

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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2022

or

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

For the transition period from _____ to _____

Commission file number 001-33170



NETLIST, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

95-4812784

(I.R.S. employer Identification No.)

111 Academy, Suite 100

Irvine, California

(Address of principal executive offices)

92617

(Zip Code)

(949) 435-0025

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: **None**

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

**Common Stock, par value \$0.001 per
share**

(Title of class)

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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 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 registrant's voting and non-voting common stock held by non-affiliates of the registrant as of July 2, 2022, the last business day of the registrant's most recently completed second fiscal quarter, was approximately \$744.1 million.

As of February 21, 2023, the registrant had 235,523,847 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

Netlist, Inc. and Subsidiaries
Form 10-K
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CAUTIONARY NOTE ABOUT FORWARD-LOOKING STATEMENTS

This report includes “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements other than historical facts and often address future events or our future performance. Words such as “anticipate,” “estimate,” “expect,” “project,” “intend,” “may,” “will,” “might,” “plan,” “predict,” “believe,” “should,” “could” and similar words or expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Forward-looking statements contained in this report include statements about, among other things:

- our beliefs regarding the market and demand for our products or the component products we resell;
- our ability to develop and launch new products that are attractive to the market and stimulate customer demand for these products;
- our plans relating to our intellectual property, including our goals of monetizing, licensing, expanding and defending our patent portfolio;
- our expectations and strategies regarding outstanding legal proceedings and patent reexaminations relating to our intellectual property portfolio;
- specific and overall impacts of the COVID-19 pandemic on our financial condition and results of operations;
- our expectations with respect to any strategic partnerships or other similar relationships we may pursue;
- the competitive landscape of our industry;
- general market, economic and political conditions;
- our business strategies and objectives;
- our expectations regarding our future operations and financial position, including revenues, costs and prospects, and our liquidity and capital resources, including cash flows, sufficiency of cash resources, efforts to reduce expenses and the potential for future financings;
- our ability to remediate any material weakness, maintain effective internal control over financial reporting; and
- the impact of the above factors and other future events on the market price and trading volume of our common stock.

All forward-looking statements reflect management’s present assumptions, expectations and beliefs regarding future events and are subject to known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those expressed in or implied by any forward-looking statements. These risks, uncertainties and other factors include those described in Item 1A. Risk Factors of this Form 10-K. In light of these risks, uncertainties and other factors, our forward-looking statements should not be relied on as predictions of future events. Additionally, many of these risks and uncertainties are currently elevated by and may or will continue to be elevated by the COVID-19 pandemic. All forward-looking statements reflect our assumptions, expectations and beliefs only as of the date they are made, and except as required by law, we undertake no obligation to revise or update any forward-looking statements for any reason. We qualify all of our forward-looking statements by this cautionary note.

* * * * *

Unless the context indicates otherwise, all references to “Netlist,” our “Company,” “we,” “us,” or “our” in this report refer to Netlist, Inc., together with its consolidated subsidiaries, and all cross-references to notes in this Form 10-K refer to the identified note contained in our consolidated financial statements included in Part II, Item 8 of this Form 10-K. We own registered or unregistered trademark rights to NVvault®, HyperCloud®, HybriDIMM™, EXPRESSvault™, PreSight™, “memory at storage capacities, storage at memory speeds”™, Netlist® and our company logo. Although we do not use the “®” or “™” symbol in each instance in which one of our registered or common law trademarks appears in this report, this should not be construed as any indication that we will not assert our rights thereto to the fullest extent under applicable law. Any other service marks, trademarks or trade names appearing in this report are the property of their respective owners.

PART I

Item 1. Business

Overview

Netlist provides high-performance memory solutions to enterprise customers in diverse industries. Our products in various capacities and form factors and our line of custom and specialty memory products bring leading performance to customers in a variety of industries globally and cloud service providers. Netlist licenses its portfolio of intellectual property, including solutions relating to volatile memory, storage memory, and hybrid memory.

Our Industry

The global high-performance memory module market is driven by increasing demand from data center and enterprise storage applications for improved input/output performance, lower latency, and increased redundant persistent data storage capacities. The proliferation of mobile devices, social media platforms, cognitive/artificial intelligence systems and cloud-based software applications has resulted in the accelerating creation and transmission of data. To manage and analyze this data, we believe new memory and storage technologies need to be developed and implemented to satisfy the needs in the industry.

Technical challenges arising from the production of dynamic random access memory integrated circuits (“DRAM ICs” or “DRAM”) is limiting the material's long-term viability as the high-speed memory of choice in demanding computing environments. Conversely, NAND flash memory (“NAND flash”), while characterized by lower access speeds, is scaling down in cost and scaling up in density at a significantly better rate than DRAM. This has led the industry to explore alternative computer architectures and new memory materials capable of bridging DRAM's superior access speed with NAND flash's lower cost and higher densities. We expect memory subsystems relying on intelligent controller technology to leverage NAND flash will most effectively address the industry's growing need for high-speed data management and analytics.

Further, DRAM-based memory solutions are being developed to accommodate the industry's need for significant memory bandwidth increases. These growing needs have led to the development and implementation of new DDR5 Dual Inline Memory Module (“DIMM”) technologies like power management on-module, as well as higher-capacity High Bandwidth Memory (“HBM”) components. As one example of a possible trend in developing technologies to support the newest DDR5 standard – and beyond – we expect continued focus on moving logic and management functionality away from host systems and onto memory modules themselves.

Product Technologies

Our portfolio of proprietary technologies and design techniques includes:

Distributed Buffer Architecture

We invented the distributed buffer architecture that enables the buffering of data signals along the bottom edge of a memory module using multiple data buffer devices distributed between the edge connector and the DRAM. The result was shorter data paths, improved signal integrity, and reduced latency compared to the industry-standard design for DDR3 load-reduced dual in-line memory module (“LRDIMM”). The memory industry has widely adopted our distributed architecture for DDR4 LRDIMM. Our HyperCloud product was our first LRDIMM product built on this innovative and proprietary distributed buffer architecture.

Localized Module-Based Power Management Architecture

Early in our company's history of research and development efforts, we developed innovative solutions for improving the performance of memory through the increased precision of voltage regulation. Netlist's solution was to

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transfer the power management capabilities away from the host system and move them nearer to the components on the memory modules themselves. The result was improved granularity of system power loading, which could translate to improved functionality and higher data transfer speed. Relocating power management functionality onto modules also allows multiple distinct devices on a single module to receive power and operate harmoniously. While many in the memory industry have now adopted this approach for their DDR5-based DIMMs, our NVvault products incorporated this localized power management functionality long before.

Design Expertise

We have designed special algorithms that can be implemented in stand-alone integrated circuits or integrated into other functional blocks in application-specific integrated circuits (“ASICs”). We utilized these algorithms in our HybriDIMM product to incorporate load reduction functionality. We also incorporated these algorithms in our NVvault product line, which is known in the industry as NVDIMM-N.

Proprietary PCB Designs

We utilize advanced techniques to optimize electronic signal strength and integrity within a printed circuit board (“PCB”). These techniques include the use of 10-layer or 12-layer boards, matching conductive trace lengths, a minimized number of conductive connectors, or vias, and precise load balancing to, among other benefits, help reduce noise and crosstalk between adjacent traces. In addition, our proprietary designs for the precise placement of intra-substrate components allow us to assemble memory subsystems with significantly smaller physical size, enabling original equipment manufacturers (“OEMs”) to develop products with smaller footprints for their customers.

Very Low-Profile Designs

We believe we were the first company to create memory subsystems in a form factor of less than one inch in height. Our innovative very low profile (“VLP”) DIMMs provide developers of server blades, storage bridge bay applications, telecommunications servers, switches and routers with a wide range of high performance memory options where efficient use of motherboard space is critical. Our technology has allowed us to decrease the system board space required for memory, and improve thermal performance and operating speeds, by enabling our customers to use alternative methods of component layout.

2" High-Profile Designs

We have designed expanded-size memory systems in a form factor of two inches in height. Our larger 2” tall DIMM designs and associated technologies can provide developers with solutions requiring greatly expanded DIMM capacities while still satisfying requirements for high bandwidth functionality.

Thermal Management Designs

We design our memory subsystems to ensure effective heat dissipation. We use thermal simulation and data to obtain thermal profiles of the memory subsystem during the design phase, allowing us to rearrange components to enhance thermal characteristics and, if necessary, replace components that do not meet specifications. We also develop and use proprietary heat spreaders to enhance the thermal management characteristics of our memory subsystems.

Compute Express Link Technology

We are investing in new technologies like memory expansion applications that utilize Compute Express Link (“CXL”), which improves server capacity and bandwidth beyond what traditional memory channels can provide. Traditional memory channel bandwidth and capacities can no longer keep up with host central processing unit needs. As this space matures, we believe that CXL technology will allow larger memory pools to be placed further away from the host central processing unit and still be seamlessly utilized with the traditional channel memory.

Products

Our commercially available memory subsystem products and other products that we sell include:

Component and Other Product Resales

Due to our relationships with memory channel customers, in addition to our own products, we resell certain component products that we purchase for the purpose of resale. We have purchased certain of these products under the terms of a product supply agreement with SK hynix, Inc., a South Korean memory semiconductor supplier (“SK hynix”). We have also sourced resale products from other suppliers. Additionally, we sell excess component inventory to distributors and other users of memory integrated circuits. For information regarding our concentrations and customers, see Note 10 “Major Customers, Suppliers and Products” of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

Specialty DIMMs and Embedded Flash

A small portion of our net product sales is from OEM sales of specialty memory modules and flash-based products, the majority of which are utilized in data center and industrial applications. When developing custom modules for an OEM system launch, we engage with our OEM customers from the earliest stages of new product development definition, providing us valuable insight into their full range of system architecture and performance requirements. This close collaboration has also allowed us to develop a significant level of systems expertise. We leverage a portfolio of proprietary technologies and design techniques, including efficient planar design, alternative packaging techniques and custom semiconductor logic, to deliver memory subsystems with persistence, high density, small form factor, high signal integrity, attractive thermal characteristics, reduced power consumption and low cost per bit.

Customers

We resell certain component products that we purchase for the purpose of resale to certain end-customers that are not reached in the distribution models of the component manufacturers, including storage customers, appliance customers, system builders and cloud and datacenter customers. We also market and sell our memory subsystem products, primarily to OEMs in the server, high-performance computing and communications markets.

Our target markets are characterized by a limited number of large companies, and consolidation in one or more of our target markets may further increase this concentration. As a result, sales to small numbers of customers have historically represented a substantial portion of our net product sales. Additionally, the composition of major customers and their respective contributions to our net product sales have fluctuated and will likely continue to fluctuate from period to period as our existing and prospective customers progress through the life cycle of the products they produce and sell and experience resulting fluctuations in their product demand. For further information about our customer concentrations, see Note 10 “Major Customers, Suppliers and Products” to our consolidated financial statements in Part II, Item 8 of this Form 10-K. We do not consider our businesses to be seasonal to any significant degree.

We do not have long-term agreements with any of our customers. Instead, our product sales are made primarily pursuant to stand-alone purchase orders that we often receive no more than two weeks in advance of the desired delivery date and that may be rescheduled or cancelled on relatively short notice, which reduces our backlog of firm orders. Customers are generally allowed limited rights of return for up to 30 days, except for sales of excess inventories, which contain no right-of-return privileges.

Additionally, we offer warranties on our memory subsystems generally ranging from one to three years, depending on the product and negotiated terms of purchase orders from our customers. These warranties require us to repair or replace defective products returned to us during such warranty period at no cost to the customer.

Sales and Marketing

We primarily market and sell our products and the component products we resell through a direct sales force and a network of independent sales representatives. Our sales activities focus primarily on developing strong relationships at the technical, marketing and executive management levels within existing and prospective customers in our target markets.

We utilize well-trained, highly technical program management teams to drive new product development and quickly respond to our customers' needs and expectations. Our program management teams provide quick response times and act as a single point-of-contact for customer's issues that may arise during the sales process. Additionally, they help us address the long-term business and technology goals of our customers. We employ a team approach to business development whereby our sales team and independent representatives identify, qualify and prioritize customer prospects through offices in a number of locations worldwide.

Resources

Manufacturing

We manufacture memory subsystem products at our facility in the People's Republic of China ("PRC"), which is certified in International Organization for Standardization ("ISO") 9001:2008 Quality Management Systems and ISO 14001:2004 Environmental Management Standards. Our in-house manufacturing function, combined with our engineering and design capabilities, allows us to assemble our memory subsystems quickly and in high volume. Our manufacturing facility is capable of surface mount assembly, subsystem testing, system-level burn-in testing, programming, marking, labeling and packaging. Manufacturing cycle times for our memory subsystem products, from receipt of order, are typically one week or less and in some cases as short as two days.

We schedule production based on purchase order commitments and anticipated orders. We release raw materials to the manufacturing floor by means of an online shop floor control system, which allows for internal quality analysis, direct access to inventory information and production floor material tracking. We have a flexible manufacturing workforce, which allows us to manage unforecasted demand.

We perform ongoing reliability testing on our memory subsystems and share the results of that testing with our customers. In addition, we have implemented procedures that require all of our memory subsystems to undergo functional and system burn-in testing prior to delivery to a customer. We also supplement our test capabilities with advanced imaging technology to inspect the quality of our assemblies.

Supply Chain

We acquire components and materials, such as field-programmable gate arrays ("FPGAs"), ASICs, DRAM ICs and NAND flash, directly from integrated circuit manufacturers and assemble them into our finished subsystem products. We have developed supplier relationships with several manufacturers of these component products, and we typically qualify our memory subsystem products with our customers using multiple component manufacturers. However, our actual purchases of component products, both for integration into our products and for resale, are concentrated in a small number of suppliers. Various factors could impact the availability of materials or components, and shortages or increases in lead times have occurred in the past, are currently occurring with respect to some materials and components, and may occur from time to time in the future.

We order component products based primarily on forecasts of customer demand, which subjects us to certain inventory risks in the event our forecasts are not accurate. In order to mitigate these inventory risks, we seek to resell to distributors and other users of memory integrated circuits excess quantities of the component inventories we have purchased for integration in our memory subsystem products. Our quality assurance engineers work with our suppliers to ensure that the raw materials we receive meet our quality standards. These engineers also perform on-site supplier factory audits and use our internal test and inspection systems to verify that purchased components and materials meet

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our specifications. Our supplier quality program and incoming material quality control program are important aspects of our manufacturing and sale processes.

Patents

As of December 31, 2022, we had over 100 patents, which have various terms expiring through 2041. Our issued patents cover various aspects of our innovations and include various claim scopes and, as a result, we believe our business is not materially dependent on any one claim in any of our existing patents or pending patent applications.

Competition

Our products are primarily targeted to OEMs in the server, high-performance computing and communications markets. In addition, we resell certain component products to storage customers, appliance customers, system builders and cloud and datacenter customers. These markets are intensely competitive, as numerous companies vie for business opportunities at a limited number of large OEMs and other customers. We face competition from DRAM suppliers, memory module providers and logic suppliers for many of our products. Additionally, if and to the extent we enter new markets or pursue licensing arrangements to monetize our technologies and intellectual property portfolio, we may face competition from a large number of competitors that produce solutions utilizing similar or competing technologies.

Some of our customers and suppliers may have proprietary products or technologies that are competitive with our products or the components we resell to them, or could develop internal solutions or enter into strategic relationships with, or acquire, other high-density memory module or component providers. Any of these actions could reduce our customers' demand for our products or the component products we resell. Additionally, some of our significant suppliers could choose to sell component products to customers directly, which would adversely affect our ability to resell these products, or choose to manufacture competitive memory subsystem products themselves or reduce our supply of essential components of our products, which could adversely affect our ability to manufacture and sell our memory subsystems.

We believe the principal competitive factors in the selection of memory subsystems or the component products we resell by existing and potential future customers are:

- price;
- timeliness of new value-add product introductions;
- development of advanced technologies;
- fulfillment capability and flexibility;
- understanding of system and business requirements;
- design characteristics and performance;
- quality and reliability;
- track record of volume delivery; and
- credibility with the customer

We believe we compete favorably with respect to these factors. However, our target markets could disagree, or circumstances could change with respect to one or more of these competitive factors. Further, we believe our ability to compete in our current target markets and potential future markets will depend in part on our ability to successfully and timely develop, introduce and sell at attractive prices new and enhanced products or technologies and otherwise respond to changing market requirements, which we may not be able to do faster and better than our competitors. Moreover, many of our competitors have substantially greater financial, technical, marketing, distribution and other resources, broader product lines, lower cost structures, greater brand recognition, more influence on industry standards, more extensive or established patent portfolios and longer standing relationships with customers and suppliers. We may not be able to compete effectively against any of these organizations. If we are unable to compete effectively, then our market position and prospects could deteriorate and our revenues could decline.

Research and Development

Our industry is characterized by rapid technological change, evolving industry standards and rapid product obsolescence. As a result, continuous development of new technology, processes and product innovation is necessary in order to be successful. We believe the continued and timely development of new products and improvement of existing products are critical to our business and prospects for growth.

Our research and development activities are conducted at our headquarters in Irvine, California. Our engineering team delivers innovative solutions with a focus on meeting our customers' performance requirements with our expertise in computer architectures, system memory, subsystem design and memory software, ASIC design, as well as high density PCB design and thermal management. Our engineers focus on developing and incorporating new techniques, methodologies and processes for testing and manufacturing our products. Our engineers also collaborate with our customers to provide us with insights into and expertise in systems architecture, power budget, performance requirements, operating environment (such as air flow and operating temperature) and any mechanical constraints.

We have invested significant resources in our product research and development efforts. Our customers typically do not separately compensate us for design and engineering work involved in developing application-specific products for them.

Human Capital

As of December 31, 2022, we had approximately 100 full-time and part-time employees globally. Our future success will depend in part on our ability to attract, retain and motivate highly qualified technical, managerial and other personnel for whom competition is intense. We are not party to any collective bargaining agreements with any of our employees. We have never experienced a work stoppage, and we believe our employee relations are good.

We promote an atmosphere of mutual respect and recognize that diversity creates differences in perspective that strengthens our business. It is our practice to hire, motivate and retain people solely on the basis of ability, experience, training and future potential. We invest in our workforce by offering competitive salaries, incentives, and benefits. Our incentives are meritocracy-based and we have a strong pay for performance culture that we believe drives superior results.

We offer our employees opportunities to advance their careers at Netlist. We are focused on leadership progression and encourage our employees to take advantage of new opportunities.

Government Regulations

We are subject to various and frequently changing U.S. federal, state and local and foreign laws and regulations relating to the protection of the environment, including laws governing the discharge of pollutants into the air and water, the management and disposal of hazardous substances and wastes and the clean-up of contaminated sites. In particular, some of our manufacturing processes may require us to handle and dispose of hazardous materials from time to time. For example, in the past our manufacturing operations have used lead-based solder in the assembly of our products. Today, we use lead-free soldering technologies in our manufacturing processes, as this is required for products entering the European Union. We could incur substantial costs, including clean-up costs, civil or criminal fines or sanctions and third-party claims for property damage or personal injury, as a result of violations of or noncompliance with these and other environmental laws and regulations. Although we have not incurred significant costs to date to comply with these laws and regulations, new laws or changes to current laws and regulations to make them more stringent could require us to incur significant costs to remain in compliance.

We also may be subject to a variety of laws and regulations relating to other matters, including workplace health and safety, labor and employment, foreign business practices (including the U.S. Foreign Corrupt Practices Act and applicable foreign anti-bribery laws), data protection, public reporting and taxation, among others. It is difficult and costly to manage the requirements of every authority having jurisdiction over our various activities and to comply with

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their varying standards. Any changes to existing regulations or adoption of new regulations may result in significant additional expense to us or our customers. Further, our failure to comply with any applicable laws and regulations may result in a variety of administrative, civil and criminal enforcement measures, including monetary penalties or imposition of sanctions or other corrective requirements.

Available Information

Information about us is available at our website, www.netlist.com, to which we regularly post copies of our press releases as well as additional information about us. Our filings are available free of charge on our website as soon as reasonably practicable after they are electronically filed with, or furnished to the Securities and Exchange Commission (“SEC”), including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy and information statements and amendments to these reports or statements. All SEC filings are also available at the SEC’s website at www.sec.gov. Our website also contains copies of our corporate governance guidelines, code of business conduct and ethics, insider trading policy and whistleblower policy. The information contained on the websites referenced in this Form 10-K is not incorporated by reference into this filing. Further, our references to website URLs are intended to be inactive textual references only.

