, this will impact the fair value of the reporting unit, which can lead to potential impairment in future periods. The Company reviews goodwill for impairment on an annual basis or whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. The Company first assesses qualitative factors to determine whether it is more-likely-than-not that the fair value of the reporting unit is less than the carrying amount as a basis for determining whether it is necessary to perform an impairment test. If the qualitative assessment warrants further analysis, the Company compares the fair value of the reporting unit to its carrying value. The fair value of the reporting unit is determined using the market approach. If the fair value of the reporting unit exceeds the carrying value of net assets of the reporting unit, goodwill is not impaired. If the carrying value of the reporting unit's goodwill exceeds its fair value, then the Company must record an impairment charge equal to the difference.

During the three months ended December 31, 2022, the Company concluded a triggering event had occurred due to the sustained decrease in the price per share of its common stock and related reduced market capitalization. The Company performed a test for goodwill impairment, and, due to the decrease in the price per share of its common stock, the test results indicated the goodwill carrying value was greater than its implied fair value. As a result of the impairment test, the Company recorded a non-cash impairment charge totaling \$9.9 million, and the Company's goodwill balance was reduced to zero as of December 31, 2022.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

***Leases***

ASC 842, *Leases* (ASC 842), requires an entity to recognize a right-of-use asset and a lease liability for all leases with terms longer than 12 months. The Company adopted ASC 842 utilizing the modified retrospective transition method. The Company elected the practical expedient afforded in ASC 842 in which the Company did not reassess whether any contracts that existed prior to adoption have or contain leases or the classification of its existing leases.

***Revenue Recognition***

The Company recognizes revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers*, and its amendments (ASC 606). As described below, the analysis of contracts under ASC 606 supports the recognition of revenue at a point in time, resulting in revenue recognition timing that is materially consistent with the Company's historical practice of recognizing product revenue when title and risk of loss pass to the customer.

The Company generates revenue primarily from sales of integrated circuits and module products, performance of engineering services and licensing of its intellectual property. Revenues are recognized when control is transferred to customers in amounts that reflect the consideration the Company expects to be entitled to receive in exchange for those goods. Revenue recognition is evaluated through the following five steps: (i) identification of the contract, or contracts, with a customer; (ii) identification of the performance obligations in the contract; (iii) determination of the transaction price; (iv) allocation of the transaction price to the performance obligations in the contract; and (v) recognition of revenue when or as a performance obligation is satisfied.

***Product revenue***

Revenue is recognized when performance obligations under the terms of a contract with a customer are satisfied. The majority of the Company's contracts have a single performance obligation to transfer products. Accordingly, the Company recognizes revenue when title and risk of loss have been transferred to the customer, generally at the time of shipment of products. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products and is generally based upon a negotiated, formula, list or fixed price. The Company sells its products both directly to customers and through distributors generally under agreements with payment terms typically 60 days or less.

The Company may record an estimated allowance, at the time of shipment, for future returns and other charges against revenue consistent with the terms of sale.

***Royalty and other***

The Company's licensing contracts typically provide for royalties based on the licensee's use of the Company's memory technology in its currently shipping commercial products. The Company estimates its royalty revenue in the calendar quarter in which the licensee uses the licensed technology. Payments are received in the subsequent quarter. The Company also generates revenue from licensing its technology. The Company recognizes license fees as revenue at the point of time when the control of the license has been transferred and the Company has no continuing performance obligations to the customer.

***Engineering services revenue***

Engineering and development contracts with customers generally contain a single performance obligation that is delivered over time. Revenue is recognized using an output method that is consistent with the satisfaction of the performance obligation as a measure of progress.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

*Deferred cost of net revenue*

During the year ended December 31, 2022, the Company had \$1.1 million of product shipments for which the revenue recognition criteria under ASC 606 had not been met. Accordingly, the Company deferred the cost of net revenue associated with these shipments, and the amount deferred has been presented as deferred cost of net revenue in the consolidated balance sheets.

*Contract liabilities — deferred revenue*

The Company's contract liabilities consist of advance customer payments and deferred revenue. The Company classifies advance customer payments and deferred revenue as current or non-current based on the timing of when the Company expects to recognize revenue. As of December 31, 2022 and December 31, 2021, contract liabilities were in a current position and included in deferred revenue.

During the year ended December 31, 2022, the Company recognized approximately \$243,000 of revenue that had been included in deferred revenue as of December 31, 2021.

See Note 7 for disaggregation of revenue by geography.

The Company does not have significant financing components, as payments from customers are typically due within 60 days of invoicing, and the Company has elected the practical expedient to not value financing components that are less than one year. Shipping and handling costs are generally incurred by the customer, and, therefore, are not recorded as revenue.

***Cost of Net Revenue***

Cost of net revenue consists primarily of direct and indirect costs of product sales, including amortization of intangible assets and depreciation of production-related fixed assets.

***Advertising Costs***

Advertising costs are expensed as incurred. Advertising costs were not significant for the years ended December 31, 2022 and 2021.

***Government Subsidies***

A grant or subsidy that is compensation for expenses or losses already incurred, or for which there are no future related costs, is recognized in the statement of operations in the period in which it becomes receivable.

Starting in 2020, certain Canadian businesses, which experienced a drop in revenue during the COVID-19 pandemic, became eligible for rent and wage subsidies from the Canadian government. The Company's subsidiary, Peraso Tech, was eligible for and received the Covid-program subsidies on a monthly basis beginning in the fourth quarter of 2020 and ending in the fourth quarter of 2021.

During the year ended December 31, 2021, the Company recognized payroll subsidies of \$1,120,475 as a reduction in the associated wage costs and rent subsidies of \$199,235 as a reduction of operating expenses in the consolidated statement of operations.

***Research and Development***

Engineering costs are recorded as research and development expense in the period incurred.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

***Stock-Based Compensation***

The Company periodically issues stock options and restricted stock awards to employees and non-employees. The Company accounts for such grants based on ASC No. 718, whereby the value of the award is measured on the date of grant and recognized as compensation expense on a straight-line basis over the vesting period. The fair value of the Company's stock options is estimated using the Black-Scholes-Merton Option Pricing (Black Scholes) model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the options, and future dividends. Compensation expense is recorded based upon the value derived from the Black Scholes model. The assumptions used in the Black Scholes model could materially affect compensation expense recorded in future periods.

***Foreign Currency Transactions***

The functional currency of the Company is the U.S dollar. All foreign currency transactions are initially measured and recorded in an entity's functional currency using the exchange rate on the date of the transaction. All monetary assets and liabilities are remeasured at the end of each reporting period using the exchange rate at that date. All non-monetary assets and related expense, depreciation or amortization are not subsequently remeasured and are measured using the historical exchange rate. An average exchange rate may be used to recognize income and expense items earned or incurred evenly over a period. Foreign exchange gains and losses resulting from the settlement of such transactions are recognized in the statement of operations, except for the gains and losses arising from the conversion of the carrying amount of the foreign currency denominated convertible preferred shares into the functional currency that are presented as adjustment to the net loss to arrive at net loss attributable to common stockholders.