Item 1A. Risk Factors

Summary of Risk Factors

The risk factors summarized and detailed below could materially harm our business, operating results, financial condition, impair our future growth prospects and/or cause the price of our common stock to decline. These are not all of the risks we face and other factors not presently known to us or that we currently believe are immaterial may also affect our business if they occur. In assessing these risks, you should also review the other information contained in this report, including our consolidated financial statements and accompanying notes, and the other filings we make with the SEC. Material risks that may affect our business, operating results and financial condition include, but are not necessarily limited to, those relating to the following:

Risks Related to Our Business, Operations and Industry

- Significant increases in worldwide supply of semiconductor memory and storage could lead to declines in demand and average selling prices for our products, which could materially and adversely affect our business, results of operations, or financial condition;
- We have historically incurred losses and may continue to incur losses;
- The vast majority of our net product sales in recent periods have been generated from resales of component products, including products sourced from SK hynix, and any decline in these product resales could significantly harm our performance;
- We face risks related to the impact of the COVID-19 pandemic and the related protective public health measures;
- We are subject to risks relating to our focus on developing our CXL products for our target customer markets;
- Sales to a small number of customers have historically represented a significant portion of our net product sales, and the loss of, or a significant reduction in sales to, any one of these customers could materially harm our business;
- We are subject to risks of disruption in the supply of component products;
- Our customers require that our products undergo a lengthy and expensive qualification process without any assurance of sales;
- If we are unable to timely and cost-effectively develop new or enhanced products that achieve customer and market acceptance or technologies we can monetize, our revenues and prospects could be materially harmed;
- We face intense competition in our industry, and we may not be able to compete successfully in our target markets;

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- Our operating results may be adversely impacted by worldwide economic and political uncertainties and specific conditions in the markets we address and in which we or our strategic partners or competitors do business, including ongoing effects of the COVID-19 pandemic and the cyclical nature of and volatility in the memory market and semiconductor industry;
- Our lack of a significant backlog of unfilled orders and the difficulty inherent in estimating customer demand makes it difficult to forecast our short-term requirements, and any failure to optimally calibrate our production capacity and inventory levels to meet customer demand could adversely affect our revenues, gross margin and earnings;
- Declines in our average sale prices, driven by volatile prices for components and other factors, may result in declines in our revenues and gross margin;
- Our manufacturing operations involve significant risks;
- We depend on third parties to design and manufacture components for our products and the component products we resell, which exposes us to risks;
- If our products or the component products we resell do not meet quality standards or are defective or used in defective systems, we may be subject to quality holds, warranty claims, recalls or liability claims;
- Our indemnification obligations for the infringement by our products of the rights of others could require us to pay substantial damages;
- We depend on certain key employees, and our business could be harmed if we lose the services of any of these employees or are unable to attract and retain other qualified personnel;
- We rely on our internal and third-party sales representatives to market and sell our products and the component products we resell, and any failure by these representatives to perform as expected could reduce our sales;
- Our operations could be disrupted by power outages, natural disasters, cyber-attacks or other factors;
- Difficulties with our global information technology systems, including any unauthorized access or cyber-attacks, could harm our business;
- If we do not effectively manage any future growth we may experience, our resources, systems and controls may be strained and our results of operations may suffer;
- If we acquire businesses or technologies or pursue other strategic transactions or relationships in the future, these transactions could disrupt our business and harm our operating results and financial condition;
- Increased prices and inflation could negatively impact our margin performance and our financial results; and
- Geopolitical risks associated with Russia's invasion of Ukraine could result in increased market volatility and uncertainty, which could negatively impact our business, financial condition, and results of operations.

Risks Related to Laws and Regulations

- We are exposed to additional business, regulatory, political, operational, financial and economic risks related to our international sales and operations;
- Our failure to comply with environmental and other applicable laws and regulations could subject us to significant fines and liabilities or cause us to incur significant costs;
- Regulations related to “conflict minerals” may cause us to incur additional expenses and could limit the supply and increase the cost of certain metals used in manufacturing our products;
- We have identified a material weakness in our internal control over financial reporting. If we are unable to remediate the material weakness, or if we identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect our business; and
- We are required to comply with certain provisions of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (“SOX”), that place significant demands on our resources, and the transition to the higher reporting and control standards that applies to us as a “large accelerated filer” may cause management distraction and increased costs.

Risks Related to Intellectual Property and Litigation

- We may be unsuccessful in monetizing our intellectual property portfolio;
- We are and expect to continue to be involved in other legal and administrative proceedings to enforce or protect our intellectual property rights and to defend against claims that we infringe the intellectual property rights of others;
- If our proprietary rights are not protected, our customers or our competitors might gain access to our proprietary designs, processes and technologies, which could adversely affect our operating results; and
- We may become involved in non-patent related litigation and administrative proceedings that may materially adversely affect us.

Risks Related to Capitalization and Financial Markets

- We may not have sufficient working capital to fund our planned operations, and, as a result, we may need to raise additional capital in the future, which may not be available when needed, on acceptable terms or at all;
- The price and trading volume of our common stock has and may continue to fluctuate significantly in reaction to real or perceived developments in our business;
- We have incurred a material amount of indebtedness to fund our operations, the terms of which have required us to pledge substantially all of our assets as security. Our level of indebtedness and the terms of such indebtedness could adversely affect our operations and liquidity;
- There is a limited market for our common shares, and the trading price of our common shares is subject to volatility;
- Future issuances of our common stock or rights to purchase our common stock, including pursuant to our equity incentive plans, could result in additional dilution to the percentage ownership of our stockholders and could cause the price of our common stock to decline;
- Sales of our common stock, or the perception that such sales could occur, could cause the market price of our stock to drop significantly, regardless of the state of our business;
- As a sole director, Chun K. Hong has significant control over all corporate decisions that may not be in the best interest of our other stockholders;
- Anti-takeover provisions under our charter documents and Delaware law, as well as our rights agreement, could delay or prevent a change of control and could also limit the market price of our common stock; and
- We do not currently intend to pay dividends on our common stock, and any return to investors is expected to result, if at all, only from potential increases in the price of our common stock.

Risks Related to Our Business, Operations and Industry

Significant increases in worldwide supply of semiconductor memory and storage could lead to declines in demand and average selling prices for our products, which materially and adversely affect our business, results of operations or financial condition.

Our suppliers generally seek to increase wafer output, improve yields, and reduce die size, which could result in significant increases in worldwide supply and downward pressure on prices. Increases in worldwide supply of semiconductor memory and storage also result from fabrication capacity expansions, either by way of new facilities, increased capacity utilization, or reallocation of other semiconductor production to semiconductor memory and storage production. Increases in worldwide supply of semiconductor memory and storage could lead to declines in average selling prices and a decrease in short-term and/or long-term demand resulting in industry oversupply and could materially adversely affect our business, results of operations, or financial condition.

We have historically incurred losses and may continue to incur losses.

Since the inception of our business in 2000, we have only experienced two fiscal years (2006 and 2021) with profitable results. In order to sustain profitability, or to achieve and sustain positive cash flows from operations, we must

reduce operating expenses and/or increase our revenues and gross margin. Although we have in the past engaged in a series of cost reduction actions, such expense reductions alone will not make us profitable or allow us to sustain profitability if it is achieved, and eliminating or reducing strategic initiatives could limit our opportunities and prospects. Our ability to sustain profitability will depend on increased revenue growth from, among other things, increased demand for our product offerings and our ability to monetize our intellectual property. We may not be successful in any of these pursuits, and we may not be able to sustain profitability if achieved.

The vast majority of our net product sales in recent periods have been generated from resales of component products, including products sourced from SK hynix, and any decline in these product resales could significantly harm our performance.

The vast majority of our net product sales in recent periods have been generated from resales of component products, including solid-state drives (“SSDs”), NAND flash and DRAM products. We resell these component products to end-customers that are not reached in the distribution models of the component manufacturers, including storage customers, appliance customers, system builders and cloud and datacenter customers.

These component product resales are subject to a number of risks. For example, demand for these products could decline at any time for a number of reasons, including, among others, changing customer requirements or preferences, product obsolescence, introduction of more advanced or otherwise superior competing products by our competitors, the ability of our customers to obtain these products or substitute products from alternate sources (including from the manufacturer directly), customers reducing their need for these products generally, or the other risk factors described in this report. We have no long-term agreements or other commitments with respect to sales of these or any of the other products we sell. As a result, any decrease in demand for these products from us would reduce our sale levels and could materially adversely impact our revenues. Additionally, opportunistic purchases of products for resale, when coupled with a decrease in demand, may cause us to write off excess inventory which would adversely affect our operating performance.

We may experience supply shortages at any time and for a variety of reasons, including, among others, spikes in customer demand that cannot be satisfied, any problems that arise with SK hynix’s manufacturing operations or facilities that cause disruptions or delays, including from the recent COVID-19 pandemic, or any failure to comply with the terms of the agreements regarding the supply of these products. If we choose, or if we are forced, to seek to supply the component products we resell from other suppliers, we may not be able to identify other suppliers that are available and able to produce the particular components with the specific product specifications and in the quantities our customers require, or we may not be able to make arrangements with any other suppliers in a timely manner to avoid delays in satisfying customer orders. Further, even if we are able to make arrangements with other suppliers for sufficient component products to replace any undersupply from SK hynix, we may not be able to make these arrangements on financial and other terms comparable to those we have negotiated with SK hynix. As a result, any inability to obtain sufficient component products from SK hynix could increase our cost of sales for component product resales if we are forced to pay higher prices to obtain the products from other suppliers. Moreover, all of our supply arrangements for these component products and any arrangements we may establish with other suppliers, are subject to the other supply and manufacturing risks discussed elsewhere in these risk factors.

Increased reliance on product resales also has a substantial impact on our results of operations. Because the cost of the component products we purchase for resale is added to our cost of sales for these products, our gross margin on resales of component products is significantly lower than our gross margin on sales of our own memory subsystem products. As a result, increased resales of component products as a percentage of our total product sales have a significant negative impact on our gross margin and gross margin percentage. This gross margin and gross margin percentage differential between memory product sales and component product resales would be amplified if our costs to purchase component products were to increase. The occurrence of any one or more of these risks could cause our performance to materially suffer.

We face risks related to the impact of the COVID-19 pandemic and the related protective public health measures.

COVID-19 has spread globally and has resulted in authorities imposing, and businesses and individuals implementing, numerous unprecedented measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter-in-place/stay-at-home and social distancing orders, and shutdowns. These measures have impacted and may further impact our workforce and operations, the operations of our customers, and those of our respective vendors, suppliers, and partners. The ultimate impact and efficacy of government measures and potential future measures is currently unknown. In addition, the continued spread of COVID-19 variants, or the occurrence of other epidemics could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, resulting in an economic downturn that could affect demand for our products and further adversely impact our results of operations.

There are numerous uncertainties associated with the COVID-19 outbreak, including the number of individuals who will become infected, whether vaccination level will increase sufficiently to stop the spread of COVID-19 and its variants, and the extent of the protective and preventative measures that have been put in place by both governmental entities and other businesses and those that may be put in place in the future. Any or all of the foregoing uncertainties could have a material adverse effect on our results of operations, financial position and/or cash flows.

We are subject to risks relating to our focus on developing our CXL products for our target customer markets.

We have historically derived revenues from sales of our high-performance modular memory subsystems to OEM in the server, high-performance computing and communications markets. Although we expect these memory subsystems to continue to account for a portion of our revenues, we have experienced declines in sales of these products in recent periods, and these declines could continue or intensify in the future. We believe market acceptance of these products or derivative products that incorporate our core memory subsystem technology is critical to our success, and any continued decline in sales of these products could have a material adverse impact on our performance and long-term prospects.

We have invested significant research and development time and capital in the design of ASIC and hybrid devices, including our CXL technology-based memory expansion controller. These products are subject to significant risks, including:

- we are dependent on a limited number of suppliers for the SSDs, DRAM ICs, NAND flash and ASIC devices that are essential to the functionality of these products, and in the past, we have experienced supply chain disruptions and shortages of SSDs, DRAM and NAND flash required to create these products as a result of issues that are specific to our suppliers or the industry as a whole;
- CXL and some of our other next-generation products may require additional time including the services and attention of key employees who have competing demands on their available time and may require capital investment to bring the products to market;
- our development and commercialization strategies for these products;
- we are required to demonstrate the quality and reliability of our products to and qualify them with our customers before purchases are made, which requires investments of time and resources in significant and unpredictable amounts prior to the receipt of any revenues from these customers; and
- our memory expansion controller products or other new products, such as CXL, may contain currently undiscovered flaws, the correction of which could result in increased costs and time to market.

These and other risks associated with our memory subsystem products could impair our ability to obtain customer or market acceptance of these products or obtain such acceptance in a timely manner, which would reduce our achievable revenues from these products and limit our ability to recoup our investments in developing these technologies.

Additionally, if the demand for servers deteriorates, if the demand for our products to be incorporated in servers continues to decline, or if demand for our products deteriorates because customers in our other target markets change

their requirements or preferences or otherwise reduce their need for these types of products generally, our operating results would be adversely affected, and we would be forced to diversify our product portfolio and our target customer markets in order to try to replace revenues lost from the further decreases in product sales. We may not be able to achieve this diversification, and any inability to do so may adversely affect our business, operating performance and prospects.

Sales to a small number of customers have historically represented a significant portion of our net product sales, and the loss of, or a significant reduction in sales to, any one of these customers could materially harm our business.

Our target markets are characterized by a limited number of large companies, and consolidation in one or more of these markets may further increase this concentration. As a result, sales to small numbers of customers have historically represented a substantial portion of our net product sales, and we expect this concentration to continue. Additionally, the composition of major customers and their respective contributions to our net product sales have fluctuated and will likely continue to fluctuate from period to period as our existing and prospective customers progress through the life cycle of the products they produce and sell and experience resulting fluctuations in their product demand. We believe our performance depends in significant part on our ability to establish and maintain relationships with and effect substantial sales to our large customers.

We do not have long-term agreements with any of our customers and, as result, any or all of them could decide at any time to decrease, delay or discontinue their purchase of our products or the component products we resell. In addition, the prices customers pay for products are subject to fluctuations, and large or key customers may exert pressure on us to make concessions in the prices at which we sell products to them. Further, we may not be able to sell some of our products developed for one customer to a different customer because our products are often customized to address specific customer requirements, and even if we are able to sell these products to another customer, our margin on these products may be reduced. Additionally, although customers are generally allowed only limited rights of return after purchasing our products or the component products we resell, we may determine that it is in our best interest to accept returns from certain large or key customers even if we are not contractually obligated to accept them in order to maintain good relations with these customers. Any returns beyond our expectations could negatively impact our operating results. Moreover, because a few customers often account for a substantial portion of our net product sales, the failure of any one of these customers to pay on a timely basis would negatively impact our cash flows. As a result, our net product sales and operating results could be materially adversely affected by the loss of any of our customers, particularly our large or key customers, a decrease in product sales to any of our customers, including as a result of normal fluctuations in demand or other factors, reductions in the prices at which we sell products to any of our customers, including as a result of price concessions or general declines in average sale prices, or difficulties collecting payments from any of our customers.

Our ability to maintain or increase our product sales to our key customers depends on a variety of factors, many of which are beyond our control. These factors include our customers' continued sales of servers and other computing systems that incorporate our memory subsystems, our customers' continued incorporation of our products or the component products we resell into their systems, and our customers' sales activity and business results. Because of these and other factors, sales to these customers may not continue and the amount of such sales may not reach or exceed historical levels in any future period.

We are subject to risks of disruption in the supply of component products.

Our ability to fulfill customer orders for or produce qualification samples of our memory subsystem products, as well as orders for the component products we resell, is dependent on a sufficient supply of SSDs, FPGAs, ASICs, DRAM ICs and NAND flash, which are essential components of our memory subsystems. Further, there are a relatively small number of suppliers of these components, and we typically purchase from only a subset of these suppliers. As a result, our inventory purchases have historically been concentrated in a small number of suppliers, including SK hynix, from which we obtained a large portion of our component products purchased for resale. We also use consumables and other components, including PCBs, to manufacture our memory subsystems, which we sometimes procure from single or limited sources to take advantage of volume pricing discounts.

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From time to time, shortages in SSDs, DRAM ICs and NAND flash have required some suppliers to limit the supply of these components. In the past, we have experienced supply chain disruptions and shortages of SSDs, DRAM and NAND flash required to create certain of our memory subsystem products, and we have been forced to procure the component products we resell from other suppliers to the extent sufficient product is not available from SK hynix to meet customer demand or in the event of other SK hynix supply issues. We are continually working to secure adequate supplies of the components necessary to fill customers' orders in a timely manner. If we are unable to obtain a sufficient supply of SSDs, DRAM ICs, NAND flash or other essential components, as a result of a natural disaster, political unrest military conflict, medical epidemics, such as the COVID-19 pandemic, climate change, economic instability, equipment failure or other cause, to avoid interruptions or failures in the delivery of our products as required by our customers or the delivery of these components to customers to whom we resell them directly, these customers may reduce future orders for these products or not purchase these products from us at all, which could cause our net product sales to decline and harm our operating results. In addition, our reputation could be harmed due to failures to meet our customers' demands and, even assuming we are successful in resolving supply chain disruptions, we may not be able to replace any lost business and we may lose market share to our competitors. Further, if our suppliers are unable to produce qualification samples of our products on a timely basis or at all, we could experience delays in the qualification process with existing or prospective customers, which could have a significant impact on our ability to sell our products. Moreover, if we are not able to obtain these components in the amounts needed on a timely basis and at commercially reasonable prices, we may not be able to develop or introduce new products, we may experience significant increases in our cost of sales if we are forced to procure components from alternative suppliers and are not able to negotiate favorable terms with these suppliers, or we may be forced to cease our sales of products dependent on the components or resales of the components we sell to customers directly.

Our dependence on a small number of suppliers and the components we resell expose us to several risks, including the inability to obtain an adequate supply of these components, increases in their costs, delivery delays and poor quality. Additionally, our customers qualify certain of the components provided by our suppliers for use in their systems. If one of our suppliers experiences quality control or other problems, it may be disqualified by one or more of our customers. This would disrupt our supplies of these components, and would also reduce the number of suppliers available to us and may require that we qualify a new supplier, which we may not be able to do.

Declines in customer demand for our products in recent periods have caused us to reduce our purchases of SSDs, DRAM ICs and NAND flash for use as components in our products. Such declines or other fluctuations could continue in the future. If we fail to maintain sufficient purchase levels with some suppliers, our ability to obtain supplies of these raw materials may be impaired due to the practice of some suppliers of allocating their products to customers with the highest regular demand.

Frequent technology changes and the introduction of next-generation versions of component products may also result in the obsolescence of our inventory on-hand, which could involve significant time and costs to replace, reduce our net product sales and gross margin and adversely affect our operating performance and financial condition.

Our customers require that our products undergo a lengthy and expensive qualification process without any assurance of sales.

Our prospective customers generally test and evaluate our memory subsystems before purchasing our products and integrating them into their systems. This extensive qualification process involves rigorous reliability testing and evaluation of our products, which may continue for nine months or longer and is often subject to delays. In addition to qualification of specific products, some of our customers may also require us to undergo a technology qualification if our product designs incorporate innovative technologies that the customer has not previously encountered. Such technology qualifications often take substantially longer than product qualifications and can take over a year to complete. Even after our products are qualified with existing or new customers, the customer may take several months to begin purchasing the product or may decide not to purchase the product at all, as qualification does not ensure product sales. As a result, we could receive no or limited revenues from a customer even after our investment of time and resources in the qualification process with this customer, which could adversely affect our operating results.

Even after successful qualification and sales of our products to a customer, because the qualification process is both product-specific and platform-specific, our existing customers sometimes require us to re-qualify our products or to qualify our new products for use in new platforms or applications. For example, as our OEM customers transition from prior generation architectures to current generation architectures, we must design and qualify new products for use by these customers. Our net product sales to these customers can decline significantly during this re-qualification process.

Likewise, changes in our products, our manufacturing facilities, our production processes or our component suppliers may require a new qualification process. For example, if our memory, SSDs, NAND flash and DRAM component suppliers discontinue production of these components, it may be necessary for us to design and qualify new products for our customers. As a result, some customers may require us, or we may decide, to purchase an estimated quantity of discontinued memory components necessary to ensure a steady supply of existing products until products with new components can be qualified. Purchases of this nature may affect our liquidity. Additionally, our forecasts of quantities required during the transition may be incorrect, which could adversely impact our results of operations through lost revenue opportunities or charges related to excess and obsolete inventory.

We must devote substantial resources, including design, engineering, sales, marketing and management efforts, to qualify our products with prospective customers in anticipation of sales. Significant delays or other difficulties in the qualification process could result in an inability to keep pace with rapid technology change or new competitive products. If we experience delays or do not succeed in qualifying a product with an existing or prospective customer, we would not be able to sell that product to that customer, which may result in excess and obsolete inventory that we may not be able to sell to another customer and could reduce our net product sales and customer base, any of which could materially harm our operating results and business.

If we are unable to timely and cost-effectively develop new or enhanced products that achieve customer and market acceptance or technologies we can monetize, our revenues and prospects could be materially harmed.

Our industry is characterized by rapid technological change, evolving industry standards and rapid product obsolescence. As a result, continuous development of new technology, processes and product innovations is necessary in order to be successful. We believe the continued and timely development of new products and technologies and improvement of existing products and technologies are critical to our business and prospects for growth.

In order to develop and introduce new or enhanced products and technologies, we need to:

- retain and continue to attract new engineers with expertise in memory subsystems and our key technology competencies;
- identify and adjust to the changing requirements and preferences of our existing and potential future customers and markets;
- identify and adapt to emerging technological trends and evolving industry standards in our markets;
- continue to develop and enhance our design tools, manufacturing processes and other technologies on which we rely to produce new products or product enhancements;
- design and introduce cost-effective, innovative and performance-enhancing features that differentiate our products and technologies from those of our competitors;
- secure licenses to enable us to use any technologies, processes or other rights essential to the manufacture or use of any new products or product enhancements we may develop, which licenses may not be available when needed, on acceptable terms or at all;
- maintain or develop new relationships with suppliers of components required for any new or enhanced products and technologies;
- qualify any new or enhanced products for use in our customers' products; and
- develop and maintain effective commercialization and marketing strategies.

We may not be successful at any of these activities. As a result, we may not be able to successfully develop new or enhanced products or technology or we may experience delays in this process. Failures or delays in product development and introduction could result in the loss of, or delays in generating, net products sales or other revenues and

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the loss of key customer relationships. Even if we develop new or enhanced products or technologies, they may not meet our customers' requirements, gain market acceptance or attract monetization opportunities, as our product and technology development efforts are inherently risky due to the challenges of foreseeing changes or developments in technology, predicting changes in customer requirements or preferences or anticipating the adoption of new industry standards. Moreover, we have invested significant resources in our product and technology development efforts, which would be lost if we fail to generate revenues from these efforts. If any of these risks occur, our revenues, prospects and reputation could be materially adversely affected.

We face intense competition in our industry, and we may not be able to compete successfully in our target markets.

Our products are primarily targeted to OEMs in the server, high-performance computing and communications markets. In addition, we resell certain component products to storage customers, appliance customers, system builders and cloud and datacenter customers. These markets are intensely competitive, as numerous companies vie for business opportunities at a limited number of large OEMs and other customers. We face competition from DRAM suppliers, memory module providers and logic suppliers for many of our products. We also face competition from the manufacturers and distributors of the component products we resell to customers, as these manufacturers and distributors could decide at any time to sell these component products to these customers directly. Additionally, if and to the extent we enter new markets or pursue licensing arrangements to monetize our technologies and intellectual property portfolio, we may face competition from a large number of competitors that produce solutions utilizing similar or competing technologies.

Some of our customers and suppliers may have proprietary products or technologies that are competitive with our products or the components we resell to them or could develop internal solutions or enter into strategic relationships with, or acquire, other high-density memory module or component providers. Any of these actions could reduce our customers' demand for our products or the component products we resell. Additionally, some of our significant suppliers could choose to sell component products to customers directly, which would adversely affect our ability to resell these products, or may choose to manufacture competitive memory subsystem products themselves or reduce our supply of essential components of our products, which could adversely affect our ability to manufacture and sell our memory subsystems.

We believe our ability to compete in our current target markets and potential future markets will depend in part on our ability to successfully and timely develop, introduce and sell at attractive prices new and enhanced products or technologies and otherwise respond to changing market requirements, which we may not be able to do faster and better than our competitors. Moreover, many of our competitors have substantially greater financial, technical, marketing, distribution and other resources, broader product lines, lower cost structures, greater brand recognition, more influence on industry standards, more extensive or established patent portfolios and longer standing relationships with customers and suppliers. We may not be able to compete effectively against any of these organizations. If we are unable to compete effectively, then our market position and prospects could deteriorate and our revenues could decline.

Our operating results may be adversely impacted by worldwide economic and political uncertainties and specific conditions in the markets we address and in which we or our strategic partners or competitors do business, including ongoing effects of the COVID-19 pandemic and the cyclical nature of and volatility in the memory market and semiconductor industry.

Changes in domestic and global economic and political conditions make it difficult for our customers, our vendors and us to accurately forecast and plan future business activities, and these conditions have caused and could continue to cause U.S. and foreign businesses to slow or decrease spending on our products and the products we resell.

In addition, sales of our products and the products we resell are dependent on demand by customers in our target markets. These markets are characterized by wide fluctuations in product supply and demand and have been cyclical in the past, which may result in substantial period-to-period fluctuations in our operating results. In addition, these markets have in the past experienced significant downturns, often connected with or in anticipation of maturing product cycles, reductions in technology spending and declines in general economic conditions. During these downturns, product demand diminishes, production capacity exceeds demand, inventory levels increase and average sale prices

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decline, all of which would materially adversely impact our business and operating results. In addition, because many of our costs and operating expenses are relatively fixed, if we are unable to control our expenses adequately in response to reduced product demand and sales, our gross margin and cash flows would be negatively impacted. Further, such a downturn could decrease the perceived value of our intellectual property portfolio and reduce our ability to pursue our intellectual property monetization objectives.

During challenging economic times, our customers may face challenges gaining timely access to sufficient credit, which could impair their ability to make timely payments to us. This may negatively affect our liquidity and cash flows and require us to increase our allowance for doubtful accounts. Furthermore, our vendors may face similar issues gaining access to credit, which may limit their ability to supply components or provide trade credit to us.

We cannot predict the timing, strength or duration of any economic slowdown or subsequent economic recovery, either generally or in our customer markets. If the economy or markets in which we operate experience such a slowdown, our business, financial condition and results of operations could be materially and adversely affected. The combination of our lengthy sales cycle coupled with any challenging macroeconomic conditions could compound the negative impact of any such downturn on the results of our operations.

Our lack of a significant backlog of unfilled orders and the difficulty inherent in estimating customer demand makes it difficult to forecast our short-term requirements, and any failure to optimally calibrate our production capacity and inventory levels to meet customer demand could adversely affect our revenues, gross margin and earnings.

We make significant decisions regarding the levels of business we will seek and accept, production schedules, component procurement, personnel needs and other resource requirements based on our estimates of customer demand. We do not have long-term agreements with any of our customers. Instead, our product sales are made primarily pursuant to stand-alone purchase orders that we often receive no more than two weeks in advance of the desired delivery date and that may be rescheduled or cancelled on relatively short notice. The short-term nature of the commitments by many of our customers and our customers' ability to cancel or defer purchase orders for any reason reduces our backlog of firm orders and our ability to accurately estimate future customer requirements for our products or the component products we resell. These facts, combined with the short turnaround times that apply to most orders, makes it difficult to predict our production and inventory needs and allocate production capacity and capital for inventory purchases effectively. As a result, we attempt to forecast the demand for the components needed to manufacture our products and to resell to customers directly, but any such forecasts could turn out to be wrong. Further, lead times for components vary significantly and depend on various factors, such as the specific supplier and the demand and supply for a component at any given time.

Our production expense and component purchase levels are to a large extent fixed in the short term. As a result, we may be unable to adjust spending on a timely basis to compensate for any unexpected shortfall in customer orders. If we overestimate customer demand, we may have excess component or finished goods inventory, which may not be able to be used in other products or resold and may become obsolete before any such use or resale. If there is a subsequent decline in the prices of components, the value of our inventory would fall and we may be required to write-down the value of our component inventory, which may result in a significant increase in our cost of sales and decrease in our gross margin. In the past, we have had to write-down inventory due to obsolescence, excess quantities and declines in market value below our costs. As a result, any significant shortfall of customer orders in relation to our expectations could hurt our operating results, cash flows and financial condition.

Conversely, any rapid increases in demand by our customers could strain our resources. If we underestimate customer demand, we may not have sufficient inventory of necessary components on hand to meet that demand and we may need to try to procure additional quantities, which may not be available or may only be available at high prices or on otherwise unfavorable terms. We also may not have sufficient manufacturing capacity at any given time to meet any demands for rapid increases in production of our memory subsystem products. Any shortages of inventory or manufacturing capacity could lead to delays in the delivery of products, which may force us to forego sales opportunities, reduce our net product sales and damage our customer relationships.

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In addition, if our product demand forecasts are wrong, we may understate or overstate the provision required for excess and obsolete inventory. If our inventories are determined to be overvalued, we would be required to recognize additional expense in our cost of sales at the time of the determination. Conversely, if our inventories are determined to be undervalued, we may have over-reported our costs of sales in previous periods and would be required to recognize additional gross margin at the time the inventories are sold.

Declines in our average sale prices, driven by volatile prices for components and other factors, may result in declines in our revenues and gross margin.

Our industry has historically been characterized by declines in average sale prices. If sale price declines are not offset by corresponding decreases in costs or increases in sales volume or sales of products with higher margins, these sale price declines could have a material adverse effect on our operating results.

The prices customers pay for the products we sell can fluctuate due to many factors, including, among others, competitive conditions in our key customer markets, changes in customer requirements or preferences, volatility in the market prices for SSDs, DRAM ICs, NAND flash and other component products, and changes in manufacturing efficiencies or capacities. Market prices for component products have historically constituted a substantial portion of the total cost of our memory subsystems and in recent periods have constituted the vast majority of the cost of resales of these products to customers directly. As a result, fluctuations in the prices for these component products, due to overcapacity in worldwide supply or increased manufacturing efficiencies, implementation of new manufacturing processes or expansion of manufacturing capacity by component suppliers, among other factors, significantly impact our costs to sell our products or component products.

Once our prices with a customer are negotiated, we are generally unable to revise pricing with that customer until our next regularly scheduled price adjustment. As a result, if market prices for essential components increase, we generally cannot pass the price increases through to our customers for products purchased under an existing purchase order. Consequently, we are exposed to the risks associated with the volatility of prices for these components and our cost of sales could increase and our gross margin could decrease in the event of sudden price increases. Alternatively, if there are declines in the prices of these components, we may be required to reduce our selling prices for subsequent purchase orders, which may result in a decline in our net product sales.

Our manufacturing operations involve significant risks.

We maintain a manufacturing facility in the PRC at which we produce a portion of our products. These manufacturing activities require significant resources to maintain. For instance, we must continuously review and improve our manufacturing processes in order to maintain satisfactory manufacturing yields and product performance, try to lower our costs and otherwise remain competitive. As we manufacture new and more complex products, the risk of encountering delays, difficulties or higher costs increases. In addition, the start-up costs associated with implementing new manufacturing technologies, methods and processes, including the purchase of new equipment and any resulting manufacturing delays and inefficiencies, could negatively impact our results of operations.

Additionally, we could experience a prolonged disruption, material malfunction, interruption or other loss of operations at our manufacturing facility for any number of reasons, including the occurrence of a contagious disease or illness, such as COVID-19, or cyber-attacks, or catastrophic weather events, or we may need to add manufacturing capacity to satisfy any increased demand for our products. Under these circumstances, we may be forced to rely on third parties for our manufacturing needs, which could increase our manufacturing costs, decrease our gross margin, decrease our control over manufacturing processes, limit our ability to satisfy customer requirements and demand and delay new product development until we could secure a relationship with a third-party manufacturer, which we may not be able to do in a timely manner, on acceptable terms or at all. If any of these risks occur, our operations, performance and customer relationships could be severely harmed.

We also may need to expand our existing manufacturing facility or establish a new facility in the future. Any need to expand or replace our manufacturing facility would be expensive and time-consuming and could also subject us to factory audits by our customers that could themselves result in delays, unexpected costs or customer losses if we

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cannot meet the standards of any such audits. Further, we may not be able to replace or increase our manufacturing capacity at all. The occurrence of any of these events could have a material adverse effect on our business, financial condition and results of operations.

We depend on third parties to design and manufacture components for our products and the component products we resell, which exposes us to risks.

Components that are used in our products, as well as all of the component products we resell, are designed and manufactured by third parties. In addition, some of our memory subsystem products rely on significantly customized components. The ability and willingness of third parties to enter into these engagements with us and perform in accordance with these engagements is largely outside our control. If one or more of our design or manufacturing partners experiences a manufacturing disruption for any number of factors including labor disruptions, catastrophic weather events and the occurrence of a contagious disease or illness, such as COVID-19, fails to dedicate adequate resources to the production of the components we use in our products or the components we resell, experiences financial instability or otherwise fails to perform its obligations to us in a timely manner or at satisfactory quality levels, our ability to bring products to market or deliver products to our customers, as well as our reputation, could suffer and our business and prospects could be materially harmed. In the event of any failure by our component manufacturers, we may have no readily available alternative source of supply for these components, since, in our experience, the lead time needed to establish a relationship with a new design or manufacturing partner is substantial, and the time for our OEM customers to re-qualify our products with components from a new vendor is also significant. Additionally, even if an alternative manufacturer is available, we may not be able to engage the manufacturer on acceptable terms, which could result in increased costs, timing requirements or other adverse changes. Further, we may not be able to redesign the customized components used in our products to be manufactured by a new manufacturer, in which case we could infringe on the intellectual property of our current design or manufacturing partner when we manufacture the products with a new design or manufacturing partner. Such an occurrence could force us to stop selling certain of our products or could expose us to lawsuits, license payments or other liabilities.

Our dependence on third-party manufacturers exposes us to many other risks, including, among others: reduced control over delivery schedules, quality, manufacturing yields and costs; the potential lack of adequate capacity during periods of excess demand; limited warranties on products supplied to us; and potential infringement or misappropriation of our intellectual property or the intellectual property of others. We are dependent on our manufacturing partners to manufacture components with acceptable quality and manufacturing yields, to deliver these components to us on a timely basis and at an acceptable cost and to allocate a portion of their manufacturing capacity sufficient to meet our needs. However, these component manufacturers may not be able to achieve these tasks. Additionally, our manufacturing partners may not continue to devote adequate resources to produce our products or the component products we resell, or continue to advance the process design technologies on which the customer qualifications of our products are based. Any of these risks could limit our ability to meet customer demand and materially adversely affect our business and operating results.

If our products or the component products we resell do not meet quality standards or are defective or used in defective systems, we may be subject to quality holds, warranty claims, recalls or liability claims.

Our customers require our products and the component products we resell to meet strict quality standards. If the products fail to meet these standards, our customers may discontinue purchases from us until we are able to resolve the quality issues that are causing these failures, which we may not be able to do. These “quality holds” can be costly and time-consuming to resolve. In addition, if the products we sell are defectively manufactured, contain defective components or are used in defective or malfunctioning systems, we could be subject to warranty and product liability claims, product recalls, safety alerts or advisory notices.

Although we generally attempt to contractually limit our exposure to incidental and consequential damages, if these contract provisions are not enforced or if liabilities arise that are not effectively limited, we could incur substantial costs in defending or settling product liability claims. While we currently have product liability insurance, it may not provide coverage under certain circumstances and it may not be adequate to satisfy claims made against us. We also may be unable to maintain insurance in the future at satisfactory rates or in adequate amounts.

Warranty and product liability claims, product “quality holds,” product recalls, safety alerts or advisory notices, regardless of their coverage by insurance or their ultimate outcome, could have a material adverse effect on our business, performance and financial condition, as well as our ability to attract and retain customers.

Our indemnification obligations for the infringement by our products of the rights of others could require us to pay substantial damages.

As is common in our industry, we have a number of agreements in which we have agreed to defend, indemnify and hold harmless our customers and suppliers from damages and costs that may arise from the infringement by our products of third-party patents, trademarks or other proprietary rights. The scope of these indemnities varies, the duration of these indemnities is generally perpetual after execution of an agreement, and the maximum potential amount of future payments we could be required to make under these indemnities is often unlimited. Any indemnification claims by customers could require us to incur significant legal fees and could potentially result in our payment of substantial damages, and our insurance generally would not cover these fees or damages. As a result, the occurrence of any of these risks could have a material adverse effect on our business and results of operations.

We depend on certain key employees, and our business could be harmed if we lose the services of any of these employees or are unable to attract and retain other qualified personnel.

To date, we have been highly dependent on the experience, relationships and technical knowledge of certain key employees. We believe our future success will be dependent on our ability to retain the services of these key employees, develop their successors and properly manage the transition of their roles should departures occur. The loss of these key employees or their inability to continue to provide their services could delay the development and introduction of new or enhanced products or technologies, negatively impact our ability to sell our existing products, limit our ability to pursue our other business goals and strategies and otherwise harm our business. We do not have employment agreements with any of our employees other than Chun K. Hong, our President, Chief Executive Officer (“CEO”) and sole member of our board of directors, and as a result most of our employees may terminate their employment with us at any time.

Our future success also depends on our ability to attract, retain and motivate highly skilled engineering, manufacturing and other technical and sales personnel. Competition for these personnel is intense. We may not be successful in attracting new engineers or other technical personnel or in retaining or motivating our existing personnel. If we are unable to hire and retain personnel with the skills necessary to keep pace with the evolving technologies in our markets, our ability to continue to provide our existing products and to develop new or enhanced products and technologies would be negatively impacted, which could harm our business. In addition, a general shortage of experienced engineers or other technical personnel could lead to increased recruiting, relocation and compensation costs to attract new recruits, which may increase our operating expenses or make these hires more difficult or impossible if increased recruiting costs exceed our resources.

A significant portion of our workforce consists of contract personnel. We invest considerable time and expense to train these contract personnel; however, they typically may terminate their relationships with us at any time. As a result, we may experience high turnover rates in this contract personnel workforce, which may require us to expend additional resources to attract, train and retain replacements. Additionally, if we convert any of these contract personnel to permanent employees, we may have to pay finder’s fees to the contract agency. These risks associated with our contract personnel workforce may involve increased costs or delays or failures in meeting customer requirements or developing new or enhanced products or technologies, any of which could materially adversely affect our business and operating performance.

We are also subject to employment laws and regulations, including the changing regulatory landscape. For example, in California, State Assembly Bill 5 (“AB5”), which went into effect in January 2020, codifies a test to determine whether a worker is an employee under California law. AB5 provides a mechanism for determining whether workers of a hiring entity are employees or independent contractors, but AB5 does not result in any immediate change in how workers are classified. If the State of California, cities or municipalities, or workers disagree with how a hiring

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entity classifies workers, AB5 sets forth the test for evaluating their classification. The legal and other costs associated with any misclassification of our personnel can be substantial and could materially adversely affect our results of operations and financial condition.

We rely on our internal and third-party sales representatives to market and sell our products and the component products we resell, and any failure by these representatives to perform as expected could reduce our sales.

We primarily market and sell our products and the component products we resell through a direct sales force and a network of independent sales representatives. We have expended significant resources to build our internal sales and marketing function, but compared to many of our competitors, we have relatively little experience creating a sales and marketing platform and developing a team to implement it. We may be unsuccessful in these efforts.

Our sales representatives generally may terminate their relationships with us at any time. As a result, our performance depends in part on our ability to retain existing and attract additional sales representatives that will be able to effectively market and support our products or the component products we resell, especially in markets in which we have not previously distributed these products. Our efforts to attract, train and retain these sales representatives to be knowledgeable about our industry, products and technologies are costly and time-consuming. If these efforts fail, our investments in these sales representatives may not produce the expected or any benefits and our ability to market and sell our products or the component products we resell may be limited, which could materially harm our financial condition and operating results. Further, our reliance on independent sales representatives subjects us to risks, as we have very little control over their activities and they are generally free to market and sell other, potentially competing, products. As a result, these independent sales representatives could devote insufficient time or resources to marketing our products or the component products we resell, could market them in an ineffective manner or could otherwise be unsuccessful in selling adequate quantities of these products.

Our operations could be disrupted by power outages, natural disasters, cyber-attacks or other factors.

Due to the geographic concentration of our manufacturing operations in our PRC facility and our small number of component suppliers, including SK hynix for many of the component products we resell, a disruption resulting from equipment or power failures, quality control issues, human errors, government intervention, cyber-attacks or natural disasters, including earthquakes and floods, could require significant costs to repair and could interrupt or interfere with product manufacture and sale and cause significant delays in product shipments, which could harm our customer relationships, financial condition and results of operations. In the past, our PRC facility has suffered water damage as a result of heavy rains and floods, which forced us to temporarily halt manufacturing at the facility while necessary repairs or equipment replacements were made. This incident caused us to incur additional expenses because we were forced to shift our manufacturing activities to a third-party facility in the PRC to mitigate the disruption in product shipments to our customers. If manufacturing at the PRC facility is disrupted for similar or other reasons in the future, we may again be subject to increased expenses in order to engage a third-party manufacturer, or, if we are not able to secure alternative manufacturing capabilities, our ability to sell products and our relationships with our customers could be materially harmed. Additionally, we may be forced to bear significant costs in order to repair any damage to our manufacturing equipment and facility. Any of these outcomes could have a material adverse effect on our business and results of operations.

Difficulties with our global information technology systems, including any unauthorized access or cyber-attacks, could harm our business.

We store key data about our business, including certain customer data, information about our and our customers' intellectual property and other proprietary information, on our global information technology systems. Any failure or malfunctioning of our global information technology systems, errors or misuse by system users, cyber-attacks, difficulties migrating stand-alone systems to our centralized systems or inadequacy of the systems in addressing the needs of our operations could disrupt our ability to timely and accurately manufacture and ship products, divert management's and key employees' attention from other business matters and involve significant costs and other resources to repair or otherwise resolve, any of which could have a material adverse effect on our business, financial condition and results of operations. Any such event could also disrupt our ability to timely and accurately process, report

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and evaluate key operating metrics and key components of our results of operations, financial position and cash flows and could adversely affect our ability to complete other important business processes, such as maintenance of our disclosure controls and procedures and internal control over financial reporting.

While our information technology systems include security measures designed to prevent unauthorized access, employee error, employee malfeasance or other causes, including intentional misconduct by computer hackers, could circumvent these measures and result in unauthorized access to these systems. Because the techniques used to gain unauthorized access to information technology systems evolve frequently and often are not recognized until successful, we may be unable to anticipate these techniques or implement adequate preventative measures in a timely manner. Any security breach could require significant resources to correct, if correction is possible, and could result in disruption to our business, misappropriation or loss of data, loss of confidence in us by our customers, damage to our reputation and legal liability. Further, any failure to implement appropriate security measures to protect our information or any breach or other failure of our systems that results in unauthorized access, manipulation, disclosure or loss of this information could result in our violation of any U.S. or foreign data protection laws that are applicable to us, including the California Consumer Privacy Act which went into effect in January 2020. These laws and their interpretation and application are constantly evolving, and they could be interpreted and applied in a manner that is inconsistent with our current practices or they could become more stringent over time. Efforts to comply with applicable data protection laws or any new interpretations of their application could involve significant time and substantial costs or require us to change our business practices and compliance procedures, and any failures to so comply could subject us to substantial civil or criminal fines or sanctions. Any of these outcomes could have a material negative impact on our business, performance and prospects.

If we do not effectively manage any future growth we may experience, our resources, systems and controls may be strained and our results of operations may suffer.

Any future growth we may experience could strain our resources, management, information and telecommunication systems and operating and financial controls. To manage future growth effectively, including any expansion of volume in our manufacturing facility in the PRC, we must be able to improve and expand our systems and controls, which we may not be able to do in a timely or cost-effective manner. In addition, our management team has relatively limited experience managing a rapidly growing business. As a result, they may not be able to manage any future growth we may experience. A failure to manage any growth we may experience or improve or expand our existing systems and controls, or unexpected difficulties in doing so, could harm our business and results of operations.

If we acquire businesses or technologies or pursue other strategic transactions or relationships in the future, these transactions could disrupt our business and harm our operating results and financial condition.

From time to time, we evaluate opportunities to acquire businesses or technologies or pursue other strategic transactions or relationships, including collaboration or joint development arrangements, which might complement our current product offerings or enhance our intellectual property portfolio or technical capabilities. We have no experience acquiring other businesses or technologies.

Acquisitions and other strategic transactions or relationships entail a number of risks that could adversely affect our business and operating results, including, among others:

- difficulties integrating the operations, technologies or products of acquired companies or working with third parties with which we may partner on joint development or collaboration relationships;
- the diversion of management's time and attention from the daily operations of our business;
- insufficient increases in revenues to offset increased expenses associated with an acquisition or strategic transaction or relationship;
- difficulties retaining business relationships with our existing suppliers and customers or the suppliers and customers of an acquired company;
- overestimation of potential synergies or other benefits, or a delay in realizing these synergies or other benefits;

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- entering markets in which we have no or limited experience and in which competitors have stronger market positions;
- the potential loss of our key employees or an acquired company;
- exposure to contingent liabilities of an acquired company;
- depletion of cash resources to fund an acquisition or other strategic transaction or establish a strategic relationship, or dilution of existing stockholders or increased leverage relative to our earnings or to our equity capitalization if we issue debt or equity securities for these purposes;
- adverse tax consequences; and
- incurrence of material charges, such as depreciation, deferred compensation charges, in-process research and development charges, the amortization of amounts related to deferred stock-based compensation expense and identifiable purchased intangible assets or impairment of goodwill.