***Per-Share Amounts***

Basic net loss per share is computed by dividing net loss for the period by the weighted-average number of exchangeable shares and shares of common stock outstanding during the period. Diluted net loss per share gives effect to all potentially dilutive exchangeable and common shares outstanding during the period. Potentially dilutive common shares consist of incremental exchangeable shares and shares of common stock issuable upon the achievement of escrow terms, exercise of stock options, vesting of stock awards and exercise of warrants.

The following table sets forth securities outstanding that were excluded from the computation of diluted net loss per share as their inclusion would be anti-dilutive (in thousands):

	<b>December 31,</b>	
	<b>2022</b>	<b>2021</b>
Escrow Shares – exchangeable shares . . . . .	1,313	1,313
Escrow Shares – common stock . . . . .	502	502
Options to purchase common stock . . . . .	1,499	1,558
Unvested restricted common stock units. . . . .	1,057	88
Common stock warrants . . . . .	4,959	134
Total . . . . .	9,330	3,595

***Income Taxes***

The Company determines deferred tax assets and liabilities based upon the differences between the financial statement and tax bases of the Company's assets and liabilities using tax rates in effect for the year in which the Company expects the differences to affect taxable income. A valuation allowance is established for any deferred tax assets for which it is more likely than not that all or a portion of the deferred tax assets will not be realized.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. The Company and Summary of Significant Accounting Policies (cont.)**

The Company files U.S. federal and state and foreign income tax returns in jurisdictions with varying statutes of limitations. The 2015 through 2020 tax years generally remain subject to examination by U.S. federal and state tax authorities, and the 2011 through 2020 tax years generally remain subject to examination by foreign tax authorities.

At December 31, 2022, the Company did not have any material unrecognized tax benefits nor expect its unrecognized tax benefits to change significantly over the next 12 months. The Company recognizes interest related to unrecognized tax benefits as income tax expense and penalties related to unrecognized tax benefits as other income and expense. During the years ended December 31, 2022 and 2021, the Company did not recognize any interest or penalties related to unrecognized tax benefits.

***Recently Issued Accounting Pronouncements***

In June 2016, the FASB issued Accounting Standards Update (ASU) No. 2016-13, *Financial Instruments — Credit Losses*. This ASU added a new impairment model (known as the current expected credit loss (CECL) model) that is based on expected losses rather than incurred losses. Under the new guidance, an entity recognizes an allowance for its estimate of expected credit losses and applies to most debt instruments, trade receivables, lease receivables, financial guarantee contracts, and other loan commitments. The CECL model does not have a minimum threshold for recognition of impairment losses and entities will need to measure expected credit losses on assets that have a low risk of loss. This update is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years for smaller reporting companies. The Company does not expect that the adoption of ASU No. 2016-13 will have a significant impact on the Company's consolidated financial statements.

In May 2021, the FASB issued ASU No. 2021-04, *Earnings Per Share (Topic 260), Debt — Modifications and Extinguishments (Subtopic 470-50), Compensation — Stock Compensation (Topic 718), and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40): Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options (ASU 2021-04)*. ASU 2021-04 provides guidance as to how an issuer should account for a modification of the terms or conditions or an exchange of a freestanding equity-classified written call option (i.e., a warrant) that remains classified after modification or exchange as an exchange of the original instrument for a new instrument. An issuer should measure the effect of a modification or exchange as the difference between the fair value of the modified or exchanged warrant and the fair value of that warrant immediately before modification or exchange and then apply a recognition model that comprises four categories of transactions and the corresponding accounting treatment for each category (equity issuance, debt origination, debt modification, and modifications unrelated to equity issuance and debt origination or modification). ASU 2021-04 is effective for all entities for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. An entity should apply the guidance provided in ASU 2021-04 prospectively to modifications or exchanges occurring on or after the effective date. The Company adopted ASU 2021-04 effective January 1, 2022. The adoption of ASU 2021-04 did not have any impact on the Company's consolidated financial statement presentation or disclosures.

Management does not believe that any other recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company's financial statement presentation or disclosures.

**Note 2. Business Combination**

***Arrangement***

As discussed in Note 1, on September 14, 2021, the Company and its newly formed subsidiaries, Calco and Canco, entered into the Arrangement Agreement with Peraso Tech. Prior to the Arrangement, as a fabless semiconductor company, the Company's primary focus was the manufacture and sale of high-performance memory semiconductor devices for a wide range of markets. Peraso Tech was also a fabless semiconductor company specializing in the development of mmWave technology, including 60GHz and 5G products, and deriving revenue from selling semiconductor devices, proprietary modules based on its semiconductor devices and performance of



**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 2. Business Combination (cont.)**

non-recurring engineering services. The primary reason for the business combination was to produce a larger fabless semiconductor company with greater size and scale with access to the public capital markets for the benefit of the stockholders of both companies.

On December 17, 2021, following the satisfaction of the closing conditions set forth in the Arrangement Agreement, including approvals from the stockholders of the Company and Peraso Tech, the Arrangement was completed.

*Securities Conversion*

Pursuant to the completion of the Arrangement, each Peraso Share that was issued and outstanding immediately prior to December 17, 2021 was converted into the right to receive 0.045239122387267 (the Exchange Ratio) newly issued shares of common stock of the Company or shares of Canco, which are exchangeable for shares of the Company's common stock (Exchangeable Shares), at the election of each former Peraso Tech stockholder. In addition, all of Peraso Tech's outstanding stock options and other securities exercisable or exchangeable for, or convertible into, and any other rights to acquire Peraso Shares were exchanged for securities exercisable or exchangeable for, or convertible into, or other rights to acquire the Company's common stock. Immediately following the completion of the Arrangement, the former security holders of Peraso Tech owned approximately 61%, on a fully-diluted basis, of the Company's common stock, and the former shareholders of Peraso Tech, as a group, obtained control of the Company. While the Company was the legal acquirer of Peraso Tech, Peraso Tech was deemed to be the acquirer for accounting purposes.

In addition, pursuant to the terms of the Arrangement Agreement, (i) certain warrants to purchase Peraso Shares outstanding immediately prior to the closing of the Arrangement were exercised in consideration for the issuance of Peraso Shares; (ii) each convertible debenture of Peraso Tech outstanding immediately prior to the closing of the Arrangement and all principal and accrued but unpaid interest thereon was converted into Peraso Shares at a conversion price equal to the conversion price set out in each such debenture; and (iii) each outstanding option to purchase Peraso Shares (each, a Peraso Option) was exchanged for a replacement option to purchase such number of shares of common stock that was equal to the product of (a) the number of Peraso Shares subject to the Peraso Options immediately before the closing of the Arrangement and (b) the Exchange Ratio, rounded down to the nearest whole number of shares of common stock.