If any of these risks occur, we may not be able to realize the intended benefits of an acquisition or strategic transaction or relationship, and our operating results, financial condition and business prospects could be materially negatively affected.

Increased prices and inflation could negatively impact our margin performance and our financial results.

Increased inflation, including rising prices for raw materials, parts and components, freight, packaging, labor and energy increases, the costs to manufacture and distribute our products, and we may be unable to pass these costs on to our customers. Additionally, we are exposed to fluctuations in other costs such as packaging, freight, labor and energy prices. If inflation in these costs increases beyond our ability to control for them through measures such as implementing operating efficiencies, we may not be able to increase prices to sufficiently offset the effect of various cost increases without negatively impacting customer demand, thereby negatively impacting our margin performance and results of operations.

Geopolitical risks associated with Russia's invasion of Ukraine could result in increased market volatility and uncertainty, which could negatively impact our business, financial condition, and results of operations.

The uncertain nature, scope, magnitude, and duration of hostilities stemming from Russia's recent military invasion of Ukraine, including the potential effects of such hostilities as well as sanctions, embargoes, asset freezes, cyber-attacks and other actions taken in response to such hostilities on the world economy and markets, have disrupted global markets and contributed to increased market volatility and uncertainty, which could have an adverse impact on macroeconomic and other factors that affect our business and supply chain. Any disruption in our supply chain could reduce our revenue and adversely impact our financial results. Such a disruption could occur as a result of any number of events, including, but not limited to, military conflicts, geopolitical developments, war or terrorism, including the ongoing conflict in Ukraine, regional or global pandemics like COVID-19, and disruptions in utility and other services. Any inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply or to manufacture, assemble, and test such components internally could significantly delay our ability to ship our products, which could damage relationships with current and prospective customers and could harm our reputation and brand and could adversely affect our business, financial condition, and results of operations.

In February 2022, in response to the military conflict between Russia and Ukraine, the United States and other North Atlantic Treaty Organization member states, as well as non-member states, announced targeted economic sanctions on Russia, including certain Russian citizens and enterprises, and the continuation of the conflict may trigger additional economic and other sanctions. The potential impacts of the conflict and related sanctions could include supply chain and logistics disruptions, macro financial impacts resulting from the exclusion of Russian financial institutions from the global banking system, volatility in foreign exchange rates and interest rates, inflationary pressures on raw materials and energy and heightened cybersecurity threats. We do not and cannot know if the conflict, which remains ongoing, could escalate and result in broader economic and security concerns which could adversely affect our, supply chain, suppliers, customers, and potential customers. It is not possible to predict the broader consequences of this conflict, which could include further sanctions, embargoes, regional instability, geopolitical shifts and adverse effects on

macroeconomic conditions, the availability and cost of materials, supplies, labor, currency exchange rates and financial markets, all of which could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Laws and Regulations

We are exposed to additional business, regulatory, political, operational, financial and economic risks related to our international sales and operations.

We sell products to foreign corporations and deliver products to facilities located in foreign countries. To facilitate this process and to meet the long-term projected demand for our products, we have established a manufacturing facility in the PRC that performs most of the manufacturing activities for our memory subsystem products.

Selling and manufacturing in foreign countries subjects us to additional risks not present with our domestic operations, as we are operating in business and regulatory environments in which we have limited experience and that may impose materially different requirements. Further, the geographic distance from our headquarters in Irvine, California, compounds the difficulties of maintaining a manufacturing operation in the PRC. For instance, we may not be able to maintain the desired amount of control over production capacity and timing, inventory levels, product quality, delivery schedules, manufacturing yields or costs. Moreover, we will need to continue to overcome language and cultural barriers to effectively conduct these international operations. Failures in any of these areas could result in legal consequences or production delays and increased turnaround times, which could adversely affect our business. In addition, changes to the labor or other laws of the PRC or the economic and political conditions in the PRC, including increased industrialization in recent years, natural disasters, public health crises, including the occurrence of a contagious disease or illness, such as COVID-19, and other catastrophic events, could increase the costs of employing a local workforce or conducting our manufacturing operations in the PRC. Any of these factors could negatively impact any cost savings we experience from locating our manufacturing facility in the PRC. Additionally, our management has limited experience creating or overseeing foreign operations generally, and the ongoing administration and operation of our PRC facility may require substantial amounts of time and attention by our management team, particularly if we encounter operational, legal or cultural difficulties or disruptions at our PRC facility.

To date, the majority of our net product sales have been denominated in U.S. dollars. In the future, however, some of our net product sales may be denominated in Chinese Renminbi (“RMB”). The Chinese government controls the procedures by which RMB is converted into other currencies, which generally requires government consent. As a result, RMB may not be freely convertible into other currencies at all times. If the Chinese government institutes changes in currency conversion procedures or imposes additional restrictions on currency conversion, our operations and our operating results could be negatively impacted. In addition, Chinese law imposes restrictions on the movement of funds outside of the PRC. If we need or decide to repatriate funds from our Chinese operations, we would be required to comply with the procedures and regulations of applicable Chinese law, and any failure to so comply could adversely affect our liquidity and financial condition. Further, if we are able to repatriate funds from our Chinese operations, these funds would be subject to U.S. taxes. In addition, fluctuations in the exchange rate between RMB and U.S. dollars may adversely affect our expenses, the value of our assets and liabilities and the comparability of our period-to-period results.

Our international operations and sales are subject to a number of additional risks, including, among others, timing and availability of export licenses; difficulties in accounts receivable collections; difficulties managing distributors; lack of a significant local sales presence in a number of markets; difficulties obtaining government approvals; compliance with anti-bribery, data protection and other applicable U.S. and foreign laws, including the U.S. Foreign Corrupt Practices Act and similar anti-bribery laws in the non-U.S. jurisdictions in which we operate, as well as a wide variety of other complex foreign laws, regulations and treaties; and potentially adverse tax consequences. In addition, the United States or foreign countries may implement quotas, duties, tariffs, taxes or other charges or restrictions on the importation or exportation of our products or the component products we resell, which could lead to a reduction in sales and profitability in that country. The implementation of tariffs by the United States on goods manufactured in other countries, including PRC, could cause the costs of our products to increase, which could significantly impair the gross margin we receive and thereby harm our operating results significantly.

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In addition, international turmoil and the threat of future terrorist attacks have contributed to an uncertain political and economic climate, both in the United States and globally, and have negatively impacted the worldwide economy. The economies of the PRC and other countries in which we make sales have been volatile in recent years, resulting in significant fluctuations in local currencies and other instabilities. These conditions could continue or worsen, which could adversely affect our foreign operations and our performance. The occurrence of any of these risks related to our international operations, including our manufacturing facility in the PRC and our international sales, could have a material adverse effect on our business, financial condition and prospects for growth.

Our failure to comply with environmental and other applicable laws and regulations could subject us to significant fines and liabilities or cause us to incur significant costs.

We are subject to various and frequently changing U.S. federal, state and local and foreign laws and regulations relating to the protection of the environment, including laws governing the discharge of pollutants into the air and water, the management and disposal of hazardous substances and wastes and the clean-up of contaminated sites. In particular, some of our manufacturing processes may require us to handle and dispose of hazardous materials from time to time. For example, in the past our manufacturing operations have used lead-based solder in the assembly of our products. Today, we use lead-free soldering technologies in our manufacturing processes, as this is required for products entering the European Union. We could incur substantial costs, including clean-up costs, civil or criminal fines or sanctions and third-party claims for property damage or personal injury, as a result of violations of or noncompliance with these and other environmental laws and regulations. Although we have not incurred significant costs to date to comply with these laws and regulations, new laws or changes to current laws and regulations to make them more stringent could require us to incur significant costs to remain in compliance.

We also may be subject to a variety of laws and regulations relating to other matters, including workplace health and safety, labor and employment, foreign business practices (including the U.S. Foreign Corrupt Practices Act and applicable foreign anti-bribery laws), data protection, public reporting and taxation, among others. It is difficult and costly to manage the requirements of every authority having jurisdiction over our various activities and to comply with their varying standards. Additionally, any changes to existing regulations or adoption of new regulations may result in significant additional expense to us or our customers. Further, our failure to comply with any applicable laws and regulations may result in a variety of administrative, civil and criminal enforcement measures, including monetary penalties or imposition of sanctions or other corrective requirements, any of which could materially adversely affect our reputation and our business.

Regulations related to “conflict minerals” may cause us to incur additional expenses and could limit the supply and increase the cost of certain metals used in manufacturing our products.

The U.S. Congress has enacted laws, and the SEC has adopted rules, requiring disclosure of specified minerals, known as conflict minerals, that are necessary to the functionality or production of products manufactured or contracted to be manufactured by public companies. These laws and rules require companies to verify and disclose whether or not such minerals, as used in a company’s products or their manufacture, originate from the Democratic Republic of Congo or an adjoining country. Because our products contain certain conflict minerals and we or our manufacturers use these conflict minerals in the manufacture of our products, we are required to comply with these laws and disclosure rules. To comply, we are required to conduct a reasonable country of origin inquiry each year and, depending on the results of that inquiry, we may be required to exercise due diligence on the source and chain of custody of conflict minerals contained in or used to manufacture our products. Such due diligence must conform to a nationally or internationally recognized due diligence framework. We are also required to file a disclosure report with the SEC each year relating to our conflict mineral use.

The due diligence activities required to determine the source and chain of custody of minerals contained in our products or used in their manufacture are time-consuming and may result in significant costs. Due to the size and complexity of our supply chain, we face significant challenges verifying the origins of the minerals used in our products or their manufacture. Further, these rules could affect the availability in sufficient quantities and at competitive prices of certain minerals used in our products and their manufacture, which could result in increased material and component costs and additional costs associated with potential changes to our products, processes or sources of supply.

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Additionally, if we are unable to sufficiently verify the origin of the minerals used in our products through the due diligence measures we implement, we may not be able to satisfy customer preferences or requirements regarding the use of conflict minerals in the products they purchase, which could place us at a competitive disadvantage.

We have identified a material weakness in our internal control over financial reporting. If we are unable to remediate the material weakness, or if we identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect our business.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis. In performing their audit of our internal control over financial reporting as required by Section 404 of SOX and the related rules and regulations of the SEC (“Section 404”), our independent registered public accounting firm concluded that our internal control over financial reporting was ineffective as of December 31, 2022 due to one material weakness. The identified material weakness, as of December 31, 2022, relates to the lack of an independent board and audit committee and ineffective risk assessment and monitoring controls.

While the control deficiency identified did not result in any identified misstatements, a reasonable possibility exists that a material misstatement to the annual or interim condensed consolidated financial statements and disclosures will not be prevented or detected on a timely basis.

In an effort to address the identified material weakness and enhance our internal controls, our finance and accounting personnel are continuing to follow all of the same procedures that they undertook in preparation for independent audit committee meetings on a quarterly and annual basis. Our CEO and sole director will oversee these processes and review materials prepared by the finance and accounting staff as well as our independent registered public accounting firm on a quarterly and annual basis. If our measures are insufficient to address the material weakness, or if additional material weaknesses or significant deficiencies in our internal control over financial reporting occur in the future, we may not be able to timely or accurately report our results of operations or maintain effective disclosure controls and procedures. If we are unable to report financial information timely or accurately, or to maintain effective disclosure controls and procedures, we could be required to restate our financial statements and be subject to, among other things, regulatory or enforcement actions, securities litigation, limitations on our ability to access capital markets, debt rating agency downgrades or rating withdrawals, or loss in confidence of our investors, any one of which could adversely affect the valuation of our common stock and our business prospects. We can give no assurance that the measures we have taken and plan to take in the future will remediate the material weakness identified or that any additional material weaknesses will not arise in the future due to a failure to implement and maintain adequate internal control over financial reporting.

We are required to comply with certain provisions of Section 404 that place significant demands on our resources, and the transition to the higher reporting and control standards that applies to us as a “large accelerated filer” may cause management distraction and increased costs.

Section 404 require us to evaluate our internal control over financial reporting and require management to report on the effectiveness of this internal control as of the end of each fiscal year.

Our Section 404 evaluations confirmed that enhancements, modifications and changes to our internal control over financial reporting are necessary and desirable. Implementing changes to comply with Section 404 may divert the attention of management, involve significant time and costs and could negatively impact our financial reporting functions during the transition, any of which could have a material negative effect on our results of operations and financial condition.

Risks Related to Intellectual Property and Litigation

We may be unsuccessful in monetizing our intellectual property portfolio.

We dedicate substantial resources to developing technology innovations we believe are essential to our business. We intend to pursue monetization avenues for our intellectual property portfolio, potentially including licensing, royalty or other revenue-producing arrangements. However, other than monies received from SK hynix, we have not generated any such revenue stream from our intellectual property to date, and we may never be successful in achieving this objective.

Although we may pursue agreements with third parties to commercially license certain of our products or technologies, we may never successfully enter into any such agreement. Further, the terms of any such agreements we may reach with third-party licensees are uncertain and may not provide sufficient royalty or other licensing revenues to us to justify our costs of developing and maintaining the licensed intellectual property or may otherwise include terms that are not favorable to us. Additionally, the pursuit of licensing arrangements would require by its nature that we relinquish certain of our rights to our technologies and intellectual property that we license to third parties, which could limit our ability to base our own products on such technologies or could reduce the economic value we receive from such technologies and intellectual property. Additionally, the establishment of arrangements to monetize our intellectual property may be more difficult or costly than expected, may require additional personnel and investments and may be a significant distraction for management.

Our ability to establish licensing, royalty or similar revenues, and maintain or increase any such revenues we are able to establish, depends on a variety of factors, including, among others, the novelty, utility, performance, quality, breadth, depth and overall perceived value of our intellectual property portfolio, all as compared to that of our competitors, as well as our sales and marketing capabilities. Even if we are able to secure these revenues, they may be negatively affected by factors that are entirely or partially outside our control, including reductions in our customers' sales prices, sales volumes and the general state of their business, as well as the terms of the license arrangements.

If we are not successful in monetizing our intellectual property portfolio, we may never recoup our investments of time, capital and other resources in the development, maintenance, defense and enforcement of this portfolio, which could materially harm our financial condition and prospects.

We are and expect to continue to be involved in other legal and administrative proceedings to enforce or protect our intellectual property rights and to defend against claims that we infringe the intellectual property rights of others.

As is common in the semiconductor industry, we have experienced substantial litigation regarding patent and other intellectual property rights. We are currently involved in litigation and proceedings at the U.S. Patent and Trademark Office ("USPTO") and Patent Trial and Appeal Board ("PTAB") based on alleged third-party infringement of our patents, and lawsuits claiming we are infringing others' intellectual property rights also have been and may in the future be brought against us.

Our business strategy includes litigating claims against others, such as our competitors and customers, to enforce our intellectual property, contractual and commercial rights, including, in particular, our patent portfolio and our trade secrets, as well as to challenge the validity and scope of the proprietary rights of others. This or other similar proceedings could also subject us to counterclaims or countersuits against us, or the parties we sue could seek to invalidate our patents or other intellectual property rights through reexamination or similar processes at the USPTO or similar bodies. Further, any legal disputes with customers could cause them to cease buying or using our products or the component products we resell or delay their purchase of these products and could substantially damage our relationship with them.

Moreover, our ability to continue to pursue this strategy depends on our ability to obtain and protect patents, which is governed by an uncertain process. In addition to the patent issuance process established by law and the procedures of the USPTO, we must also comply with administrative procedures of the JEDEC to protect our intellectual property within its industry standard-setting process. These procedures evolve over time, are subject to variability in

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their application and may be inconsistent with each other. Any failure to comply with the USPTO's or JEDEC's administrative procedures could jeopardize our ability to claim that our patents have been infringed.

Making use of new technologies and entering new markets increases the likelihood that others might allege that our products or the component products we resell infringe their intellectual property rights. The likelihood of this type of lawsuit may also be increased due to the limited pool of experienced technical personnel that we can draw on to meet our hiring needs. As a result, a number of our existing employees have worked for our existing or potential competitors at some point during their careers, and we anticipate a number of our future employees will have similar work histories. Moreover, lawsuits of this type may be brought, even if there is no merit to the claim, as a strategy to prevent us from hiring qualified candidates, drain our financial resources and divert management's attention away from our business.

Litigation is inherently uncertain. An adverse outcome in existing or any future litigation could force us to, among other things:

- relinquish patents or other protections of our technologies if they are invalidated, which would enable our competitors and others to freely use this technology;
- compete with products that rely on technologies and other intellectual property rights that we believe we have the right to protect from third-party use;
- accept terms of an arrangement to license our technologies to a third party that are not as favorable as we might expect;
- receive little or no returns for our time and capital investments in the litigation;
- cease manufacturing and/or selling products or using certain processes that are claimed to be infringing a third party's intellectual property;
- pay damages (which in some instances may be three times actual damages), including royalties on past or future sales, if we are found to infringe a third party's intellectual property;
- seek a license from a third-party intellectual property owner to use its technology in our products or the component products we resell, which may not be available on reasonable terms or at all; or
- redesign any products that are claimed to be infringing a third party's intellectual property, which may not be possible to do in a timely manner, without incurring significant costs or at all.

Moreover, any litigation, regardless of its outcome, involves a significant dedication of resources, including time and capital, and diverts management's attention from our other activities. As a result, any current or future infringement claims or patent challenges by or against third parties, whether or not eventually decided in our favor or settled, could materially adversely affect our business, financial condition and results of operations. Additionally, the outcome of pending or future litigation and related patent reviews and reexaminations, as well as any delay in their resolution, could affect our ability to continue to sell our products, protect against competition in the current and expected markets for our products or license or otherwise monetize our intellectual property rights in the future.

If our proprietary rights are not protected, our customers or our competitors might gain access to our proprietary designs, processes and technologies, which could adversely affect our operating results.

We rely on a combination of patent protection, trade secret laws and restrictions on disclosure to protect our intellectual property and other proprietary rights. We have submitted a number of patent applications regarding our proprietary processes and technology, many of which have resulted in issued patents. For our pending patent applications, it is uncertain when or if any of the claims in these applications will be allowed or result in issued patents, in which case the technologies or processes sought to be patented would remain unprotected from use by third parties. In addition, although we intend to continue filing patent applications with respect to new processes and technologies we develop, patent protection may not be available for some of these processes or technologies. Further, even if we are successful in obtaining patent protection, these protections could be limited in scope by the USPTO, a court or applicable foreign authorities or challenged by third parties by way of review or reexamination proceedings and subsequently invalidated, which would reduce the protections these patents are able to provide. Moreover, patent

protection is limited as to duration and all of our issued patents will eventually expire, at which time the previously protected technologies would become widely available for use by third parties, including our competitors.

Despite our efforts to protect our intellectual property rights, these efforts may not:

- prevent challenges to or the invalidation or circumvention of our intellectual property rights;
- keep our competitors or other third parties from independently developing similar products or technologies, duplicating, reverse engineering or otherwise using our products or technologies without our authorization or designing around any patents that may be issued to us;
- prevent disputes with third parties regarding ownership of our intellectual property rights;
- prevent disclosure of our trade secrets and know-how to third parties or into the public domain;
- result in valid patents, including international patents, from any of our pending or future applications; or
- otherwise adequately protect our intellectual property rights.

Moreover, monitoring for any unauthorized use of our technologies is costly, time-consuming and difficult. This is particularly true in foreign countries, such as the PRC, where we have established a manufacturing facility and where the laws may not protect our proprietary rights to the same extent as applicable U.S. laws.

If some or all of the claims in our patent applications are not allowed, if any of our issued patents or other intellectual property protections are limited, invalidated or circumvented by third parties, or if we are not able to obtain extensions of existing patents upon their expiration or issuance of new patents to maintain protections provided by expiring patents, we could face increased competition for our products and technologies and be unable to execute on our strategy of monetizing our intellectual property. Any of these outcomes could significantly harm our business, operating results and prospects.

We may become involved in non-patent related litigation and administrative proceedings that may materially adversely affect us.

From time to time, we may become involved in various legal proceedings relating to matters incidental to the ordinary course of our business, including commercial, employment, class action, whistleblower and other litigation and claims, as well as governmental and other regulatory investigations and proceedings. Such matters can be time-consuming, divert management's attention and resources and cause us to incur significant expenses. Furthermore, because litigation is inherently unpredictable, the results of these actions could subject us to monetary damages or other liabilities and have a material adverse effect on our business, results of operations and financial condition.

Risks Related to Capitalization and Financial Markets

We may not have sufficient working capital to fund our planned operations, and, as a result, we may need to raise additional capital in the future, which may not be available when needed, on acceptable terms or at all.

To support our activities in the near term, we expect to rely on cash generated from our business, the cash received under the Strategic Product Supply and License Agreement, entered into on April 5, 2021, by and between the Company and SK hynix (the "Strategic Agreement") and proceeds from issuances of debt and equity securities, including our equity line with Lincoln Park Capital Fund, LLC ("Lincoln Park"), and borrowing availability under our credit facility with Silicon Valley Bank ("SVB"). Taking into account our planned activities and sources of capital, we believe we have sufficient cash resources to satisfy our capital needs for at least the next 12 months. However, our estimates of our operating revenues and expenses and working capital requirements could be incorrect, and we may use our cash resources faster than we anticipate. Further, some or all of our ongoing or planned investments may not be successful and could further deplete our capital without immediate, or any, cash returns.

Our capital requirements will depend on many factors, including, among others:

- the costs associated with maintaining, defending and enforcing our intellectual property rights;

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- the acceptance of, and demand for, our products and the component products we resell to customers;
- our success, and that of our strategic partners, in developing and selling products derived from our technology;
- the extent and timing of any investments in developing, marketing and launching new or enhanced products or technologies;
- the costs of developing, improving and maintaining our internal design, testing and manufacturing processes;
- our results of operations, including our levels of net product sales and any other revenues we may receive, including non-recurring engineering, license, royalty or other fees;
- the amount and timing of vendor payments and the collection of receivables, among other factors affecting our working capital;
- our receipt of cash proceeds from the exercise of outstanding stock options to acquire our common stock;
- the nature and timing of acquisitions or other strategic transactions or relationships in which we engage, if any; and
- the costs associated with the continued operation, and any future growth, of our business.

Until we can generate sufficient revenues to finance our cash requirements from our operations, which we may never do, we may need to increase our liquidity and capital resources by one or more measures, which may include, among others, reducing operating expenses, restructuring our balance sheet by negotiating with creditors and vendors, entering into strategic partnerships or alliances, raising additional financing through the issuance of debt, equity or convertible securities or pursuing alternative sources of capital, such as through asset or technology sales or licenses or other alternative financing arrangements. Further, even if our near-term liquidity expectations prove correct, we may still seek to raise capital through one or more of these financing alternatives. However, we may not be able to obtain capital when needed or desired, on terms acceptable to us or at all.

Inadequate working capital would have a material adverse effect on our business and operations and could cause us to fail to execute our business plan, fail to take advantage of future opportunities or fail to respond to competitive pressures or customer requirements. A lack of sufficient funding may also require us to significantly modify our business model and/or reduce or cease our operations, which could include implementing cost-cutting measures or delaying, scaling back or eliminating some or all of our ongoing and planned investments in corporate infrastructure, research and development projects, legal proceedings, business development initiatives and sales and marketing activities, among other activities. Modification of our business model and operations could result in an impairment of assets, the effects of which cannot be determined. Furthermore, if we continue to issue equity or convertible debt securities to raise additional funds, our existing stockholders may experience significant dilution, and the new equity or debt securities may have rights, preferences and privileges that are superior to those of our existing stockholders. Additionally, because our common stock is no longer listed on The Nasdaq Capital Market, the challenges and risks of equity financings may significantly increase, including potentially increasing the dilution of any such financing or decreasing our ability to affect such a financing at all. If we incur additional debt, it may increase our leverage relative to our earnings or to our equity capitalization or have other material consequences. If we pursue asset or technology sales or licenses or other alternative financing arrangements to obtain additional capital, our operational capacity may be limited and any revenue streams or business plans that are dependent on the sold or licensed assets may be reduced or eliminated. Moreover, we may incur substantial costs in pursuing any future capital-raising transactions, including investment banking, legal and accounting fees, printing and distribution expenses and other similar costs, which would reduce the benefit of the capital received from the transaction.

The price and trading volume of our common stock has and may continue to fluctuate significantly in reaction to real or perceived developments in our business.

Our common stock has been publicly traded since November 2006. The price and trading volume of our common stock are volatile and have in the past fluctuated significantly. This volatility could continue, in which case an active trading market in our common stock may not be sustained and stockholders may not be able to sell their shares at a desired time or a desired price.

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The market price at which our common stock trades may be influenced by many factors, including, among others, the following:

- the results of legal proceedings in which we are involved;
- our operating and financial performance and prospects;
- the ongoing impacts of the COVID-19 pandemic;
- investor perceptions of us and the industry in which we operate;
- our ability to meet investor and analyst expectations for our operating results;
- the availability and level of research coverage of and market-making in our common stock;
- changes in buy/sell recommendations by analysts;
- any financial projections we may provide to the public, any changes to these projections or our failure to meet these projections;
- our announcement of significant strategic transactions or relationships or the initiation of legal proceedings, including patent infringement actions;
- general political, economic and market conditions, including volatility or uncertainty in these conditions; and
- the other risk factors described in this report.

In addition, shares of our common stock and the public stock markets in general have experienced, and may continue to experience, extreme price and trading volume volatility, at times irrespective of the state of the business of any particular company. These fluctuations may adversely affect the market price of our common stock. Further, following periods of volatility in the overall market and the market price of a particular company's securities, securities litigation can sometimes be instituted against us. Securities litigation, like other types of litigation, is expensive and time-consuming, and if such litigation is instituted against us in the future, we may incur substantial costs, management's attention and resources may be diverted, and we could be subject to damages in the event of unfavorable results.

We have incurred a material amount of indebtedness to fund our operations, the terms of which have required us to pledge substantially all of our assets as security. Our level of indebtedness and the terms of such indebtedness could adversely affect our operations and liquidity.

The SVB debt instrument contains customary representations, warranties and indemnification provisions, as well as affirmative and negative covenants that, among other things, restrict our ability to:

- incur additional indebtedness or guarantees;
- incur liens;
- make investments, loans and acquisitions;
- consolidate or merge;
- sell or exclusively license assets, including capital stock of subsidiaries;
- alter our business;
- change any provision of our organizational documents;
- engage in transactions with affiliates;
- make certain decisions regarding certain of our outstanding legal proceedings without consulting with or obtaining consent from certain of these parties; and
- pay dividends or make distributions.

The SVB debt instrument also includes events of default, including, among other things, payment defaults, any breach by us of representations, warranties or covenants, certain bankruptcy events and certain material adverse changes. If an event of default were to occur under this agreement and we were unable to obtain a waiver for the default, the counterparties could, among other remedies, accelerate our obligations under the debt instrument or other agreement and exercise their rights to foreclose on their security interests, which would cause substantial harm to our business and prospects.

Additionally, incurrence and maintenance of debt could have material adverse consequences on our business and financial condition, such as:

- requiring us to dedicate a portion of our cash flows from operations and other capital resources to debt service, thereby reducing our ability to fund working capital, capital expenditures and other cash requirements;
- increasing our vulnerability to adverse economic and industry conditions;
- limiting our flexibility in planning for or reacting to changes and opportunities in our business and industry, which may place us at a competitive disadvantage; and
- limiting our ability to incur additional debt when needed, on acceptable terms or at all.

There is a limited market for our common shares, and the trading price of our common shares is subject to volatility.

Netlist common shares began trading on the Over-the-Counter market (the “OTC”) in October 2018, following the decision to move trading of our common stock from The Nasdaq Capital Market. Because our stock is no longer listed on a registered national securities exchange, we are subject to certain “blue sky” laws of the various states which impose restrictions on our ability to offer and sell our securities. These “blue sky” laws may make it more difficult for us to raise capital or to issue our common stock for equity compensation or other strategic purposes, which could adversely affect our ability to fund our operations or to attract and retain employees. In addition, our stock may be defined as a “penny stock” under Rule 3a51-1 under the Exchange Act. “Penny stocks” are subject to Rule 15g-9, which imposes additional sales practice requirements on broker-dealers that sell low-priced securities to persons other than established customers and institutional accredited investors. For transactions covered by this rule, a broker-dealer must make a special suitability determination for the purchaser and have received the purchaser’s written consent to the transaction prior to sale. Consequently, the rule may affect the ability of broker-dealers to sell our common stock and affect the ability of holders to sell their shares of our common stock in the secondary market. To the extent our common stock is subject to the penny stock regulations, the market liquidity for the shares will be adversely affected.

Future issuances of our common stock or rights to purchase our common stock, including pursuant to our equity incentive plans, could result in additional dilution to the percentage ownership of our stockholders and could cause the price of our common stock to decline.

We have historically funded our operations in large part with proceeds from equity and convertible debt financings, and we expect to continue to do so in the future. In addition to capital-raising purposes, we may also issue securities from time to time at prices and on other terms as we determine for acquiring other businesses or assets in exchange for shares of our common stock or other securities, issuing securities to collaborators in connection with strategic partnerships, attracting and retaining employees with equity compensation, or other purposes. If we sell common stock or other equity or convertible debt securities in the future, our then-existing stockholders could be materially diluted by such issuances and new investors could gain rights, preferences and privileges senior to the holders of our common stock, which could cause the price of our common stock to decline.

Sales of our common stock, or the perception that such sales could occur, could cause the market price of our stock to drop significantly, regardless of the state of our business.

As of December 31, 2022, there were 232,557,448 shares of our common stock outstanding. In addition, 4,866,239 shares of our common stock are subject to outstanding stock options and 3,441,961 shares of our common stock are subject to outstanding unvested restricted stock units. All outstanding shares of our common stock are eligible for sale in the public market under applicable federal securities laws, subject in certain cases to the requirements of Rule 144 under the Securities Act of 1933, as amended, and shares issued upon the exercise or conversion of outstanding stock options, warrants or convertible notes may also be eligible for sale in the public market, to the extent permitted by Rule 144 or other applicable securities laws and the provisions of the applicable stock option, warrant and convertible note agreements. If these shares are sold, or if it is perceived that they may be sold, in the public market, the trading price of our common stock could fall.

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As a sole director, Chun K. Hong has significant control over all corporate decisions that may not be in the best interest of our other stockholders.

Our President, Chief Executive Officer and the sole member of our board of directors, Chun K. Hong, has the ability to exert substantial control over all matters requiring approval by our stockholders and our board of directors, including the election and removal of directors, any proposed merger, consolidation or sale of all or substantially all of our assets and other significant corporate transactions. This concentration of control could be disadvantageous to other stockholders with interests different from those of Mr. Hong.

Anti-takeover provisions under our charter documents and Delaware law, as well as our rights agreement, could delay or prevent a change of control and could also limit the market price of our common stock.

Our certificate of incorporation and bylaws contain provisions that could delay or prevent a change of control of our Company or changes in our board of directors that our stockholders might consider favorable, including:

- our board of directors is authorized, without prior stockholder approval, to designate and issue preferred stock, commonly referred to as “blank check” preferred stock, which may have rights senior to those of our common stock;
- stockholder action by written consent is prohibited;
- nominations for election to our board of directors and the submission of matters to be acted upon by stockholders at a meeting are subject to advance notice requirements; and
- our board of directors is expressly authorized to make, alter or repeal our bylaws.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. Further, we adopted a rights agreement that would, under certain specified circumstances and for so long as the rights issued under the rights agreement are outstanding, give the holders of our common stock the right to acquire additional shares of our capital stock, which would make it more difficult for a third party to acquire a significant percentage of our outstanding capital stock or attempt a hostile takeover of our Company.

These and other provisions in our certificate of incorporation and bylaws and of Delaware law, as well as the existence of our rights agreement, could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by our board of directors, including a merger, tender offer, proxy contest or other change of control transaction involving our Company. Any delay or prevention of a change of control transaction or changes in our board of directors could prevent the consummation of a transaction in which our stockholders could receive a substantial premium over the then-current market price for our common stock. In addition, these anti-takeover provisions could reduce the price that investors are willing to pay for shares of our common stock.

We do not currently intend to pay dividends on our common stock, and any return to investors is expected to result, if at all, only from potential increases in the price of our common stock.

We intend to use all available funds to finance our operations. Accordingly, while all decisions about dividends are at the discretion of our board of directors, we have never declared or paid cash dividends on our capital stock in the past, and we have no intention of declaring or paying any such dividends in the foreseeable future. As a result, any return to investors is expected to result, if at all, only from potential increases in the price of our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are located in Irvine, California where we lease and occupy approximately 14,809 square feet of office space under a lease that will expire in December 2026. Our warehouse is located in Irvine,

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California where we lease and occupy approximately 6,081 square feet of warehouse space under a lease that will expire in February 2027. Our manufacturing facility is located in the PRC where we lease and occupy approximately 43,600 square feet of manufacturing space under a lease that will expire in June 2023. We believe our existing facilities are in a good operating condition and are suitable for the conduct of our business.

Item 3. Legal Proceedings

Certain legal proceedings in which we are involved are discussed in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 7 “Commitments and Contingencies” under the heading “Litigation and Patent Reexaminations,” and are 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

Our common stock began trading on The Nasdaq Global Market under the symbol “NLST” on November 30, 2006 and was transferred to The Nasdaq Capital Market effective on January 14, 2016. On September 27, 2018, our common stock was transferred to the OTCQX® Best Market. On August 11, 2020, our common stock was transferred to the OTCQB®.

As of February 21, 2023, we had 235,523,847 outstanding shares of common stock, no outstanding shares of preferred stock, and approximately 13 holders of our common stock.

Dividend Policy

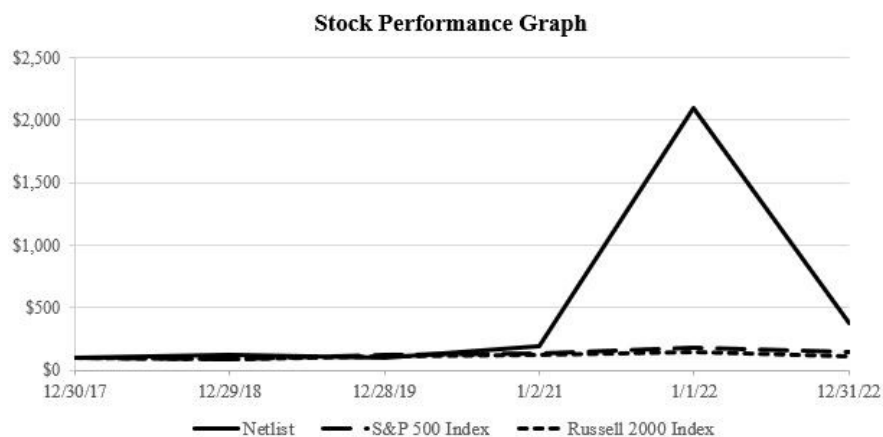
We have never declared or paid cash dividends on our capital stock in the past, and we have no intention of declaring or paying any such dividends in the foreseeable future. Additionally, our credit facility with SVB prohibits the payment of cash dividends without obtaining SVB’s prior consent. Any declaration or payment of dividends in the future will be at the discretion of our board of directors, and will depend on our results of operations, capital requirements, legal and contractual restrictions and other factors deemed relevant by our board of directors.

Securities Authorized for Issuance under Equity Compensation Plans

See Part III, Item 12 in this Form 10-K under the section titled “Security Ownership of Certain Beneficial Owners and Management” for information about our equity compensation plans which is incorporated by reference herein.

Performance Graph

The following graph shows a comparison of cumulative total shareholder return, calculated on a dividend-reinvested basis, on our common stock, the Russell 2000 Index and the S&P 500 Index for the five years ended December 31, 2022. The graph assumes \$100 was invested in each of our common stock, the Russell 2000 Index and the S&P 500 Index as of the market close on December 30, 2017. Note that past stock price performance is not necessarily indicative of future stock price performance.



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The following table summarizes stock performance graph data points in dollars:

	<u>12/30/17</u>	<u>12/29/18</u>	<u>12/28/19</u>	<u>1/2/21</u>	<u>1/1/22</u>	<u>12/31/22</u>
Netlist	\$ 100	\$ 124	\$ 104	\$ 196	\$ 2,098	\$ 374
S&P 500 Index	\$ 100	\$ 93	\$ 121	\$ 140	\$ 178	\$ 144
Russell 2000 Index	\$ 100	\$ 87	\$ 109	\$ 129	\$ 146	\$ 115

Item 6. [Reserved]

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with our consolidated financial statements and accompanying notes included in Item 8 of this Form 10-K. This section of this Form 10-K generally discusses 2022 and 2021 items and year-to-year comparisons between 2022 and 2021. Discussions of 2020 items and year-to-year comparisons between 2021 and 2020 are not included in this Form 10-K, and can be found in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended January 1, 2022.

Our fiscal year is the 52- or 53-week period that ends on the Saturday nearest to December 31. Our fiscal year 2022 ended on December 31, 2022, fiscal year 2021 ended on January 1, 2022, and fiscal year 2020 ended on January 2, 2021. All fiscal years presented in this Form 10-K, except fiscal year 2020, included 52 weeks. Additionally, all quarters, except the fourth quarter of 2020, included 13 weeks. Fiscal year 2020 included 53 weeks, with a 14-week fourth quarter. Unless otherwise stated, all information presented herein is based on our fiscal calendar, and references to particular years, quarters, months or periods refer to our fiscal years ended in January or December and the associated quarters, months and periods of those fiscal years.

Overview

Netlist provides high-performance memory solutions to enterprise customers in diverse industries. Our products in various capacities and form factors and our line of custom and specialty memory products bring leading performance to customers in a variety of industries globally and cloud service providers. Netlist licenses its portfolio of intellectual property, including solutions relating to volatile memory, storage memory, and hybrid memory.

Economic Conditions, Challenges and Risks

Our performance, financial condition and prospects are affected by a number of factors and are exposed to a number of risks and uncertainties. We operate in a competitive and rapidly evolving industry in which new risks emerge from time to time, and it is not possible for us to predict all of the risks we may face, nor can we assess the impact of all factors on our business or the extent to which any factor or combination of factors could cause actual results to differ from our expectations. See the discussion of certain risks that we face under “Risk Factors” in Item 1A of this report.

Impact of COVID-19 on our Business

The impact of the COVID-19 pandemic will have on our consolidated results of operations is uncertain. Although we initially observed demand increases in our products, we anticipate that the global health crisis caused by COVID-19 may negatively impact business activity across the globe. We will continue to actively monitor the situation and may take further actions altering our business operations that we determine are in the best interests of our employees, customers, suppliers, and stakeholders, or as required by federal, state, or local authorities. It is not clear what the potential effects of such alterations or modifications may have on our business, consolidated results of operations, financial condition, and liquidity.

Fiscal Year Highlights

Amendment to SVB Credit Agreement

On April 29, 2022, we entered into an amendment to a credit agreement dated October 31, 2009, which may from time to time be amended, modified, supplemented or restated, (the “SVB Credit Agreement”), with SVB, which provides for a revolving line of credit of up to \$10.0 million. The borrowing base is limited to 85% of eligible accounts receivable, subject to certain adjustments, and 50% of eligible inventory. Borrowings accrue interest on advance at a per annum rate equal to the greater of 0.75% above the Wall Street Journal prime rate (“Prime Rate”) or 4.25%. The maturity date is April 28, 2023, as amended.

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Second 2021 Lincoln Park Purchase Agreement

On September 28, 2021, we entered into a purchase agreement (the “Second 2021 Purchase Agreement”) with Lincoln Park, pursuant to which we have the right to sell to Lincoln Park up to an aggregate of \$75 million in shares of our common stock over the 36-month term of the Second 2021 Purchase Agreement subject to the conditions and limitations set forth in the Second 2021 Purchase Agreement. During 2021, Lincoln Park purchased an aggregate of 1,550,000 shares of our common stock for a net purchase price of \$10.9 million under the Second 2021 Purchase Agreement. In connection with the purchases, we issued to Lincoln Park an aggregate of 20,809 shares of our common stock as additional commitment shares in noncash transactions.

During 2022, Lincoln Park purchased an aggregate of 1,050,000 shares of our common stock for a net purchase price of \$4.4 million under the Second 2021 Purchase Agreement. In connection with the purchases, we issued to Lincoln Park an aggregate of 8,502 shares of our common stock as additional commitment shares in noncash transactions.

Subsequent to December 31, 2022, Lincoln Park purchased an aggregate of 2,650,000 shares of our common stock for a net purchase price of \$4.3 million under the Second 2021 Purchase Agreement. In connection with the purchases, we issued to Lincoln Park an aggregate of 8,284 shares of our common stock as additional commitment shares in noncash transactions.

Ineffective Internal Control over Financial Reporting

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis. In performing their audit of our internal control over financial reporting as required by Section 404 of SOX, our independent registered public accounting firm concluded that our internal control over financial reporting was ineffective as of December 31, 2022 due to one material weakness. The identified material weakness, at December 31, 2022, relates to the lack of an independent board and audit committee.

While the control weaknesses identified did not result in any identified misstatements, a reasonable possibility exists that a material misstatement to the annual or interim consolidated financial statements and disclosures will not be prevented or detected on a timely basis.

In an effort to address the identified material weakness related to the lack of an independent board and audit committee and to enhance our internal controls, our finance and accounting personnel are continuing to follow all of the same procedures that they undertook in preparation for independent audit committee meetings on a quarterly and annual basis. Our CEO and sole director will oversee these processes and review materials prepared by the finance and accounting staff as well as our independent registered public accounting firm on a quarterly and annual basis. If our measures are insufficient to address the material weakness, or if additional material weaknesses or significant deficiencies in our internal control over financial reporting occur in the future, we may not be able to timely or accurately report our results of operations or maintain effective disclosure controls and procedures. If we are unable to report financial information timely or accurately, or to maintain effective disclosure controls and procedures, we could be required to restate our financial statements and be subject to, among other things, regulatory or enforcement actions, securities litigation, limitations on our ability to access capital markets, debt rating agency downgrades or rating withdrawals, or loss in confidence of our investors, any one of which could adversely affect the valuation of our common stock and our business prospects. We can give no assurance that the measures we have taken and plan to take in the future will remediate the material weakness identified or that any additional material weaknesses will not arise in the future due to a failure to implement and maintain adequate internal control over financial reporting.

Results of Operations***Net Sales and Gross Margin***

Net sales and gross margin for 2022 and 2021 were as follows (dollars in thousands):

	2022	2021	Change
Net product sales	\$ 161,637	\$ 102,355	58%
License fee	—	40,000	(100%)
Net sales	<u>\$ 161,637</u>	<u>\$ 142,355</u>	14%
Gross profit - product sales	<u>\$ 11,892</u>	<u>\$ 8,897</u>	34%
Gross margin percentage - product sales	<u>7%</u>	<u>9%</u>	
Gross profit	<u>\$ 11,892</u>	<u>\$ 48,897</u>	(76%)
Gross margin percentage	<u>7%</u>	<u>34%</u>	

Net Sales

Net sales include (i) resales of certain component products, including DIMMs, SSDs and DRAM products, and sales of our high-performance memory subsystems and (ii) an upfront non-refundable fee pursuant to the Strategic Agreement.

Net product sales increased by approximately \$59.3 million during 2022 compared to 2021 primarily as a result of a \$81.4 million increase in the sale of RDIMM and discrete component products and a \$9.5 million increase in the sale of Netlist's flash and SSD products, offset by a \$31.6 million decrease in sales of low-profile memory subsystem products.

Gross Profit and Gross Margin

Product gross profit increased in 2022 compared to 2021 due primarily to higher sales across all product groups. Product gross margin percentage decreased between the periods as a result of the change in our product mix and increased component product resales as a percentage of revenue.