Upon the closing of the Arrangement, an aggregate of 9,295,097 Exchangeable Shares and 3,558,151 shares of common stock were issued to the holders of Peraso Shares. Of such shares, pursuant to the terms of the Agreement, the Company held in escrow an aggregate of 1,312,878 Exchangeable Shares and 502,567 shares of common stock (collectively, the Escrow Shares). The Escrow Shares are escrowed pursuant to the terms of an escrow agreement on a pro rata basis from the aggregate consideration received by the holders of Peraso Shares, subject to the offset by the Company for any losses in accordance with the Agreement. Such Escrow Shares shall be released, subject to any offset claim, upon the satisfaction of the earlier of: (a) any date following the first anniversary of December 17, 2021 and prior to December 17, 2024 where the volume weighted average price of the common stock for any 20 trading days within a period of 30 consecutive trading days is at least \$8.57 per share, subject to adjustment for stock splits or other similar transactions; (b) the date of any sale of all or substantially all of the assets or shares of the Company; or (c) the date of any bankruptcy, insolvency, restructuring, receivership, administration, wind-up, liquidation, dissolution, or similar event involving the Company. All and any voting rights and other stockholder rights, other than with respect to dividends and distributions, with respect to the Escrow Shares are suspended until the Escrow Shares are released from escrow.

The Exchangeable Share structure is commonly used for cross-border transactions of this nature so as to provide non-tax-exempt Canadian shareholders with the same economic rights and benefits as holders of the Company's shares into which the Exchangeable Shares are exchangeable, while allowing those Canadian shareholders to benefit from the tax-rollover available on the issuance of the Exchangeable Shares. In general terms, by choosing to acquire Exchangeable Shares from Canco, such a former Peraso Tech shareholder was able to rely on a rollover rule in the Income Tax Act (Canada) in order to defer any capital gain that he/she/it would have otherwise realized.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 2. Business Combination (cont.)**

Callco was incorporated to exercise the call rights, while Canco was incorporated to acquire the shares of Peraso Tech from Canadian shareholders that wished to receive Exchangeable Shares as consideration, so it was a tax deferred transaction for such Canadian shareholders. The use of a separate entity, Callco, helps maximize cross border paid-up capital, which represents the amount that can generally be distributed free of Canadian withholding tax. The call rights also allow Callco to “purchase” the Exchangeable Shares rather than having them redeemed by Canco on a redemption or retraction or in connection with a liquidity event, thus avoiding the adverse deemed dividend tax consequences to shareholders that may arise from a redemption or retraction of Exchangeable Shares.

Holders of Exchangeable Shares have the right at any time (the Retraction Right) to retract or redeem any or all of the Exchangeable Shares owned by them for an amount per share equal to the market price of a share of the Company’s common stock plus the full amount of all declared and unpaid dividends on such Exchangeable Share (the Exchangeable Share Purchase Price). The Exchangeable Share Purchase Price is payable only by the Company delivering or causing to be delivered to the relevant holder one share of the Company’s common stock for each Exchangeable Share purchased plus a cash amount equal to the amount of any accrued and unpaid dividends on such Exchangeable Share. The Company and Callco each have an overriding right, in the event that a holder of Exchangeable Shares exercises its Retraction Right, to redeem from such holder all, but not less than all, of the Exchangeable Shares tendered for redemption.

The Exchangeable Shares are subject to redemption by the Company, Callco and Canco at the Exchangeable Share Purchase Price, on the “Redemption Date,” which date shall be no earlier than the seventh anniversary of the date on which Exchangeable Shares are first issued, unless: (a) less than 10% of the aggregate number of Exchangeable Shares issued remain outstanding; (b) there is a change in control of the Company (defined generally as (i) any merger, amalgamation, arrangement, takeover bid or tender offer, material sale of shares or rights or interests that results in the holders of outstanding voting securities of the Company directly or indirectly owning, or exercising control or direction over, voting securities representing less than 50% of the total voting power of all of the voting securities of the surviving entity; or (ii) any sale or disposition of all or substantially of the Company’s assets), and (c) upon the occurrence of certain other events. The Exchangeable Share Purchase Price is payable only by the Company delivering or causing to be delivered to the relevant holder one share of the Company’s common stock for each Exchangeable Share purchased plus a cash amount equal to the amount of any accrued and unpaid dividends on such Exchangeable Share.

In the event of the liquidation, dissolution or winding-up of Canco, holders of Exchangeable Shares have the right to receive in respect of each Exchangeable Share held by such holder, an amount per share equal to the Exchangeable Share Purchase Price, which shall be satisfied in full by Canco by delivering to such holder one Company Share, plus an amount equal to the Dividend Amount. The Company and Callco each have an overriding right to purchase from all holders all but not less than all of the Exchangeable Shares upon the occurrence of such events.

In addition, the Company and Callco have the right to purchase all outstanding Exchangeable Shares at the Exchangeable Share Purchase Price if there is a change of law that permits holders of Exchangeable Shares to exchange their Exchangeable Shares for shares of common stock on a basis that will not require holders to recognize any gain or loss or any actual or deemed dividend for Canadian tax purposes.

The holders of Exchangeable Shares have an “automatic exchange right” in the event of any insolvency, liquidation, dissolution or winding-up or in general, related proceedings, of the Company for an amount per share equal to the Exchangeable Share Purchase Price.

It is expected that Callco will exercise its call rights, as that is more beneficial to the holders of the Exchangeable Shares. Once Callco acquires the Exchangeable Shares from a holder, it (Callco and the Company) is obligated to deliver the Company shares to the holder. Callco discharges this obligation by arranging for the Company to issue and deliver those shares to the holders on behalf of Callco. As consideration for satisfying the delivery obligation, Callco would issue its own shares to the Company.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 2. Business Combination** (cont.)

There are no cash redemption features, as all redemption and exchange scenarios are payable in a share of the Company's common stock. Neither Canco, Callco, or the Company assume any tax liabilities of a former Peraso Tech shareholder who acquired Exchangeable Shares under the plan of arrangement. The purchase price computed upon the exercise of rights pertaining to retraction, redemption, or liquidation, or otherwise giving rise to a purchase or cancellation of an Exchangeable Share, will, in all cases, consist of a 1:1 exchange involving the Company's common stock, regardless of the market price of a share of the Company's common stock.

In connection with the Arrangement, on December 15, 2021, the Company filed the Certificate of Designation of Series A Special Voting Preferred Stock (the Certificate) with the Secretary of State of the State of Delaware to designate Series A Special Voting Preferred Stock (the Special Voting Share) in accordance with the terms of the Arrangement Agreement in order to enable the holders of Exchangeable Shares to exercise their voting rights. The Special Voting Share was issued to a third-party administrative agent (the Agent) solely to facilitate the exercise of rights by holders of Exchangeable Shares. The rights of the Agent, as holder of the Special Voting Share, are limited to effecting the rights of the holders of the Exchangeable Shares; the Special Voting Share does not confer any independent rights to the Agent. Under the Certificate, when all of the Exchangeable shares have been converted into shares of the Company's common stock, the Special Voting Share shall be automatically cancelled and shall not be reissued. Each Exchangeable Share is exchangeable for one share of common stock of the Company and while outstanding, the Special Voting Share enables holders of Exchangeable Shares to cast votes on matters for which holders of the common stock are entitled to vote, and by virtue of the share terms relating to the Exchangeable Shares, enable the Exchangeable Shares to receive dividends that are economically equivalent to any dividends declared with respect to the shares of common stock. As the Special Voting Share does not participate in dividends (only the Exchangeable Shares participate in dividends) and is not entitled to participate in the residual interest of the Company, it is not classified as an equity instrument in the Company's financial statements.