Operating Expenses

Operating expenses for 2022 and 2021 were as follows (dollars in thousands):

	2022	2021	Change
Research and development	\$ 10,624	\$ 7,241	47%
Percentage of net product sales	7%	7%	
Intellectual property legal fees	\$ 20,421	\$ 19,494	5%
Percentage of net product sales	13%	19%	
Selling, general and administrative	\$ 14,347	\$ 10,779	33%
Percentage of net product sales	9%	11%	

Research and Development

Research and development expenses increased in 2022 compared to 2021 due primarily to an increase in employee headcount, related overhead and new product research.

Intellectual Property Legal Fees

Intellectual property legal fees consist of legal fees incurred for enforcement, protection and patent filings and prosecution. Although we expect intellectual property legal fees to generally increase over time as we continue to

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protect, defend and enforce and seek to expand our patent portfolio, these increases may not be linear but may occur in lump sums depending on the due dates of patent filings and their associated fees and the arrangements we may make with our legal advisors in connection with enforcement proceedings, which may include fee arrangements or contingent fee arrangements in which we would pay these legal advisors on a scaled percentage of any negotiated fees, settlements or judgments awarded to us based on if, how and when the fees, settlements or judgments are obtained. See Note 7 “Commitments and Contingencies” of the Notes to Consolidated Financial Statements in Item 8 of this Form 10-K for further discussion.

Intellectual property legal fees increased during 2022 compared to 2021 due primarily to higher legal expenses incurred to defend and enforce our patent portfolio internationally.

Selling, General and Administrative

Selling, general and administrative expenses increased in 2022 compared to 2021 due primarily to an increase in employee headcount and overhead and outside services.

Other Income, Net

Other income, net for 2022 and 2021 was as follows (dollars in thousands):

	<u>2022</u>	<u>2021</u>	<u>Change</u>
Interest income (expense), net	\$ 57	\$ (568)	
Other income, net	74	643	
Total other income, net	<u>\$ 131</u>	<u>\$ 75</u>	(75%)

Interest expense, net, in 2021 consisted primarily of interest expense on the Senior Secured Convertible Promissory Note issued on November 18, 2015 (the “SVIC Note”) to SVIC No. 28 Technology Business Investment L.L.P., a Korean limited liability partnership (“SVIC”), an affiliate of Samsung Venture Investment Co., and a revolving line of credit under the SVB Credit Agreement, along with the accretion of debt discounts and amortization of debt issuance costs on the SVIC Note. The SVIC Note was paid off in December 2021 resulting in a decrease in interest expense for 2022 compared to 2021.

Other income, net in 2021 included the gain on forgiveness of the PPP Loan of \$0.6 million unsecured promissory note entered into on April 23, 2020, by and between the Company and Hanmi Bank under the Paycheck Protection Program (“PPP”) (the “PPP Loan”) administered by the Small Business Administration (“SBA”). This gain was recognized during the second quarter of 2021 resulting in a decrease in other income for 2022 compared to 2021.

Provision for Income Taxes

For 2022, our effective tax rate was 0% due primarily to our net loss and valuation allowances. During 2021, we recorded a provision for income taxes of \$6.6 million related to the Korean withholding tax incurred in connection with the upfront non-refundable fee pursuant to the Strategic Agreement of \$40 million from SK hynix recognized during the second quarter of 2021. Due primarily to this withholding tax, our effective tax rate for 2021 was higher at 58% than the statutory federal income tax rate of 21%.

Liquidity and Capital Resources

We believe our existing balance of cash and cash equivalents, which totaled \$43.6 million as of December 31, 2022, along with cash receipts from revenues, borrowing availability under the SVB Credit Agreement, the equity financing available under the Second 2021 Lincoln Park Purchase Agreement, funds raised through other future debt and equity offerings and taking into account cash expected to be used in our operations, will be sufficient to meet our anticipated cash needs for at least the next 12 months.

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In addition, on April 5, 2021, we entered into a Product Purchase and Supply Agreement (the “Supply Agreement”) with SK hynix and the Strategic Agreement. Both agreements have a term of 5 years. Under the Strategic Agreement, (a) we have granted to SK hynix worldwide, non-exclusive, non-assignable licenses to certain of our patents covering memory technologies and (b) SK hynix has granted to us worldwide, non-exclusive, non-assignable licenses to its patent portfolio. In addition, the Strategic Agreement provided for the settlement of all intellectual property proceedings between us and SK hynix and a settlement fee of \$40 million paid to us by SK hynix. In addition, the parties have agreed to collaborate on certain technology development activities.

For a description of contractual obligations, see Note 4, “Debt” and Note 5, “Leases” of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

Cash Flow Summary

Our cash flows from operating, investing and financing activities, as reflected in the consolidated statements of cash flows, are summarized as follows (in thousands):

	2022	2021
Net cash provided by (used in):		
Operating activities	\$ (14,995)	\$ 6,007
Investing activities	(467)	(520)
Financing activities	594	36,466
Net change in cash, cash equivalents and restricted cash	<u>\$ (14,868)</u>	<u>\$ 41,953</u>

Net cash used in operating activities for 2022 was primarily a result of net loss of \$33.4 million, non-cash adjustments to net loss of \$4.2 million, partially offset by net cash inflows from changes in operating assets and liabilities of \$14.2 million driven predominantly by an increase in accounts payable and accrued expenses and other liabilities and a decrease in accounts receivable and inventories. Net cash provided by financing activities for 2022 primarily consisted of \$4.4 million in net proceeds from issuance of common stock under the Second 2021 Lincoln Park Purchase Agreement and \$0.3 million in proceeds from exercise of stock options, partially offset by \$2.1 million in net payments under the SVB Credit Agreement, \$0.6 million in payments of note payable to finance insurance policies and \$1.4 million in payments for taxes related to net share settlement of equity awards.

Net cash provided by operating activities for 2021 was primarily a result of net income of \$4.8 million, non-cash adjustments to net income of \$2.0 million, offset by net cash outflows from changes in operating assets and liabilities of \$1.0 million driven predominantly by an increase in accounts payable, partially offset by an increase in accounts receivable and inventories. Net cash provided by financing activities for 2021 primarily consisted of \$39.6 million in net proceeds from issuance of common stock under the Purchase Agreement, dated as of June 24, 2019, by and between the Company and Lincoln Park (the “2019 Purchase Agreement”), the Purchase Agreement, dated as of March 5, 2020, by and between the Company and Lincoln Park (the “2020 Purchase Agreement”), the Purchase Agreement, dated as of July 12, 2021, by and between the Company and Lincoln Park (the “First 2021 Purchase Agreement”), and the Second 2021 Purchase Agreement, \$11.8 million in proceeds from exercise of stock options and warrants and \$3.3 million in net borrowings under the SVB Credit Agreement, partially offset by \$17.1 million in repayment of SVIC Note and other debt and \$1.1 million in payments for taxes related to net share settlement of equity awards.

Capital Resources

Second 2021 Lincoln Park Purchase Agreement

On September 28, 2021, we entered into the Second 2021 Purchase Agreement with Lincoln Park, pursuant to which we have the right to sell to Lincoln Park up to an aggregate of \$75 million in shares of our common stock over the 36-month term of the Second 2021 Purchase Agreement subject to the conditions and limitations set forth in the Second

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2021 Purchase Agreement. As of December 31, 2022, \$59.7 million remains available under the Second 2021 Purchase Agreement with Lincoln Park.

SVB Credit Agreement

On October 31, 2009, we entered into the SVB Credit Agreement, which provides for a revolving line of credit of up to \$10.0 million, as amended. The SVB Credit Agreement was most recently amended on April 29, 2022, and the borrowing base is limited to 85% of eligible accounts receivable, subject to certain adjustments, and 50% of eligible inventory. Borrowings accrue interest on advance at a per annum rate equal to the greater of 0.75% above the Prime Rate or 4.25%. The maturity date is April 28, 2023, as amended.

As of December 31, 2022, the outstanding borrowings under the SVB Credit Agreement were \$4.9 million with no availability under the revolving line of credit. During the year ended December 31, 2022, we made net repayments of \$2.1 million under the SVB Credit Agreement.

Critical Accounting Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States and our discussion and analysis of our financial condition and operating results require our management to make judgments, assumptions and estimates that affect the amounts reported. Management bases its estimates on historical experience and on various other assumptions it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. While our significant accounting policies are described in more detail in Note 1 “Summary of Significant Accounting Policies” of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K, we believe the accounting policies discussed below used in the preparation of our consolidated financial statements require the most significant estimates, judgments, assumptions and decisions.

Sales Return Reserves

Our revenue generating activities include variable consideration which is recorded as a reduction of the transaction price based upon expected amounts at the time revenue for the corresponding product sale is recognized. Common forms of variable consideration include limited rights of return for up to 30 days, except for sales of excess component inventories, which contain no right-of-return privileges and volume rebates for meeting established sales targets. Estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of the anticipated performance and all information (historical, current and forecasted) that is reasonably available.

Returns for products sold are estimated using the expected value method and are recorded as a reduction in reported revenues at the time of sale based upon historical product return experience and is adjusted for known trends to arrive at the amount of consideration to which we expect to receive. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

Inventories

Inventories are valued at the lower of cost or the net realizable value. Cost is determined on an average cost basis which approximates actual cost on a first-in, first-out basis and includes raw materials, labor and manufacturing overhead. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. We evaluate inventory balances for excess quantities and obsolescence on a regular basis by analyzing estimated demand, inventory on hand, sales levels and other information and reduce inventory balances to net realizable value for excess and obsolete inventory based on this analysis. At the

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point of the write-down recognition, a new, lower cost basis for that inventory is established, and subsequent changes in facts and circumstances do not result in the restoration or increase in that newly established cost basis.

Warranties

We offer standard product warranties generally ranging from one to three years to our memory subsystem products customers, depending on the negotiated terms of any purchase agreements, and has no other post-shipment obligations or separately priced extended warranty or product maintenance contracts. These warranties require us to repair or replace defective product returned to us during the warranty period at no cost to the customer. Warranties are not offered on sales of component products. We record an estimate for warranty related costs at the time of sale based on our historical and estimated future product return rates and expected repair or replacement costs. Estimated future warranty costs are recorded in the period in which the sale is recorded and are included in cost of sales in the consolidated statements of operations.

Stock-Based Compensation

Stock-based awards are comprised principally of stock options, restricted stock awards (“RSAs”) and restricted stock units (“RSUs”). Stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as an expense over the requisite service period, which is the vesting period, on a straight-line basis, net of estimated forfeitures. We use the Black-Scholes option pricing model to determine the grant date fair value of stock options. The model requires us to estimate the expected volatility and expected term of the stock options, which are highly complex and subjective variables. The expected volatility is based on the historical volatility of our common stock. The expected term is computed using the simplified method as our best estimate given our lack of actual exercise history. The risk-free rate selected to value any particular grant is based on the U.S. Treasury rate that corresponds to the expected term of the grant effective as of the date of the grant. The expected dividend assumption is based on our history and management’s expectation regarding dividend payouts. The grant-date fair value of RSAs and RSUs equals the closing price of our common stock on the grant date.

Uncertain Tax Positions

We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained upon examination by the taxing authorities based on the technical merits of our position. The tax benefit recognized in the financial statements for a particular tax position is based on the largest benefit that is more likely than not to be realized. The amount of unrecognized tax benefits is adjusted as appropriate for changes in facts and circumstances, such as significant amendments to existing tax laws, new regulations or interpretations by the taxing authorities, new information obtained during a tax examination, or resolution of an examination.

The application of tax laws and regulations is subject to legal and factual interpretation, judgment and uncertainty. Tax laws and regulations may change as a result of changes in fiscal policy, changes in legislation, the evolution of regulations and court rulings. Therefore, the actual liability for U.S. or foreign taxes may be materially different from our estimates, which could require us to record additional tax liabilities or to reduce previously recorded tax liabilities, as applicable.

Recent Accounting Standards

See Note 1 “Summary of Significant Accounting Policies” of the Notes to Consolidated Financial Statements in Item 8 of this Form 10-K for further discussion.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Foreign Currency Exchange Rate Risk

The majority of our sales and our expenses are denominated in U.S. dollars. Since we operate in the PRC, a percentage of our sales and operational expenses are denominated in RMB and exchange volatility could positively or

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negatively impact those operating costs. Additionally, we may hold certain assets and liabilities in local currency on our consolidated balance sheet. As the sales and operational expenses in RMB is immaterial, we do not believe that foreign exchange volatility has a material impact on our current business or results of operations.

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Netlist, Inc. and Subsidiaries

CONSOLIDATED BALANCE SHEETS
(in thousands, except par value amounts)

	December 31, 2022	January 1, 2022
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 25,011	\$ 47,679
Restricted cash	18,600	10,800
Accounts receivable, net of allowances of \$137 (2022) and \$283 (2021)	8,242	12,727
Inventories	10,686	15,670
Prepaid expenses and other current assets	1,308	1,126
Total current assets	63,847	88,002
Property and equipment, net	1,138	989
Operating lease right-of-use assets	2,043	1,891
Other assets	295	294
Total assets	<u>\$ 67,323</u>	<u>\$ 91,176</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	\$ 28,468	\$ 25,887
Revolving line of credit	4,935	7,000
Accrued payroll and related liabilities	1,588	1,308
Accrued expenses and other current liabilities	2,635	632
Long-term debt due within one year	447	562
Total current liabilities	38,073	35,389
Operating lease liabilities	1,744	1,593
Other liabilities	270	152
Total liabilities	40,087	37,134
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, \$0.001 par value—10,000 shares authorized: Series A preferred stock, \$0.001 par value; 1,000 shares authorized; none issued and outstanding	—	—
Common stock, \$0.001 par value—450,000 shares authorized; 232,557 (2022) and 230,113 (2021) shares issued and outstanding	233	231
Additional paid-in capital	250,428	243,866
Accumulated deficit	(223,425)	(190,055)
Total stockholders' equity	27,236	54,042
Total liabilities and stockholders' equity	<u>\$ 67,323</u>	<u>\$ 91,176</u>

See accompanying Notes to Consolidated Financial Statements.

Netlist, Inc. and Subsidiaries**CONSOLIDATED STATEMENTS OF OPERATIONS**

(in thousands, except per share amounts)

	Year Ended		
	December 31, 2022	January 1, 2022	January 2, 2021
Net product sales	\$ 161,637	\$ 102,355	\$ 47,234
License fee	—	40,000	—
Net sales	161,637	142,355	47,234
Cost of sales	149,745	93,458	40,503
Gross profit	11,892	48,897	6,731
Operating expenses:			
Research and development	10,624	7,241	2,953
Intellectual property legal fees	20,421	19,494	2,368
Selling, general and administrative	14,347	10,779	8,247
Total operating expenses	45,392	37,514	13,568
Operating (loss) income	(33,500)	11,383	(6,837)
Other income (expense), net:			
Interest income (expense), net	57	(568)	(531)
Other income, net	74	643	101
Total other income (expense), net	131	75	(430)
(Loss) income before provision for income taxes	(33,369)	11,458	(7,267)
Provision for income taxes	1	6,627	1
Net (loss) income	\$ (33,370)	\$ 4,831	\$ (7,268)
(Loss) earnings per share:			
Basic	\$ (0.14)	\$ 0.02	\$ (0.04)
Diluted	\$ (0.14)	\$ 0.02	\$ (0.04)
Weighted-average common shares outstanding:			
Basic	231,487	218,171	183,594
Diluted	231,487	225,589	183,594

See accompanying Notes to Consolidated Financial Statements.

Netlist, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands)

	Common Stock		Additional	Accumulated	Total
	Shares	Amount	Paid-in Capital	Deficit	Stockholders' Equity (Deficit)
Balance, December 28, 2019	169,539	\$ 169	\$ 179,086	\$ (187,618)	\$ (8,363)
Net loss	—	—	—	(7,268)	(7,268)
Issuance of common stock, net	25,490	25	12,149	—	12,174
Issuance of warrants	—	—	145	—	145
Exercise of stock options	226	—	32	—	32
Exercise of warrants	256	—	—	—	—
Stock-based compensation	—	—	763	—	763
Restricted stock units vested and distributed	801	1	(1)	—	—
Tax withholdings related to net share settlements of equity awards	(334)	—	(103)	—	(103)
Balance, January 2, 2021	195,978	195	192,071	(194,886)	(2,620)
Net income	—	—	—	4,831	4,831
Issuance of common stock, net	16,646	17	39,552	—	39,569
Exercise of stock options	2,865	4	3,946	—	3,950
Exercise of warrants	13,808	14	7,854	—	7,868
Stock-based compensation	—	—	1,580	—	1,580
Restricted stock units vested and distributed	1,140	1	(1)	—	—
Tax withholdings related to net share settlements of equity awards	(324)	—	(1,136)	—	(1,136)
Balance, January 1, 2022	230,113	231	243,866	(190,055)	54,042
Net loss	—	—	—	(33,370)	(33,370)
Issuance of common stock, net	1,059	1	4,435	—	4,436
Exercise of stock options	414	—	284	—	284
Stock-based compensation	—	—	3,214	—	3,214
Restricted stock units vested and distributed	1,358	1	(1)	—	—
Tax withholdings related to net share settlements of equity awards	(387)	—	(1,370)	—	(1,370)
Balance, December 31, 2022	<u>232,557</u>	<u>\$ 233</u>	<u>\$ 250,428</u>	<u>\$ (223,425)</u>	<u>\$ 27,236</u>

See accompanying Notes to Consolidated Financial Statements.

Netlist, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Year Ended		
	December 31, 2022	January 1, 2022	January 2, 2021
Cash flows from operating activities:			
Net income (loss)	\$ (33,370)	\$ 4,831	\$ (7,268)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	340	127	147
Interest accrued on convertible promissory notes	—	300	309
Amortization of debt discounts	—	228	212
Non-cash lease expense	640	375	489
Gain on extinguishment of debt	—	(643)	—
Stock-based compensation	3,214	1,580	763
Issuance of warrant in lieu of payment	—	—	145
Changes in operating assets and liabilities:			
Accounts receivable	4,485	(8,047)	(1,008)
Inventories	4,984	(12,472)	298
Prepaid expenses and other assets	264	(286)	1,693
Accounts payable	2,581	20,166	(3,807)
Accrued payroll and related liabilities	280	502	66
Accrued expenses and other liabilities	1,587	(654)	(173)
Net cash provided by (used in) operating activities	<u>(14,995)</u>	<u>6,007</u>	<u>(8,134)</u>
Cash flows from investing activities:			
Acquisition of property and equipment	(467)	(520)	(43)
Net cash used in investing activities	<u>(467)</u>	<u>(520)</u>	<u>(43)</u>
Cash flows from financing activities:			
Net borrowings (repayments) under line of credit	(2,065)	3,322	688
Proceeds from issuance of long-term debt	—	—	637
Principal repayments under finance lease	(129)	(20)	(18)
Payments on note payable and long-term debt	(562)	(17,087)	(423)
Proceeds from issuance of common stock, net	4,436	39,569	12,174
Proceeds from exercise of stock options and warrants	284	11,818	32
Payments for taxes related to net share settlement of equity awards	(1,370)	(1,136)	(103)
Net cash provided by financing activities	<u>594</u>	<u>36,466</u>	<u>12,987</u>
Net change in cash, cash equivalents and restricted cash	<u>(14,868)</u>	<u>41,953</u>	<u>4,810</u>
Cash, cash equivalents and restricted cash at beginning of period	58,479	16,526	11,716
Cash, cash equivalents and restricted cash at end of period	<u>\$ 43,611</u>	<u>\$ 58,479</u>	<u>\$ 16,526</u>
Reconciliation of cash, cash equivalents and restricted cash at end of period:			
Cash and cash equivalents	\$ 25,011	\$ 47,679	\$ 13,326
Restricted cash	18,600	10,800	3,200
Cash, cash equivalents and restricted cash at end of period	<u>\$ 43,611</u>	<u>\$ 58,479</u>	<u>\$ 16,526</u>

See accompanying Notes to Consolidated Financial Statements.

Netlist, Inc. and Subsidiaries

Notes to Consolidated Financial Statements

Note 1—Summary of Significant Accounting Policies

Basis of Presentation

Netlist, Inc. and its wholly owned subsidiaries (collectively the “Company”, “Netlist,” “we,” “us,” or “our”) provides high-performance memory solutions to enterprise customers in diverse industries. Our products in various capacities and form factors and the line of custom and specialty memory products bring industry-leading performance to server and storage appliance customers and cloud service providers. We license our portfolio of intellectual property including patents, in server memory, hybrid memory and storage class memory, to companies that implement our technology. We operate in one reportable segment, which is the design and manufacture of high-performance memory subsystems for the server, high-performance computing and communications markets.

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). The consolidated financial statements include the accounts of Netlist, Inc. and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, net sales and expenses. Actual results may differ materially from those estimates. We have evaluated events occurring subsequent to December 31, 2022, through the filing date of this Annual Report on Form 10-K and concluded that there were no events that required recognition and disclosures, other than those discussed elsewhere in the notes hereto. Certain prior period amounts have been reclassified to conform to the current period’s presentation.

Our fiscal year is the 52- or 53-week period that ends on the Saturday nearest to December 31. Our fiscal year 2022 ended on December 31, 2022, fiscal year 2021 ended on January 1, 2022, and fiscal year 2020 ended on January 2, 2021. All fiscal years presented in this Form 10-K, except fiscal year 2020, included 52 weeks. Additionally, all quarters, except the fourth quarter of 2020, included 13 weeks. Fiscal year 2020 included 53 weeks, with a 14-week fourth quarter. Unless otherwise stated, references to particular years, quarters, months and periods refer to our fiscal years ended in January or December and the associated quarters, months and periods of those fiscal years.

Recently Adopted Accounting Standards

In the first quarter of 2022, we adopted the Financial Accounting Standards Board (“FASB”) Accounting Standards Update (“ASU”) No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*. This ASU amends the guidance on convertible instruments and the derivatives scope exception for contracts in an entity’s own equity, and also improves and amends the related earnings per share guidance for both Subtopics. The adoption of this ASU did not have an impact on the Company’s condensed consolidated financial statements as the Company paid off its convertible debt in December 2021.

Revenue Recognition

Product Revenue

Revenue is recognized when control is transferred to customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods and services. Revenue recognition is evaluated through the five steps outlined within the accounting guidance. Substantially all of our product sales relate to products sold at a point in time through ship-and-bill performance obligations. At contract inception, an assessment of the goods and services promised in the contracts with customers is performed and a performance obligation is identified for each distinct promise to transfer to the customer a good or service (or bundle of goods or services). To identify the performance obligations, we consider all of the goods or services promised in the contract regardless of whether they are explicitly stated or are

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implied by customary business practices. Contracts with customers are comprised of customer purchase orders, invoices (including our standard terms and conditions) and written contracts.

License Revenue

For licenses of technology, recognition of revenue is dependent upon whether we have delivered rights to the technology, and whether there are future performance obligations under the contract. In some instances, the license agreements call for future events or activities to occur in order for milestone amounts to become due from the customer. The terms of such agreements include payments to us of one or more of the following: non-refundable upfront fees and royalties on net sales of licensed products. Historically, these license agreements have not included other future performance obligations for us once the license has been transferred to the customer.

Revenue from non-refundable upfront payments is recognized when the license is transferred to the customer and we have no other performance obligations.

Performance Obligations

Net product sales and related cost of sales are primarily the result of promises to transfer products to customers. For performance obligations related to substantially all of the ship-and-bill products, control transfers at a point in time when title transfers upon shipment of the product to the customer, and for some sales, control transfers when title is transferred at time of receipt by the customer. Once a product has shipped or has been delivered, the customer is able to direct the use of, and obtain substantially all of the remaining benefits from, the asset. We consider control to have transferred upon shipment or delivery, because we have a present right to payment at that time, the customer has legal title to the asset, we have transferred physical possession of the asset, and the customer has the significant risks and rewards of ownership of the asset.

Amounts billed to our customers for shipping and handling are recorded in net sales. Shipping and handling costs incurred by us are included in cost of sales in the accompanying consolidated statements of operations.

Significant Payment Terms

For ship-and-bill type contracts with customers, the invoice states the final terms of the sale, including the description, quantity, and price of each product purchased. Payment terms are typically due within 30 days after delivery but, in limited instances, can range up to 90 days after delivery. Accordingly, our contracts with customers do not include a significant financing component.

Variable Consideration

Our revenue generating activities include variable consideration which is recorded as a reduction of the transaction price based upon expected amounts at the time revenue for the corresponding product sale is recognized. Common forms of variable consideration include limited rights of return for up to 30 days, except for sales of excess component inventories, which contain no right-of-return privileges and volume rebates for meeting established sales targets. Estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of the anticipated performance and all information (historical, current and forecasted) that is reasonably available.

Returns for products sold are estimated using the expected value method and are recorded as a reduction in reported revenues at the time of sale based upon historical product return experience and is adjusted for known trends to arrive at the amount of consideration to which we expect to receive. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

Contract Assets and Liabilities

We continually evaluate whether the revenue generating activities and advanced payment arrangements with customers result in the recognition of contract assets or liabilities. Generally, we do not have material amounts of contract assets since revenue is recognized as control of goods is transferred or as services are performed. As of January 1, 2022 and December 31, 2022, there were no contract liabilities.

Warranties

We offer standard product warranties generally ranging from one to three years to our memory subsystem products customers, depending on the negotiated terms of any purchase agreements, and have no other post-shipment obligations or separately priced extended warranty or product maintenance contracts. These warranties require us to repair or replace defective product returned to us during the warranty period at no cost to the customer. Warranties are not offered on sales of component products. We record an estimate for warranty related costs at the time of sale based on our historical and estimated future product return rates and expected repair or replacement costs. Estimated future warranty costs are recorded in the period in which the sale is recorded and are included in cost of sales in the consolidated statements of operations.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and short-term investments with original maturities of three months or less.

Restricted Cash

Our restricted cash consists of cash to secure standby letters of credit (see Note 3).

Fair Value Measurements

Certain assets and liabilities are accounted for at fair value. The hierarchy below lists three levels of fair value based on the extent to which inputs used in measuring fair value are observable in the market. We categorize each of our fair value measurements in one of those three levels based on the lowest level input that is significant to the fair value measurement in its entirety.

- *Level 1* – inputs are based on unadjusted quoted prices in active markets for identical assets or liabilities that we have the ability to access. An active market is defined as a market in which transactions for the assets or liabilities occur with sufficient frequency and volume to provide pricing information on an ongoing basis.
- *Level 2* – inputs are based on quoted prices of similar instruments in active markets, quoted prices for identical or similar instruments in market that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- *Level 3* – inputs are generally unobservable inputs for the asset or liability, which are typically based on management’s estimates of assumptions that market participants would use in pricing the assets and liabilities. The fair values are therefore determined using model-based techniques, including option pricing models and discounted cash flow models.

Our financial instruments consist principally of cash and cash equivalents, restricted cash, a revolving line of credit and note payable. Cash equivalents consist of short-term investments with original maturities of three months or less and restricted cash consists of cash to secure standby letters of credit (see Note 3). The carrying value of these instruments approximates their fair value due to their short-term nature. The fair value of the revolving line of credit and the note payable is estimated by using current applicable rates for similar instruments as of the balance sheet date and an assessment of the credit rating. The carrying values of the revolving line of credit as of December 31, 2022 and January 1, 2022 and the note payable as of December 31, 2022 and January 1, 2022 approximate fair value because the interest rate yield is near current market rates for comparable debt instruments.

Accounts Receivable, net

We extend credit to our customers. An allowance for doubtful accounts is maintained for estimated losses resulting from the inability of our customers to make required payments. We specifically analyze the age of customer balances, historical bad debt experiences, customer creditworthiness and changes in customer payment terms when making estimates of the collectability of our accounts receivable balances. If we determine that the financial condition of any of our customers has deteriorated, whether due to customer specific or general economic issues, an increase in the allowance may be made. After all attempts to collect a receivable have failed, the receivable is written off.

Concentration of Credit Risk

Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash and cash equivalents, and accounts receivable. We invest our cash equivalents primarily in money market mutual funds. Cash equivalents are maintained with high quality institutions, the composition and maturities of which are regularly monitored by management. At times, deposits held with financial institutions may exceed the amount of insurance provided by the Federal Deposit Insurance Corporation and the Securities Investor Protection Corporation.

Our accounts receivable are primarily derived from sales to original equipment manufacturers in the server, high-performance computing and communications markets, as well as from sales to storage customers, appliance customers, system builders and cloud and datacenter customers. We perform credit evaluations of our customers' financial condition and limit the amount of credit extended when deemed necessary, but generally require no collateral. We believe the concentration of credit risk in our accounts receivable is moderated by our credit evaluation process, relatively short collection terms, a high level of credit worthiness of our customers (see Note 10), foreign credit insurance, and letters of credit issued in our favor. The allowance for credit losses is maintained, and such losses historically have not been significant and have been within management's expectations.

Inventories

Inventories are valued at the lower of cost or the net realizable value. Cost is determined on an average cost basis which approximates actual cost on a first-in, first-out basis and includes raw materials, labor and manufacturing overhead. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. We evaluate inventory balances for excess quantities and obsolescence on a regular basis by analyzing estimated demand, inventory on hand, sales levels and other information and reduce inventory balances to net realizable value for excess and obsolete inventory based on this analysis. At the point of the write-down recognition, a new, lower cost basis for that inventory is established, and subsequent changes in facts and circumstances do not result in the restoration or increase in that newly established cost basis.

Property and Equipment

Property and equipment are recorded at cost and depreciated on a straight-line basis over their estimated useful lives, which generally range from three to seven years. Leasehold improvements are recorded at cost and amortized on a straight-line basis over the shorter of their estimated useful lives or the remaining lease term. Expenditures for repairs and maintenance are expensed as incurred. Upon retirement or sale, the cost and related accumulated depreciation and amortization of disposed assets are removed from the accounts and any resulting gain or loss is included in other income (expense), net in the consolidated statements of operations.

Impairment of Long-Lived Assets

We evaluate the recoverability of the carrying value of long-lived assets held and used by us in our operations for impairment on at least an annual basis or whenever events or changes in circumstances indicate that their carrying value may not be recoverable. When such factors and circumstances exist, we compare the projected undiscounted future net cash flows associated with the related asset or group of assets over their estimated useful lives against their respective carrying amount. These projected future cash flows may vary significantly over time as a result of increased

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competition, changes in technology, fluctuations in demand, consolidation of our customers and reductions in average sales prices. If the carrying value is determined not to be recoverable from future operating cash flows, the asset is deemed impaired and an impairment loss is recognized to the extent the carrying value exceeds the estimated fair value of the asset. The fair value of the asset or asset group is based on market value when available, or when unavailable, on discounted expected cash flows. Management believes there is no impairment of long-lived assets as of December 31, 2022 and January 1, 2022.

Leases

We determine if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (“ROU”) assets, accrued expenses and other current liabilities, and operating lease liabilities on our consolidated balance sheets. Finance leases are included in property and equipment, accrued expenses and other current liabilities, and other liabilities in our consolidated balance sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. We use the implicit rate when readily determinable. The operating lease ROU asset also includes any lease payments made and excludes lease incentives. The lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

We have lease agreements with lease and non-lease components, which are accounted for as a single lease component. We do not present short-term leases on the balance sheet, as those leases have a lease term of twelve months or less at inception and do not contain purchase options or renewal terms that we are reasonably certain to exercise.

Stock-Based Compensation

Stock-based awards are comprised principally of stock options, restricted stock awards (“RSAs”) and restricted stock units (“RSUs”). Stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as an expense over the requisite service period, which is the vesting period, on a straight-line basis, net of estimated forfeitures. We use the Black-Scholes option pricing model to determine the grant date fair value of stock options. The model requires us to estimate the expected volatility and expected term of the stock options, which are highly complex and subjective variables. The expected volatility is based on the historical volatility of our common stock. The expected term is computed using the simplified method as our best estimate given our lack of actual exercise history. The risk-free rate selected to value any particular grant is based on the U.S. Treasury rate that corresponds to the expected term of the grant effective as of the date of the grant. The expected dividend assumption is based on our history and management’s expectation regarding dividend payouts. The grant-date fair value of RSAs and RSUs equals the closing price of our common stock on the grant date.

Income Taxes

Deferred income tax assets and liabilities are recognized for temporary differences between the financial statement carrying amounts of assets and liabilities and the amounts that are reported in the income tax returns. Deferred taxes are evaluated for realization on a jurisdictional basis. We record valuation allowances to reduce deferred tax assets to the amount that is more likely than not to be realized. In making this assessment, management analyzes future taxable income, reversing temporary differences and ongoing tax planning strategies. Should a change in circumstances lead to a change in judgment about the realizability of deferred tax assets in future years, we will adjust related valuation allowances in the period that the change in circumstances occurs, along with a corresponding increase or charge to income.

We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained upon examination by the taxing authorities based on the technical merits of our position. The tax

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benefit recognized in the financial statements for a particular tax position is based on the largest benefit that is more likely than not to be realized. The amount of unrecognized tax benefits is adjusted as appropriate for changes in facts and circumstances, such as significant amendments to existing tax laws, new regulations or interpretations by the taxing authorities, new information obtained during a tax examination, or resolution of an examination. We recognize both accrued interest and penalties associated with uncertain tax positions as a component of provision for income taxes in the consolidated statements of operations.

The application of tax laws and regulations is subject to legal and factual interpretation, judgment and uncertainty. Tax laws and regulations may change as a result of changes in fiscal policy, changes in legislation, the evolution of regulations and court rulings. Therefore, the actual liability for U.S. or foreign taxes may be materially different from our estimates, which could require us to record additional tax liabilities or to reduce previously recorded tax liabilities, as applicable.

Contingent Legal Expenses

Contingent legal fees are expensed in the consolidated statements of operations in the period that the related revenues are recognized. In instances where there are no recoveries from potential infringers, no contingent legal fees are paid; however, we may be liable for certain out of pocket legal costs incurred pursuant to the underlying legal services agreement.

Research and Development Expenses

Research and development expenditures are expensed in the period incurred.

Foreign Currency Remeasurement

The functional currency of our foreign subsidiaries is the U.S. dollar. Local currency financial statements are remeasured into U.S. dollars at the exchange rate in effect as of the balance sheet date for monetary assets and liabilities and the historical exchange rate for nonmonetary assets and liabilities. Expenses are remeasured using the average exchange rate for the period, except items related to nonmonetary assets and liabilities, which are remeasured using historical exchange rates. All remeasurement gains and losses are included in determining net loss. Transaction gains and losses were not significant during 2022, 2021 or 2020.

Earnings (Loss) Per Share

Basic earnings (loss) per share is calculated by dividing net income (loss) by the weighted-average common shares outstanding during the period. Diluted earnings (loss) per share is calculated by dividing the net income (loss) by the weighted-average shares and dilutive potential common shares outstanding during the period. Dilutive potential shares consist of dilutive shares issuable upon the exercise of outstanding stock options and warrants computed using the treasury stock method, shares issuable under the conversion feature of a convertible note using the “if-converted” method, and shares issuable upon the vesting of RSAs and RSUs. In periods of net loss, basic and diluted loss per share are the same, as the effect of dilutive potential shares on loss per share is anti-dilutive.

Note 2—Supplemental Financial Information***Inventories***

Inventories consisted of the following (in thousands):

	2022	2021
Raw materials	\$ 8,223	\$ 4,208
Work in process	185	154
Finished goods	2,278	11,308
	<u>\$ 10,686</u>	<u>\$ 15,670</u>

Property and Equipment, net

Property and equipment, net consisted of the following (in thousands):

	2022	2021
Machinery and equipment	\$ 7,881	\$ 7,814
Computer equipment and software	2,477	2,145
Leasehold improvements	781	639
Furniture and fixtures	620	474
Construction in progress	6	273
	<u>11,765</u>	<u>11,345</u>
Less: accumulated depreciation and amortization	<u>(10,627)</u>	<u>(10,356)</u>
	<u>\$ 1,138</u>	<u>\$ 989</u>

Substantially all our property and equipment are located within the United States as of December 31, 2022 and January 1, 2022.

Disaggregation of Net Sales

The following table shows disaggregated net sales by major source (in thousands):

	2022	2021	2020
Resales of third-party products	\$ 136,403	\$ 81,309	\$ 31,031
Sale of the Company's modular memory subsystems	25,234	21,046	16,203
License fee	—	40,000	—
Total net sales	<u>\$ 161,637</u>	<u>\$ 142,355</u>	<u>\$ 47,234</u>

During the second quarter of 2021, we received and recognized an upfront non-refundable license fee of \$40 million as consideration to enter into a Strategic Product Supply and License Agreement (“the Strategic Agreement”) with SK hynix, Inc., a South Korean memory semiconductor supplier, (“SK hynix”). The license fee revenue was recognized when we granted the license of our patents to SK hynix, since the performance obligation was satisfied at a point in time. In connection with the receipt of this fee, during the second quarter of 2021, we recorded a provision for income taxes of \$6.6 million related to the Korean withholding tax incurred.

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Net product sales by country presented below are based on the billing location of the customer (in thousands):

	2022	2021	2020
United States	\$ 39,545	\$ 53,519	\$ 35,826
People's Republic of China(1)	114,480	39,480	6,071
Other countries	7,612	9,356	5,337
Total net sales	<u>\$ 161,637</u>	<u>\$ 102,355</u>	<u>\$ 47,234</u>

(1) China includes Hong Kong and Taiwan.

The United States and China accounted for more than 10% of our net product sales for 2022, 2021 and 2020.

Earnings (Loss) Per Share

The following table shows the computation of basic and diluted earnings (loss) per share of common stock (in thousands, except per share data):

	2022	2021	2020
Numerator:			
Net (loss) income	\$ (33,370)	\$ 4,831	\$ (7,268)
Denominator:			
Weighted-average basic shares outstanding	231,487	218,171	183,594
Effect of dilutive securities	—	7,418	—
Weighted-average diluted shares	<u>231,487</u>	<u>225,589</u>	<u>183,594</u>
Basic (loss) earnings per share	<u>\$ (0.14)</u>	<u>\$ 0.02</u>	<u>\$ (0.04)</u>
Diluted (loss) earnings per share	<u>\$ (0.14)</u>	<u>\$ 0.02</u>	<u>\$ (0.04)</u>

We computed net loss per share using the two-class method required for unvested participating securities through the three months ended March 28, 2020 as restricted stock awards were considered participating securities until they vested in full during that quarter. No allocation of undistributed earnings to participating securities was performed for periods with net loss as such securities do not have a contractual obligation to share in our loss.

The table below sets forth potentially dilutive weighted average common share equivalents, consisting of shares issuable upon the exercise of outstanding stock options and warrants using the treasury stock method, shares issuable upon conversion of the SVIC Note (see Note 4) using the “if-converted” method, and the vesting of RSAs and RSUs. These potential weighted average common share equivalents have been excluded from the diluted net loss per share for 2022 and 2020 calculations above as their effect would be anti-dilutive (in thousands):

	2022	2021	2020
Weighted average common share equivalents	<u>4,848</u>	<u>7,418</u>	<u>13,644</u>

Cash Flow Information

The following table shows supplemental disclosures of cash flow information and non-cash financing activities (in thousands):

	2022	2021	2020
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Interest	\$ 90	\$ 56	\$ 70
Income taxes	\$ 1	\$ 6,601	\$ —
Supplemental disclosure of non-cash investing and financing activities:			
Acquisition of property and equipment included in liabilities	\$ 22	\$ 414	\$ —
Gain on extinguishment of debt	\$ —	\$ 643	\$ —
Debt financing of insurance	\$ 447	\$ 562	\$ 262

Note 3—Credit Agreement

On October 31, 2009, Netlist and Silicon Valley Bank (“SVB”) entered into a credit agreement, which may from time to time be amended, modified, supplemented or restated, (“the SVB Credit Agreement”), which provides for a revolving line of credit up to \$10.0 million, as amended. The SVB Credit Agreement was most recently amended on April 29, 2022, and the borrowing base is limited to 85% of eligible accounts receivable, subject to certain adjustments, and 50% of eligible inventory. Borrowings accrue interest on advance at a per annum rate equal to the greater of 0.75% above the Wall Street Journal prime rate (“Prime Rate”) or 4.25%. The maturity date is April 28, 2023, as amended.

The SVB Credit Agreement requires letters of credit to be secured by cash, which is classified as restricted cash in the accompanying consolidated balance sheets. As of December 31, 2022 and January 1, 2022, (i) outstanding letters of credit were \$18.6 million and \$10.8 million, respectively, and (ii) outstanding borrowings were \$4.9 million and \$7.0 million, respectively. There was no availability under the revolving line of credit as of December 31, 2022 and January 1, 2022.

As of December 31, 2022, all obligations under the SVB Credit Agreement were secured by a first priority security interest in our tangible and intangible assets. The SVB Credit Agreement subjects us to certain affirmative and negative covenants, including financial covenants with respect to our liquidity and restrictions on the payment of dividends. As of December 31, 2022, we were in compliance with our covenants under the SVB Credit Agreement.

Note 4—Debt

Our debt consisted of the following (in thousands):

	2022	2021
Notes payable	\$ 447	\$ 562
Less: amounts due within one year	(447)	(562)
Long-term debt	\$ —	\$ —

Secured Convertible Note

On November 18, 2015, in connection with entering into the Joint Development and License Agreement (the “JDLA”) with Samsung, we issued to SVIC a secured convertible note (the “SVIC Note”) and stock purchase warrant (the “SVIC Warrant”). The SVIC Note had an original principal amount of \$15.0 million, accrued interest at a rate of 2.0% per year, was due and payable in full on December 31, 2021, and was convertible into shares of our common stock at a conversion price of \$1.25 per share, subject to certain adjustments, on the maturity date of the SVIC Note. Upon our change of control prior to the maturity date of the SVIC Note, the SVIC Note might, at our option, be assumed by the surviving entity or be redeemed upon the consummation of such change of control for the principal and accrued but

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unpaid interest as of the redemption date. The SVIC Warrant granted SVIC a right to purchase 2,000,000 shares of our common stock at an exercise price of \$0.30 per share, subject to certain adjustments, was only exercisable in the event we would exercise our right to redeem the SVIC Note prior to its maturity date, and would expire on December 31, 2025. In December 2021, we repaid the full amounts outstanding under the SVIC Note and issued 2,000,000 shares of our common stock upon the exercise of 2,000,000 of our warrants by SVIC for cash proceeds of \$0.6 million.

The SVIC Warrant was valued at \$1.2 million, based on its relative fair value, and was recorded as a debt discount. We also recorded \$0.2 million of debt issuance costs as a debt discount for professional services fees rendered in connection with the transaction. These amounts were being amortized to interest expense over the term of the SVIC Note using the interest method. For 2021 and 2020, we amortized \$0.2 million and \$0.2 million, respectively, to interest expense in the accompanying consolidated statements of operations. The effective interest rate, including accretion of the SVIC Note to par and amortization of debt issuance costs, was approximately 3.4%.

In connection with the SVIC Note, SVIC was granted a first priority security interest in our patent portfolio and a second priority security interest in all of our other tangible and intangible assets. Upon issuance of the SVIC Note, Netlist, SVB and SVIC entered into an Intercreditor Agreement pursuant to which SVB and SVIC agreed to their relative security interests in our assets. Additionally, upon issuance of the SVIC Note and the SVIC Warrant, Netlist and SVIC entered into a Registration Rights Agreement pursuant to which we were obligated to register with the Securities and Exchange Commission, upon demand by SVIC, the shares of our common stock issuable upon conversion of the SVIC Note or upon exercise of the SVIC Warrant. The SVIC Note subjected us to certain affirmative and negative operating covenants. We made the repayment of \$16.8 million on December 27, 2021 and SVIC purchased 2,000,000 shares of common stock at an exercise price of \$0.30 per share on December 28, 2021. As a result, neither the SVIC Note nor the SVIC Warrant remained outstanding as of December 31, 2022 and January 1, 2022.