The Exchangeable Shares, which can be converted into common stock at the option of the holder and have the same voting and dividend rights as common stock, are similar in substance to shares of common stock. Further, Canco and Callco are non-substantive entities, which are looked through with the Exchangeable Shares being, in substance, common stock of the Company. Therefore, the Exchangeable Shares have been included in the determination of outstanding common stock. The Special Voting Share was issued to a third-party administrative agent (the Agent) solely to facilitate the exercise of rights by holders of Exchangeable Shares. The rights of the Agent, as holder of the Special Voting Share, are limited to effecting the rights of the holders of the Exchangeable Shares; the Special Voting Share does not confer any independent rights to the Agent. Under the Certificate, when all of the Exchangeable shares have been converted into shares of the Company's common stock, the Special Voting Share shall be automatically cancelled and shall not be reissued.

*Outstanding Shares of Common Stock*

The following table details the shares of the common stock that were outstanding immediately following the consummation of the Arrangement:

	<b>Number of shares</b>
MoSys common stock outstanding prior to business combination. . . . .	8,715,910
Common stock issued to Peraso Tech stockholders . . . . .	3,055,584
Exchangeable Shares issued to Peraso Tech stockholders . . . . .	7,982,219
Escrow Shares – common stock . . . . .	502,567
Escrow Shares – Exchangeable Shares . . . . .	1,312,878
Total shares issued and outstanding . . . . .	<u>21,569,158</u>

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 2. Business Combination (cont.)**

*Reverse Acquisition Determination*

Pursuant to ASC 805, the transaction was accounted for as a reverse acquisition because: (i) the stockholders of Peraso Tech owned the majority of the outstanding common stock of the Company after the share exchange; (ii) Peraso Tech appointed a majority of the Company's board of directors; and (iii) Peraso Tech determined the officers of the Company.

*Measuring the Consideration Transferred*

In the reverse acquisition, the accounting acquirer did not issue any consideration to the accounting acquiree, rather the accounting acquiree issued its equity shares to the owners of the accounting acquirer in exchange for the accounting acquirer's shares. The acquisition date fair value of the consideration transferred by the accounting acquirer for its interest in the accounting acquiree was calculated by Peraso Tech, as the fair value of the consideration effectively transferred. In accordance with ASC 805, the consideration effectively transferred between the Company (a public company as the accounting acquiree) and Peraso Tech (a private company as the accounting acquirer), was calculated as the fair value of the Company's equity including the fair value of its common shares outstanding and its warrants, plus the portion of the share-based award fair value allocated to the pre-combination service of the accounting acquiree's awards. The fair value of the total consideration effectively transferred is summarized in the following table (in thousands, except per-share amount):

Company share price <sup>(i)</sup> . . . . .	\$ 4.21
Company common shares outstanding <sup>(ii)</sup> . . . . .	8,716
Fair value of the Company's common shares outstanding . . . . .	36,694
Fair value of the Company's warrants <sup>(iii)</sup> . . . . .	301
Fair value of the Company's warrants <sup>(iii)</sup> . . . . .	782
Percent related to precombination service . . . . .	80.76%
Fair value of the Company's precombination service share based awards <sup>(iii)</sup> . . . . .	632
Consideration effectively transferred . . . . .	<u>\$ 37,627</u>

(i) Represents the Company's share price as of December 16, 2021

(ii) Represents the Company's outstanding shares as of December 16, 2021

(iii) Represents the fair value of the Company's warrants outstanding and calculated as of December 16, 2021

The following table summarizes the final allocation of the purchase price to the net assets acquired based on the respective fair value of the acquired assets and assumed liabilities of the accounting acquiree, which is the Company.

	<b>December 31, 2021</b>
	<b>(in thousands)</b>
<b>Assets:</b>	
Cash, cash equivalents and investments . . . . .	\$ 19,064
Other current assets. . . . .	2,558
Other assets . . . . .	833
Intangibles	
Developed technology. . . . .	5,726
Customer relationships . . . . .	<u>2,556</u>
	8,282
Goodwill . . . . .	9,946
<b>Liabilities:</b>	
Current liabilities . . . . .	3,056
	<u>\$ 37,627</u>

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 2. Business Combination** (cont.)

*Presentation of Consolidated Financial Statements Post Reverse Acquisition*

The consolidated financial statements reflect all of the following:

- the assets and liabilities of the legal subsidiary (Peraso Tech, as the accounting acquirer) recognized and measured at their pre-combination carrying amounts;
- the assets and liabilities of the legal parent (the Company, as the accounting acquiree) recognized and measured in accordance with ASC No. 805;
- the retained earnings and other equity balances of the legal subsidiary (Peraso Tech, as the accounting acquirer) before the business combination; and
- the amount recognized as issued equity interests in the consolidated financial statements determined by adding the issued equity interest of Peraso Tech outstanding immediately before the business combination to the fair value of the Company. However, the equity structure (that is, the number and type of equity interests issued) reflects the equity structure of the Company.

All references to common stock, stock options and warrants as well as per share amounts have been retroactively restated to reflect the number of shares of the Company issued in the reverse acquisition. Unaudited pro forma results of operations for the year ended December 31, 2021 are included below as if the business combination occurred on January 1, 2021. This summary of the unaudited pro forma results of operations is not necessarily indicative of what the Company's results of operations would have been had Peraso Tech been acquired at the beginning of 2021, nor does it purport to represent results of operations for any future periods.

	<b>Year ended December 31, 2021</b>
Revenue .....	\$ 10,670
Net loss .....	(19,977)
add back: acquisition costs .....	1,628
Adjusted net loss .....	<u>\$ (18,349)</u>

**Note 3. Fair Value of Financial Instruments**

The following table represents the Company's assets and liabilities measured at fair value on a recurring basis as of December 31, 2022 and 2021 and the basis for that measurement (in thousands):

	<b>December 31, 2022</b>			
	<b>Fair Value</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Assets:				
Money market funds <sup>(1)</sup> .....	\$ 73	\$ —	\$ —	\$ —
Corporate notes and commercial paper .....	\$ 1,078	\$ —	\$ 1,078	\$ —
Liabilities:				
Warrant liability .....	\$ 2,079	\$ —	\$ —	\$ 2,079
	<b>December 31, 2021</b>			
	<b>Fair Value</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Money market funds <sup>(1)</sup> .....	\$ 1,159	\$ 1,159	\$ —	\$ —
Corporate notes and commercial paper .....	\$ 12,195	\$ —	\$ 12,195	\$ —

(1) Included in cash and cash equivalents

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 3. Fair Value of Financial Instruments (cont.)**

The following table represents the Company's determination of fair value for its financial assets (cash equivalents and investments) (in thousands):

<b>December 31, 2022</b>				
	<b>Cost</b>	<b>Unrealized Gains</b>	<b>Unrealized Losses</b>	<b>Fair Value</b>
Cash and cash equivalents . . . . .	\$ 1,828	\$ —	\$ —	\$ 1,828
Short-term investments . . . . .	1,103	—	(25)	1,078
	<u>\$ 2,931</u>	<u>\$ —</u>	<u>\$ (25)</u>	<u>\$ 2,906</u>
<b>December 31, 2021</b>				
	<b>Cost</b>	<b>Unrealized Gains</b>	<b>Unrealized Losses</b>	<b>Fair Value</b>
Cash and cash equivalents . . . . .	\$ 5,893	\$ —	\$ —	\$ 5,893
Short-term investments . . . . .	9,276	—	(9)	9,267
Long-term investments . . . . .	2,935	—	(7)	2,928
	<u>\$ 18,104</u>	<u>\$ —</u>	<u>\$ (16)</u>	<u>\$ 18,088</u>

There were no transfers in or out of Level 1 and Level 2 securities during the years ended December 31, 2022 or December 31, 2021.

**Note 4. Balance Sheet Detail**

	December 31,	
	2022	2021
	(in thousands)	
<b>Inventories:</b>		
Raw materials . . . . .	\$ 1,279	\$ 879
Work-in-process . . . . .	2,595	2,170
Finished goods . . . . .	1,474	775
	<u>\$ 5,348</u>	<u>\$ 3,824</u>
<b>Prepaid expenses and other:</b>		
Prepaid inventory and production costs . . . . .	\$ 186	\$ 671
Prepaid insurance . . . . .	47	44
Prepaid software . . . . .	173	277
Other . . . . .	168	167
	<u>\$ 574</u>	<u>\$ 1,159</u>
<b>Property and equipment, net:</b>		
Machinery and equipment . . . . .	\$ 4,630	\$ 8,944
Computer equipment and software . . . . .	342	2,200
Furniture and fixtures . . . . .	93	323
Leasehold improvements . . . . .	555	354
Total property and equipment . . . . .	5,620	11,821
Less: Accumulated depreciation and amortization . . . . .	(3,395)	(9,472)
	<u>\$ 2,225</u>	<u>\$ 2,349</u>

During the year ended December 31, 2022, the Company wrote-off fully depreciated assets, or assets that were no longer in service, costing approximately \$6,380,000 with corresponding accumulated depreciation of approximately \$6,227,000, or a remaining net book value of approximately \$153,000. The Company recorded the remaining book value of approximately \$153,000 as a loss during the year ended December 31, 2022.



**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 4. Balance Sheet Detail (cont.)**

	2022	2021
	(in thousands)	
<b>Accrued Expenses &amp; Other:</b>		
Accrued wages and employee benefits . . . . .	\$ 469	\$ 506
Professional fees, legal and consulting . . . . .	514	1,252
Insurance . . . . .	—	340
Accrued taxes . . . . .	14	190
Accrued inventory . . . . .	—	233
Financing liability . . . . .	330	—
Warranty accrual . . . . .	39	29
Other . . . . .	451	353
	<u>\$ 1,817</u>	<u>\$ 2,903</u>

**Note 5. Commitments and Contingencies**

***Leases***

The Company has facility leases that it accounts for under ASC 842, including the operating leases for its corporate headquarters facility in San Jose, California, and facilities in Toronto and Markham Ontario, Canada. The Toronto lease expires in December 2023. The Company entered into a new, direct lease for the San Jose facility in April 2022, for an 18-month term, which commenced July 15, 2022. In May 2022, the Company entered into a new lease for the facility in Markham with a 60-month term, which commenced June 21, 2022. The Markham landlord also provided a lease incentive of approximately \$220,000 (the Incentive), which will be payable to the Company as follows: one-half of the Incentive payable subsequent to the completion of the improvements to the leased space and the second half-ratably on an annual basis commencing with the second year of the lease.

The initial right-of-use assets and corresponding liabilities of approximately \$1.0 million for the San Jose and Markham facility leases were measured at the present value of the future minimum lease payments. The discount rate used to measure the lease assets and liabilities were 8%. Lease expense is recognized on a straight-line basis over the lease term.

On March 1, 2022, the Company entered into a 36-month finance lease agreement for the lease of equipment resulting in the recognition of a right-of-use asset and lease liability of approximately \$274,000.

On November 1, 2022, the Company entered into a 36-month finance lease agreement for the lease of equipment resulting in the recognition of a right-of-use asset of approximately \$124,000 and lease liability of approximately \$117,000.

The following table provides the details of right-of-use assets and lease liabilities as of December 31, 2022 (in thousands):

	Year Ended December 31, 2022
Right-of-use assets:	
Operating leases . . . . .	\$ 826
Finance lease . . . . .	321
Total right-of-use assets . . . . .	<u>\$ 1,147</u>
Lease liabilities:	
Operating leases . . . . .	\$ 834
Finance lease . . . . .	323
Total lease liabilities . . . . .	<u>\$ 1,157</u>

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 5. Commitments and Contingencies (cont.)**

Future minimum payments under the leases at December 31, 2022 are listed in the table below (in thousands):

<b>Year ending December 31,</b>	
2023.....	\$ 688
2024.....	263
2025.....	164
2026.....	107
2027.....	81
Total future lease payments.....	1,303
Less: imputed interest.....	(146)
Present value of lease liabilities.....	<u>\$ 1,157</u>

The following table provides the details of supplemental cash flow information (in thousands):

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for leases .....	\$ 704	\$ 248

Rent expense was approximately \$0.7 million and \$0.6 million for the years ended December 31, 2022 and December 31, 2021, respectively. In addition to the minimum lease payments, the Company is responsible for property taxes, insurance and certain other operating costs related to the leased facilities and equipment.

***Indemnification***

In the ordinary course of business, the Company enters into contractual arrangements under which it may agree to indemnify the counterparties from any losses incurred relating to breach of representations and warranties, failure to perform certain covenants, or claims and losses arising from certain events as outlined within the particular contract, which may include, for example, losses arising from litigation or claims relating to past performance. Such indemnification clauses may not be subject to maximum loss clauses. The Company has also entered into indemnification agreements with its officers and directors. No material amounts were reflected in the Company's consolidated financial statements for the years ended December 31, 2022 and 2021 related to these indemnifications.

The Company has not estimated the maximum potential amount of indemnification liability under these agreements due to the limited history of prior claims and the unique facts and circumstances applicable to each particular agreement. To date, the Company has not made any payments related to these indemnification agreements.

***Product Warranties***

The Company warrants certain of its products to be free of defects generally for a period of three years. The Company estimates its warranty costs based on historical warranty claim experience and includes such costs in cost of net revenues. Warranty costs were not material for the years ended December 31, 2022 and 2021.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 5. Commitments and Contingencies (cont.)**

***Legal Matters***

The Company is not a party to any legal proceeding that the Company believes is likely to have a material adverse effect on its consolidated financial position or results of operations. From time to time the Company may be subject to legal proceedings and claims in the ordinary course of business. These claims, even if not meritorious, could result in the expenditure of significant financial resources and diversion of management efforts.

**Note 6. Retirement Savings Plan**

Effective January 1997, the Company adopted the Peraso 401(k) Plan (the Savings Plan), which qualifies as a thrift plan under Section 401(k) of the Internal Revenue Code. Full-time and part-time employees who are at least 21 years of age are eligible to participate in the Savings Plan at the time of hire. Participants may contribute up to 15% of their earnings to the Savings Plan. No matching contributions were made by the Company during the years ended December 31, 2022 and 2021.

**Note 7. Business Segments, Concentration of Credit Risk and Significant Customers**

The Company determined its reporting units in accordance with ASC No. 280, *Segment Reporting* (ASC 280). Management evaluates a reporting unit by first identifying its operating segments under ASC 280. The Company then evaluates each operating segment to determine if it includes one or more components that constitute a business. If there are components within an operating segment that meet the definition of a business, the Company evaluates those components to determine if they must be aggregated into one or more reporting units. If applicable, when determining if it is appropriate to aggregate different operating segments, the Company determines if the segments are economically similar and, if so, the operating segments are aggregated.

Management has determined that the Company has one consolidated operating segment. The Company's reporting segment reflects the manner in which its chief operating decision maker reviews results and allocates resources. The Company's reporting segment meets the definition of an operating segment and does not include the aggregation of multiple operating segments.

The Company recognized revenue from shipments of product, licensing of its technologies and performance of services to customers by geographical location as follows (in thousands):

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
United States . . . . .	\$ 8,932	\$ 1,968
Hong Kong . . . . .	2,428	2,955
Taiwan . . . . .	1,205	693
Rest of world . . . . .	2,303	63
Total net revenue . . . . .	<u>\$ 14,868</u>	<u>\$ 5,679</u>

The following is a breakdown of product revenue by category (in thousands):

<b>(amounts in thousands)</b>	<b>Years Ended December 31,</b>	
<b>Product category</b>	<b>2022</b>	<b>2021</b>
Memory ICs . . . . .	\$ 7,722	\$ 150
mmWave ICs . . . . .	3,289	3,566
mmWave modules . . . . .	3,170	1,101
mmWave other products . . . . .	18	89
	<u>\$ 14,199</u>	<u>\$ 4,906</u>

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 7. Business Segments, Concentration of Credit Risk and Significant Customers (cont.)**

Customers who accounted for at least 10% of total net revenue were:

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Customer A . . . . .	26%	*
Customer B . . . . .	21%	19%
Customer C . . . . .	16%	48%
Customer D . . . . .	11%	*
Customer E . . . . .	*	11%

\* Represents less than 10%

As of December 31, 2022, four customers accounted for 79% of accounts receivable, and the Company had a provision for doubtful accounts of \$183,000 against one of the customer's receivables. Three customers accounted for 96% of accounts receivable as of December 31, 2021.

**Note 8. Income Tax Provision**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amount 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 were (in thousands):

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
<b>Deferred tax assets:</b>		
Federal and state loss carryforwards . . . . .	\$ 9,017	\$ 5,409
Reserves, accruals and other . . . . .	344	198
Depreciation and amortization . . . . .	611	917
Deferred stock-based compensation . . . . .	2,682	2,691
Capitalized research and development costs . . . . .	965	—
Research and development credit carryforwards . . . . .	6,655	6,675
Total deferred tax assets . . . . .	20,274	15,890
Less: Valuation allowance . . . . .	(20,274)	(15,890)
Net deferred tax assets, net . . . . .	<u>\$ —</u>	<u>\$ —</u>

The \$4.4 million increase in the valuation allowance during 2022 was primarily the result of an increase to the net operating loss carryforwards for the current year. The valuation allowance increased by \$2.0 million during the year ended December 31, 2021.

Utilization of the Company's net operating losses (NOLs) and tax credit carryforwards is subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code (IRC) and similar state provisions. Section 382 of the IRC (Section 382) imposes limitations on a corporation's ability to utilize its NOL and tax credit carryforwards, if it experiences an "ownership change." In general terms, an ownership change may result from transactions increasing the ownership percentage of certain stockholders in the stock of the corporation by more than 50% over a three-year period. In the event of an ownership change, utilization of the NOLs would be subject to an annual limitation under Section 382 determined by multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate. While a formal study has not been performed, the Company believes that Section 382 ownership changes occurred as a result of

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 8. Income Tax Provision (cont.)**

financing transaction in 2018 and the Arrangement. The Company believes the Section 382 limitations will result in approximately 89% of the federal and state NOLs expiring before they can be utilized, and approximately 88% of the federal tax credit carryforwards expiring before they can be utilized.

As of December 31, 2022, the Company had NOLs of approximately \$228.2 million for federal income tax purposes and approximately \$143.6 million for state income tax purposes. Only approximately \$34.3 million of the federal NOLs and \$25.2 million of the state NOLs are expected to be available before expiration due to the Section 382 limitation. These NOLs are available to reduce future taxable income and will expire at various times from 2025 through 2042, except federal NOLs from 2018 to 2022 which have no expiration date. As of December 31, 2022, the Company also had federal research and development tax credit carryforwards of approximately \$8.5 million that will expire at various times through 2042, and California research and development credits of approximately \$8.4 million, which do not have an expiration date.

A reconciliation of income taxes provided at the federal statutory rate (21%) to the actual income tax provision is as follows (in thousands):

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Income tax benefit computed at U.S. statutory rate . . . . .	\$ (6,804)	\$ (1,503)
Research and development credits . . . . .	(38)	(131)
Stock-based compensation . . . . .	1,033	—
Amortization of intangible assets . . . . .	(60)	(60)
Goodwill impairment . . . . .	2,089	—
Valuation allowance changes affecting tax provision . . . . .	3,774	1,693
Other . . . . .	6	1
Income tax provision. . . . .	<u>\$ —</u>	<u>\$ —</u>

**Note 9. Stock-Based Compensation**

***Common Stock Equity Plans***

In 2010, the Company adopted the 2010 Equity Incentive Plan and later amended it in 2014, 2017 and 2018 (the Amended 2010 Plan). The Amended 2010 Plan was terminated in August 2019 and remains in effect as to outstanding equity awards granted prior to the date of expiration. No new awards may be made under the Amended 2010 Plan.

In August 2019, the Company's stockholders approved the 2019 Stock Incentive Plan (the 2019 Plan) to replace the Amended 2010 Plan. The 2019 Plan authorizes the board of directors or the compensation committee of the board of directors to grant a broad range of awards including stock options, stock appreciation rights, restricted stock, performance-based awards, and restricted stock units. Under the 2019 Plan, 182,500 shares were initially reserved for issuance. In November 2021, in connection with the approval of the Arrangement, the Company's stockholders approved an amendment increasing the number of shares reserved for issuance under the 2019 Plan by 3,106,937 shares.

Under the 2019 Plan, the term of all incentive stock options granted to a person who, at the time of grant, owns stock representing more than 10% of the voting power of all classes of the Company's stock may not exceed five years. The exercise price of stock options granted under the 2019 Plan must be at least equal to the fair market value of the shares on the date of grant. Generally, awards under the 2019 Plan will vest over a three to four-year period, and options will have a term of 10 years from the date of grant. In addition, the 2019 Plan provides for automatic acceleration of vesting for options granted to non-employee directors upon a change of control of the Company.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 9. Stock-Based Compensation (cont.)**

In connection with the Arrangement, the Company assumed the Peraso Technologies Inc. 2009 Share Option Plan (the 2009 Plan) and all outstanding options granted pursuant to the terms of the 2009 Plan. Each outstanding, unexercised and unexpired option under the 2009 Plan, whether vested or unvested, was assumed by the Company and converted into options to purchase shares of the Company's common stock and became exercisable by the holder of such option in accordance with its terms, with (i) the number of shares of common stock subject to each option multiplied by the Exchange Ratio and (ii) the per share exercise price upon the exercise of each option divided by the Exchange Ratio. In connection with the Arrangement, no further awards will be made under the 2009 Plan.

The 2009 Plan, the Amended 2010 Plan and the 2019 Plan are referred to collectively as the "Plans."

***Stock-Based Compensation Expense***

The Company reflected compensation costs of \$4.3 million and \$4.4 million related to the vesting of stock options during the years ended December 31, 2022 and 2021, respectively. At December 31, 2022, the unamortized compensation cost was approximately \$7.7 million related to stock options and is expected to be recognized as expense over a weighted average period of approximately two years. The Company reflected compensation costs of \$1.4 million and \$0.1 million related to the vesting of restricted stock options during the years ended December 31, 2022 and 2021, respectively. The unamortized compensation cost at December 31, 2022 was \$2.1 million related to restricted stock units and is expected to be recognized as expense over a weighted average period of approximately two years.

***Common Stock Options and Restricted Stock***

The term of all incentive stock options granted to a person who, at the time of grant, owns stock representing more than 10% of the voting power of all classes of the Company's stock may not exceed five years. The exercise price of stock options granted under the 2019 Plan must be at least equal to the fair market value of the shares on the date of grant. Generally, options granted under the 2019 Plan will vest over a three to four-year period and have a term of 10 years from the date of grant. In addition, the 2019 Plan provides for automatic acceleration of vesting for options granted to non-employee directors upon a change of control (as defined in the 2019 Plan) of the Company.

The following table summarizes the activity in the shares available for grant under the Plans during the years ended December 31, 2021 and December 31, 2022 (in thousands, except exercise price):

	Shares Available for Grant	Options outstanding	
		Number of Shares	Weighted Average Exercise Prices
Balance as of January 1, 2021	356	1,053	\$ 2.54
Additional shares authorized under the Plans	3,107	—	—
RSUs granted	(30)	—	—
Options granted	(409)	409	\$ 3.00
Options exercised	—	(20)	\$ 1.72
Options cancelled and returned to the Plans	—	(42)	\$ 2.72
Effect of business combination	—	158	\$ 10.35
Balance as of December 31, 2021	3,024	1,558	\$ 3.49
RSUs granted	(1,732)	—	\$ —
RSUs cancelled and returned to the Plans	264	—	\$ —
Options cancelled	—	(59)	\$ 6.27
Balance as of December 31, 2022	1,556	1,499	\$ 3.32



**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 9. Stock-Based Compensation (cont.)**

The following table summarizes significant ranges of outstanding and exercisable options as of December 31, 2022 (in thousands, except contractual life and exercise price):

Range of Exercise Price	Options Outstanding			Options Exercisable		
	Number Outstanding	Weighted Average Remaining Contractual Life (in Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic value
\$1.57 – \$14.99 . . . . .	1,489	7.64	\$ 2.65	861	\$ 2.57	\$ —
\$15.00 – \$25.59 . . . . .	4	0.74	\$ 15.00	4	\$ 15.00	\$ —
\$25.60 – \$143.99 . . . . .	1	1.67	\$ 50.00	1	\$ 50.00	\$ —
\$144.00 – \$409.99 . . . . .	4	3.46	\$ 144.00	4	\$ 144.00	\$ —
\$410.00 – \$924.00 . . . . .	1	1.69	\$ 410.00	1	\$ 410.00	\$ —
\$1.57 – \$924.00 . . . . .	<u>1,499</u>		\$ 3.32	<u>871</u>	\$ 3.74	\$ —

A summary of RSU activity under the Plans is presented below (in thousands, except for fair value):

	Number of Shares	Weighted Average Grant-Date Fair Value
Non-vested shares as of December 31, 2020 . . . . .	—	\$ 0.00
Granted . . . . .	30	\$ 5.07
Vested . . . . .	(10)	\$ 4.21
Effect of business combination . . . . .	68	\$ 4.21
Non-vested shares as of December 31, 2021 . . . . .	88	\$ 4.50
Granted . . . . .	1,732	\$ 2.10
Vested . . . . .	(589)	\$ 2.29
Cancelled . . . . .	(174)	\$ 2.19
Non-vested shares as of December 31, 2022 . . . . .	<u>1,057</u>	\$ 2.06

**Note 10. Stockholders' Equity**

***Securities Purchase Agreement***

On November 30, 2022, the Company entered into a securities purchase agreement (the SPA) with an institutional investor, pursuant to which the Company sold to the investor, in a registered direct offering, an aggregate of 1,300,000 shares of common stock at a negotiated purchase price of \$1.00 per share. The Company also offered and sold to the investor pre-funded warrants to purchase up to 1,150,000 shares of common stock. Each pre-funded warrant is exercisable for one share of common stock. The purchase price of each pre-funded warrant was \$0.99, and the exercise price of each pre-funded warrant is \$0.01 per share. The pre-funded warrants were immediately exercisable and may be exercised at any time until all of the pre-funded warrants are exercised in full. Net proceeds to the Company, after offering costs, were \$2.1 million.

In a concurrent private placement, the Company also sold to the investor a warrant to purchase up to 3,675,000 shares of common stock (the Purchase Warrant). The Purchase Warrant will be exercisable beginning six months and one day from the date of the SPA at an exercise price of \$1.36 per share and will expire on the five-year anniversary of that date.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 10. Stockholders' Equity (cont.)**

***Warrants Classified as Liability***

*Purchase Warrant*

The SPA governing the Purchase Warrant provides for a value calculation for the Purchase Warrant using the Black Scholes model in the event of certain fundamental transactions. The fair value calculation provides for a floor on the volatility amount utilized in the value calculation at 100% or greater. The Company has determined this provision introduces leverage to the holders of the Purchase Warrant that could result in a value that would be greater than the settlement amount of a fixed-for-fixed option on the Company's own equity shares. Therefore, pursuant to ASC 815, the Company has classified the Purchase Warrant as a liability in its consolidated balance sheet. The classification of the Purchase Warrant, including whether the Purchase Warrant should be recorded as liability or as equity, is evaluated at the end of each reporting period with changes in the fair value reported in other income (expense) in the consolidated statements of operations and comprehensive loss. The Purchase Warrant was initially recorded at a fair value at \$3.7 million at the grant date and is re-valued at each reporting date. As of December 31, 2022, the fair value of the warrant liability was reduced to \$2.1 million. Upon the closing of the registered direct offering, the fair value of the Purchase Warrant liability, up to the net amounts of the funds received of approximately \$2,099,000, was recorded as a financing cost, and the excess of \$1,576,000 was recorded as a financing cost in the statement of operations. As a result of the change in fair value the Company recorded a gain for the year ended December 31, 2022

The fair value of the Purchase Warrant at December 31, 2022 was determined using Black Scholes model with the following assumptions: expected term based on the contractual term of 5.4 years, risk-free interest rate of 4.00%, which was based on a comparable US Treasury 5-year bond, expected volatility of 114%, and an expected dividend of zero.

As of December 31, 2022, the Company had the following liability-classified warrants outstanding (share amounts in thousands):

	<b>Number of warrants on common shares</b>	<b>Amount</b>
Balance as of December 31, 2021. ....	—	\$ —
Recognition of warrant liabilities . . . . .	3,675	3,674
Change in fair value of warrants. ....	—	(1,595)
Balance as of December 31, 2022. ....	<u>3,675</u>	<u>\$ 2,079</u>

*Peraso Tech Warrants*

As of January 1, 2021, the Company had warrants outstanding to purchase 375,000 shares of its common stock. During the year ended December 31, 2021, the Company issued warrants to purchase an additional 133,000 shares of its common stock. In accordance with the Arrangement Agreement, on December 16, 2021, the warrants to purchase the 508,000 shares of common stock were settled in exchange for a defined number of common shares. Upon settlement, the fair value of the warrants was calculated using the intrinsic fair value of the common shares. The change in fair value of approximately \$8.1 million was recognized in other income (expense) in the consolidated statements of operations.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 10. Stockholders' Equity (cont.)**

***Warrants Classified as Equity***

As of December 31, 2022, the Company had the following equity-classified warrants outstanding (share amounts in thousands):

<b>Warrant Type</b>	<b>Number of Shares</b>	<b>Exercise Price</b>	<b>Expiration</b>
Common stock . . . . .	33	\$ 47.00	January 2023
Common stock . . . . .	101	\$ 2.40	October 2023
Common stock . . . . .	1,150	\$ 0.01	—

As of December 31, 2021, the Company had the following equity-classified warrants outstanding (share amounts in thousands):

<b>Warrant Type</b>	<b>Number of Shares</b>	<b>Exercise Price</b>	<b>Expiration</b>
Common stock . . . . .	33	\$ 47.00	January 2023
Common stock . . . . .	101	\$ 2.40	October 2023

**Note 11. Debt**

***Loan Facilities***

On November 30, 2020, the Company entered into a loan agreement (the SRED Financing) to raise funds against the Company's present and after acquired personal property. On February 5, 2021, March 5, 2021 and September 17, 2021, the Company raised additional funds from the second, third and fourth draws under the SRED financing of \$274,715 (CDN\$350,000), \$274,715 (CDN\$350,000) and \$745,655 (CDN\$950,000) respectively, totaling year to date gross proceeds of \$1,295,085 (CDN\$1,650,000) net of financing fees of \$32,770 (CDN\$41,750). Each borrowing carried an interest rate of 1.6% per month, compounded monthly (20.98%). The SRED financing was sanctioned against the Company's SRED tax credit refund.

The first, second and third draws, including interest of \$136,900 (CDN\$174,417), were repaid through proceeds from the Company's tax credit refund of \$1,093,230 (CDN\$1,392,831) received in August 2021, and the balance of \$184,558 (CDN\$ 235,132) was paid from the fourth draw. The remaining loan balance, including interest, of \$816,964 (CDN\$1,044,177) was repaid on December 16, 2021.

Interest expense of approximately \$3.0 million for the year ended December 31, 2021 consisted of i) approximately \$2.1 million of amortization of debt discount, ii) approximately \$0.7 million of interest expense on convertible debt, which was outstanding and retired in 2021, and iii) approximately \$0.2 million of interest expense on the SRED financing.

**Note 12. Related Party Transactions**

A family member of one of the Company's executive officers serves as a consultant to the Company. During the years ended December 31, 2022 and 2021, the Company paid approximately \$162,000 and \$208,000, respectively, to the consultant. Additionally, a family member of one of the Company's executive officers is an employee of the Company. During the years ended December 31, 2022, the Company paid approximately \$101,000 to the employed family member, which includes the aggregate grant date fair value, as determined pursuant to FASB ASC Topic 718, of an RSU awarded in April 2022. During the years December 31, 2021, the Company paid approximately \$94,000 to the employed family member.

**PERASO INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 13. License and Asset Sale Transaction and Subsequent Event**

On August 5, 2022, the Company entered into a Technology License and Patent Assignment Agreement (the Intel Agreement) with Intel Corporation (Intel), pursuant to which Intel: (i) licensed from the Company, on an exclusive basis, certain software and technology assets related to the Company's Stellar packet classification intellectual property, including its graph memory engine technology, and any roadmap variant, in the form existing as of the date of the Agreement (the Licensed Technology); (ii) acquired from the Company certain patent applications and patents owned by the Company; and (iii) assumed a professional services agreement, dated March 24, 2020, between Fabulous Inventions AB (Fabulous) and the Company (the Fabulous Agreement), pursuant to which, among other things, the Company licensed from Fabulous certain technology incorporated into the Licensed Technology.

As consideration for the Company to enter into the Agreement, Intel agreed to pay the Company \$3,062,500 at the closing of the transaction (the Closing) and \$437,500 (the Holdback) upon the satisfaction by the Company, as mutually agreed upon by the parties in good faith, of certain release criteria set forth in the Agreement relating to various due diligence activities of Intel regarding the Licensed Technology (the Release Criteria).

The Company determined that the license and asset sale did not qualify as a sale of a business, but as a sale of a non-financial asset, with the resultant gain recorded as income from operations in accordance with ASC 610-20, *Other Income — Gains and Losses from the Derecognition of Nonfinancial Assets*. During the year ended December 31, 2022, the Company recognized a \$2.6 million gain on this transaction, net of transaction costs, which was recorded as a reduction of operating expenses in the consolidated statements of operations and comprehensive loss. Any gain related to the Holdback will be recorded when the Release Criteria have been satisfied. In January 2023, Intel paid the Holdback.