Paycheck Protection Program Loan

On April 23, 2020, we entered into an unsecured promissory note with a principal amount of \$0.6 million through Hanmi Bank under the Paycheck Protection Program (“PPP”) (the “PPP Loan”) administered by the Small Business Administration (“SBA”) and established as part of the Coronavirus Aid, Relief and Economic Security Act (the “CARES Act”). The PPP Loan bore interest at 1.0% per annum and would mature on April 23, 2022 with the first six months of interest and principal payments deferred. The amount borrowed under the PPP Loan was guaranteed by the SBA and was eligible for forgiveness in an amount equal to the sum of the eligible costs, including payroll, benefits, rent and utilities, incurred by us during the 24-week period beginning on the date we received the proceeds. The PPP Loan contained customary events of default, and the occurrence of an event of default might result in a claim for the immediate repayment of all amounts outstanding under the PPP Loan. In May 2021, the full amount outstanding under the PPP Loan was forgiven, resulting in a gain of \$0.6 million during the second quarter of 2021.

Insurance Policy Finance Agreement

As of December 31, 2022 and January 1, 2022, we had \$0.4 million and \$0.6 million, respectively, in short-term notes payable for the financing of insurance policies. On December 29, 2021, we entered into a short-term note payable for \$0.6 million bearing interest at 3.9% to finance insurance policies. Principal and interest payments on this note began January 15, 2022 and were made evenly based on a straight line amortization over a 9-month period with the final payment being made on September 15, 2022. On January 4, 2023, we entered into a short-term notes payable for \$0.4 million bearing interest at 7.2% to finance insurance policies. Principal and interest payments on this note began January 15, 2023 and are made evenly based on a straight line amortization over a 9-month period.

Note 5—Leases

We have operating and finance leases primarily associated with office and manufacturing facilities and certain equipment. The determination of which discount rate to use when measuring the lease obligation was deemed a significant judgment.

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Lease cost and supplemental consolidated cash flow information related to operating and finance leases were as follows (in thousands):

	2022	2021	2020
Lease cost:			
Operating lease cost	\$ 786	\$ 422	\$ 565
Finance lease cost			
Amortization of right-of-use assets	\$ 67	\$ 21	\$ 19
Interest on lease liabilities	11	3	4
Total finance lease cost	\$ 78	\$ 24	\$ 23
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 653	\$ 403	\$ 561
Operating cash flows from finance leases	11	3	4
Financing cash flows from finance leases	129	20	18
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	\$ 588	\$ 2,152	\$ (365)
Finance leases	372	20	—
Lease modification to increase operating lease assets	204	—	—

Supplemental balance sheet information related to leases was as follows (in thousands):

	2022	2021
Operating Leases		
Operating lease right-of-use assets	\$ 2,043	\$ 1,891
Accrued expenses and other current liabilities	\$ 451	\$ 318
Operating lease liabilities	1,744	1,593
Total operating lease liabilities	\$ 2,195	\$ 1,911
Finance Leases		
Property and equipment, at cost	\$ 488	\$ 116
Accumulated depreciation	(121)	(54)
Property and equipment, net	\$ 367	\$ 62
Accrued expenses and other current liabilities	\$ 211	\$ 24
Other liabilities	96	41
Total finance lease liabilities	\$ 307	\$ 65

The following table includes supplemental information:

	2022	2021
Weighted Average Remaining Lease Term (in years)		
Operating leases	3.9	4.8
Finance leases	1.5	2.9
Weighted Average Discount Rate		
Operating leases	5.5%	5.5%
Finance leases	4.4%	5.2%

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Maturities of lease liabilities as of December 31, 2022 were as follows (in thousands):

Fiscal Year	Operating Leases	Finance Leases
2023	\$ 559	\$ 221
2024	613	91
2025	624	4
2026	639	2
2027	23	—
Total lease payments	2,458	318
Less: imputed interest	(263)	(11)
Total	<u>\$ 2,195</u>	<u>\$ 307</u>

Note 6—Income Taxes

United States and foreign income (loss) before provision for income taxes was as follows (in thousands):

	2022	2021	2020
United States	\$ (32,857)	\$ 12,016	\$ (6,741)
Foreign	(512)	(558)	(526)
	<u>\$ (33,369)</u>	<u>\$ 11,458</u>	<u>\$ (7,267)</u>

The provision for income taxes consisted of the following (in thousands):

	2022	2021	2020
Current:			
Federal	\$ —	\$ —	\$ —
State	1	27	1
Foreign	—	6,600	—
Total current	<u>1</u>	<u>6,627</u>	<u>1</u>
Deferred:			
Federal	(7,822)	(1,897)	(1,402)
State	(1,006)	(1,913)	(415)
Foreign	17	15	67
Change in valuation allowance	8,811	3,795	1,750
Total deferred	<u>—</u>	<u>—</u>	<u>—</u>
Provision for income taxes	<u>\$ 1</u>	<u>\$ 6,627</u>	<u>\$ 1</u>

Income taxes differ from the amounts computed by applying the statutory federal income tax rate of 21% for 2022, 2021 and 2020. The reconciliation of this difference is as follows (in thousands):

	2022	2021	2020
Statutory federal income tax rate	(21%)	21%	21%
Foreign withholding taxes	—%	46%	—%
Excess tax benefits from equity awards	(3%)	(27%)	—%
Change in valuation allowance	24%	15%	(19%)
Other	—%	3%	(2%)
Effective tax rate	<u>—%</u>	<u>58%</u>	<u>—%</u>

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Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The significant components of the deferred tax assets and liabilities are as follows (in thousands):

	2022	2021
Deferred tax assets:		
Operating loss carryforward	\$ 42,306	\$ 36,563
Tax credit carryforwards	4,828	4,324
Capitalized research and development expenses	1,767	—
Reserves and allowances	1,022	748
Foreign operating loss carryforward	662	677
Stock-based compensation	784	551
Other	1,470	958
Total deferred tax assets	<u>52,839</u>	<u>43,821</u>
Deferred tax liabilities:		
Operating lease right-of-use assets	(473)	(450)
Prepaid expenses	(218)	(232)
Depreciation and amortization	(195)	—
Total deferred tax liabilities	<u>(886)</u>	<u>(682)</u>
Net deferred tax assets	<u>51,953</u>	<u>43,139</u>
Valuation allowance	<u>(51,953)</u>	<u>(43,139)</u>
	<u>\$ —</u>	<u>\$ —</u>

We evaluate whether a valuation allowance should be established against our deferred tax assets based on the consideration of all available evidence using a “more likely than not” standard. In making such judgments, significant weight is given to evidence that can be objectively verified. As of December 31, 2022 and January 1, 2022, a valuation allowance of \$52.0 million and \$43.1 million, respectively, has been provided based on our assessment that it is more likely than not that sufficient taxable income will not be generated to realize the tax benefits of the temporary differences. The valuation allowance increased by \$8.9 million, \$3.8 million and \$1.7 million during 2022, 2021, and 2020, respectively. These increases in these years primarily relate to the increases in the net operating loss (“NOL”) carryforward and tax credit carryforwards.

As of December 31, 2022, we had \$166.1 million of federal NOL carryforwards, of which \$104.2 million will expire from 2029 through 2037, and \$61.9 million of which will be carried forward indefinitely, and \$84.0 million of state NOL carryforwards that will expire from 2029 through 2041. We had federal and state tax credit carryforwards of \$2.5 million and \$2.3 million, respectively, at December 31, 2022. Federal tax credit carryforwards began to expire in 2022 and state tax credits carryforward indefinitely. In addition, we had \$0.5 million of NOL in the People’s Republic of China (“PRC”) that expired in 2022, with a remaining amount of \$2.6 million of NOL carryforward in the PRC at December 31, 2022. Utilization of the NOL and tax credit carryforwards is subject to an annual limitation due to the ownership percentage change limitations provided by Section 382 of the Internal Revenue Code (the “Code”) and similar state and foreign law provisions. Under Section 382 of the Code, substantial changes in our ownership may limit the amount of NOL and tax credit carryforwards that are available to offset taxable income. The annual limitation would not automatically result in the loss of NOL and tax credit carryforwards but may limit the amount available in any given future period. Additional limitations on the use of these tax attributes could occur in the event of possible disputes arising in examination from various taxing authorities.

We file income tax returns with federal, state and foreign jurisdictions. We are no longer subject to Internal Revenue Service (“IRS”) or state examinations for periods prior to 2018, although certain carryforward attributes that were generated prior to 2018 may still be adjusted by the IRS.

We include interest and penalties related to uncertain tax positions within the provision for income taxes. As of December 31, 2022 and January 1, 2022, the interest or penalties accrued related to unrecognized tax benefits were insignificant, and during 2022, 2021 and 2020, the interest and penalties related to uncertain tax position recorded were

insignificant. As of December 31, 2022, we had no unrecognized tax benefits that would significantly change in the next 12 months.

Note 7—Commitments and Contingencies

Contingent Legal Expenses

We may retain the services of law firms that specialize in patent licensing and enforcement and patent law in connection with our licensing and enforcement activities. These law firms may be retained on a contingent fee basis whereby such law firms are paid on a scaled percentage of any negotiated fee, settlements or judgments awarded based on how and when the fees, settlements or judgments are obtained.

Litigation and Patent Reexaminations

We own numerous patents and continue to seek to grow and strengthen our patent portfolio, which covers various aspects of our innovations and includes various claim scopes. We plan to pursue avenues to monetize our intellectual property portfolio, in which we would generate revenue by selling or licensing our technology, and we intend to vigorously enforce our patent rights against alleged infringers of such rights. We dedicate substantial resources to protecting and enforcing our intellectual property rights, including with patent infringement proceedings we file against third parties and defense of our patents against challenges made by way of reexamination and review proceedings at the U.S. Patent and Trademark Office (“USPTO”) Patent Trial and Appeal Board (“PTAB”). We expect these activities to continue for the foreseeable future, with no guarantee that any ongoing or future patent protection or litigation activities will be successful, or that we will be able to monetize our intellectual property portfolio.

Any litigation, regardless of its outcome, is inherently uncertain, involves a significant dedication of resources, including time and capital, and diverts management’s attention from our other activities. As a result, any current or future claims, allegations, or challenges by or against third parties, whether eventually decided in our favor or settled, could materially adversely affect our business, financial condition and results of operations. Additionally, the outcome of pending or future litigation and/or related patent reviews and reexaminations, as well as any delay in their resolution, could affect our ability to continue to sell our products, protect against competition in the current and expected markets for our products or license or otherwise monetize our intellectual property rights in the future.

Google Litigations

On December 4, 2009, Netlist filed a patent infringement lawsuit against Google, Inc. (“Google”) in the U.S. District Court for the Northern District of California (the “NDCA”), seeking damages and injunctive relief based on Google’s alleged infringement of our U.S. Patent No. 7,619,912 (the “’912 Patent”) which relates generally to technologies to implement rank multiplication. The NDCA case was stayed, pending challenges to the ‘912 Patent before the USPTO. Eventually, the U.S. Court of Appeals for the Federal Circuit confirmed the ‘912 Patent’s validity on June 15, 2020, and the NDCA case stay was lifted and the case proceeded before Hon. Senior Judge Armstrong, where the parties entered cross motions for summary judgment. On May 5, 2022, Hon. Chief Judge Seeborg entered an Order granting Netlist’s Motion for Summary Judgement that Claim 16 of the ‘912 Patent is not subject to Google’s pleaded defense of Intervening Rights. On July 13, 2022, Chief Judge Seeborg ordered – shortly before the planned July 14, 2022 case management conference – that the case be stayed for a 90-day period pending the outcome of an action initiated by Samsung Electronic Co., Ltd. (“Samsung”) in Delaware involving the ‘912 Patent. Samsung’s Delaware cause of action for the ‘912 Patent was dismissed by Judge Andrews there, and Netlist shortly thereafter brought a lawsuit against Samsung for their infringement of at least the ‘912 Patent in the U.S. District Court for the Eastern District of Texas (“EDTX”). In light of the pendency of the ‘912 Patent matter Netlist brought against Samsung in EDTX, Chief Judge Seeborg entered an order via stipulation on October 17, 2022 staying the NDCA Google case until the resolution of that EDTX action.

On July 26, 2022, Netlist filed a patent infringement lawsuit against Google Cloud EMEA Limited, Google Germany GmbH, Redtec Computing GmbH, and Google, Inc., seeking damages based on those defendants’ infringement of European Patents EP 2,454,735 (“EP735”) and EP 3,404,660 (“EP660”), which both generally relate to

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load reduced dual in line memory modules (“LRDIMM”) technologies. As of the reporting date, Google’s submitted its statement of defense. The date for a final oral hearing on the issues in that German action are currently scheduled for November 9, 2023.

Micron Litigations

On April 28, 2021, Netlist filed a complaint for patent infringement against Micron Technology, Inc. (“Micron”) in the U.S. District Court for the Western District of Texas, Waco Division (“WDTX”) (Case No. 6:21-cv00431 & Case No. 6:21-cv-00430). These proceedings are based on the alleged infringement by Micron’s LRDIMM and Micron’s non-volatile dual in line memory modules (“NVDIMM”) enterprise memory modules under four U.S. patents – U.S. Patent Nos. 10,489,314 (the “’314 Patent”), 9,824,035 (the “’035 Patent”), 10,268,608 (the “’608 Patent”), and 8,301,833 (the “’833 Patent”). The case has been assigned to Hon. Judge Lee Yeakel, and the parties completed briefing on their claim construction arguments. On May 11, 2022, Judge Yeakel entered a stay of the case pending the resolution of Micron’s requested Inter Partes Review (“IPR”) proceedings against the four patents asserted by Netlist in this case (the ‘833, ‘035, ‘608, and ‘314 Patents). Following entry of that stay order on September 2, 2022, Micron moved the Court to “temporarily” lift the stay to add counterclaims for declaratory judgment of noninfringement of U.S. Patent Nos. 9,858,215 (the “’215 Patent”), 10,860,506 (the “’506 Patent”), 10,949,339 (the “’339 Patent”), 11,016,918 (the “’918 Patent”), 11,232,054 (the “’054 Patent”), 11,093,417 (the “’417 Patent”), and the ‘912 Patent. This addition would encompass four of the six patents asserted in Netlist’s initial EDTX filing against Micron (Case No. 2:22-cv-00203 – further details of this case below), and all three of the patents asserted in Netlist’s second EDTX filing against Micron (Case No. 2:22-cv-00294 – further details of this case below). On October 5, 2022, Judge Yeakel denied Micron’s motion and returned the action to a stayed state, asking only that the parties submit status reports within 10 days of any activity in the relevant underlying IPR proceedings. As of the reporting date, the matter remains stayed pending the outcome of the related IPR proceedings.

As noted above, Micron filed requests to bring IPR proceedings against Netlist’s ‘314, ‘035, ‘068, and ‘833 Patents. As of the reporting date, the PTAB granted Micron’s request for the ‘035, ‘833, and ‘314 Patents, but denied its request for the ‘608 Patent. The PTAB further denied Micron’s request for rehearing on the ‘608 Patent’s institution denial. As of the reporting date, the IPR trials under the ‘035, ‘833, and ‘314 Patents are proceeding following Netlist’s timely submissions of its related Patent Owner Responses. Oral arguments for the ‘035, ‘833, and ‘314 Patents are set for April, June, and August 2023, respectively.

On March 31, 2022, Netlist filed a patent infringement lawsuit against Micron in Germany (“Micron Dusseldorf Case”), seeking damages based on their infringement of EP735 and EP660. On June 24, 2022, Netlist filed an extension of its Complaint requesting injunctive relief. Micron filed its statement of defense, thus setting Netlist’s deadline for a response as December 1, 2022. Further, Micron initiated a nullity proceeding against the asserted EP patents in this action, making Netlist’s response to the same as November 19, 2022. As of the reporting date, the date for the oral hearing in the Micron Dusseldorf Case is set for May 3, 2023.

On June 10, 2022, Netlist filed a complaint for patent infringement against Micron in the EDTX, Marshall Division (Case No. 2:22-cv-00203-JRG-RSP). These proceedings are based on the alleged infringement by Micron for the sale of its LRDIMMs, its memory modules utilizing on-board power management modules (“PMIC”), and its high bandwidth memory (“HBM”) components, under six U.S. Netlist patents: the ‘060, ‘160, ‘506, ‘339, ‘918, and ‘054 Patents. On September 2, 2022, contemporaneously with its filing in the stayed WDTX action, Micron moved the Court to stay and sever aspects of this initial EDTX case. Following the denial of its parallel motion in the WDTX, Micron moved to withdraw its stay motion in this case, which Hon. Chief Judge Gilstrap entered on October 15, 2022. As of the reporting date, the case stands ready to proceed with a claim construction hearing set for July 19, 2023, and trial beginning on January 22, 2024.

On August 1, 2022, Netlist filed a complaint for patent infringement against Micron in the EDTX (Case No. 2:22-cv-00294) under the ‘912 Patent, for Micron’s alleged infringement by the sale of its LRDIMMs and RDIMMs. On August 15, 2022, Netlist filed its first amended complaint, further addressing Micron’s infringement of the ‘215 and ‘417 Patents. On September 12, 2022, Micron moved to stay this second EDTX action in light of its parallel motions pending in both the WDTX and initial EDTX cases. Given the denial of Micron’s motion in the WDTX on October 5,

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2022, Micron moved to withdraw its motion to stay in this action, which Chief Judge Gilstrap entered on October 13, 2022. On October 21, 2022, Chief Judge Gilstrap ordered that this Micron action and a parallel action by Netlist against Samsung on the same patents (22-cv-00293-JRG) be consolidated and set for a joint scheduling conference on November 17, 2022, further instructing that the Samsung action be considered the “LEAD CASE” and that any further filings from either action be submitted in that case for all pretrial matters. As of the reporting date, the consolidated case stands ready to proceed with a claim construction hearing set for October 5, 2023, and trial beginning on April 15, 2024.

Samsung Litigations

On May 28, 2020, Netlist filed a complaint against Samsung in the U.S. District Court for the Central District of California for Samsung’s breach of the parties’ Joint Development and License Agreement (“JDLA”). On July 22, 2020, Netlist amended its complaint to seek a Declaratory Judgment that it properly terminated the JDLA in light of Samsung’s material breaches. On October 14, 2021, the Court entered summary judgment in Netlist’s favor and confirmed Netlist properly terminated the JDLA as of July 15, 2020. On February 15, 2022, the Court entered a Final Judgment in favor of Netlist on each of its three claims and confirmed conclusively that all licenses granted under the JDLA were terminated. On February 25, 2022, Samsung filed a Notice of Appeal, and the Federal Court of Appeals for the Ninth Circuit issued a Time Schedule Order on February 28, 2022. On August 4, 2022, Netlist filed a cross-appeal seeking the Appeal Court’s reconsideration of the District Court’s finding that the fees Netlist paid to PwC were consequential damages, rather than recoverable general damages. As of the reporting date, the parties have completed briefing on the appeal and cross-appeal, and await the Appeal Court setting a date for oral argument in 2023.

On October 15, 2021, Samsung filed a declaratory judgment action against Netlist in the U.S. District Court for the District of Delaware (“DDE”), requesting in relevant part that the Delaware District Court declare that Samsung does not infringe Netlist’s U.S. Patent Nos. 9,858,218 (the “’218 Patent”), 10,217,523 (the “’523 Patent”), 10,474,595 (the “’595 Patent”), and the ‘506, ‘339, ‘912 and ‘918 Patents. As of the reporting date, Samsung seeks leave to add the ‘054 Patent (issued Jan. 25, 2022) to the action. Netlist believes Samsung’s claims levied in the DDE action meritless, and the relief Samsung requests unjustified. Netlist filed a motion seeking dismissal of Samsung’s operative DDE complaint, and an opposition contesting the inclusion of the ‘054 Patent as part of Samsung’s proposed second amended complaint filing. On August 1, 2022, the Court entered an Order on the pending motions denying Samsung’s request to amend its operative complaint a second time to add a count against the ‘054 Patent, and granting-in-part Netlist’s motion that various causes of action be dismissed. Specifically, Hon. Judge Andrews dismissed all of Samsung’s counts related to Netlist’s ‘912, ‘506, ‘339, and ‘918 Patents. Thus, on August 22, 2022, Netlist entered its Answer to Samsung’s remaining Counterclaims. On September 12, 2022, Netlist amended its Counterclaims to include counterclaims tying Google, LLC and Alphabet, Inc. to the action. On November 15, 2022, Google, LLC and Alphabet, Inc. responded to Netlist’s Counterclaims by filing a Motion to Dismiss or alternatively to Sever and Stay the claims directed at Google specifically from the action. As of the reporting date, briefing has concluded and Netlist requested an oral argument on Google’s motion. Further, the Court set the Claim Construction hearing for October 20, 2023, and the beginning of the Jury Trial on February 3, 2025.

On November 19, 2021, Samsung filed IPR requests contesting the validity of U.S. Patent Nos. 9,858,218 (the “’218 Patent”), 10,474,595 (the “’595 Patent”), and 10,217,523 (the “’523 Patent”). Netlist filed its initial responses to Samsung’s petitions on February 18, 2022, contesting the institution of any IPR on the grounds propounded. As of the reporting date, the PTAB has granted Samsung’s IPR requests related to the ‘218, ‘523, and ‘595 Patents. Netlist filed its Patent Owner’s Response for the ‘523 Patent IPR on August 4, 2022, and its Patent Owner Responses for the ‘218 Patent and ‘595 Patent IPRs on August 15, 2022. As of the reporting date, Oral Arguments were heard for the ‘523 IPR (February 1, 2023), and the ‘218 Patent and ‘595 Patent IPRs (February 15, 2023), leaving the PTAB to enter its final written decision on all three IPRs by the second quarter of 2023.

On December 20, 2021, Netlist filed a complaint for patent infringement against Samsung, Samsung Semiconductor, Inc., and Samsung Electronics America, Inc. in the EDTX (Case No. 2:21-cv-463) under the ‘506, ‘339, and ‘918 Patents. Samsung responded to Netlist’s complaint on April 12, 2022, and Chief Judge Gilstrap ordered a scheduling conference be set. On May 3, 2022, Netlist entered a First Amended Complaint pursuant to the Federal Rules of Civil Procedure (“FRCP”) Rule 15, adding claims for infringement under three additional patents: the ‘060, ‘160, and ‘054 Patents. On May 4, 2022, Netlist complied with the EDTX local patent rules and served its preliminary

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infringement contentions on Samsung. On May 27, 2022, Samsung moved to stay this action and sever the patents it sought to add to its Declaratory Judgment action in Delaware. On August 2, 2022, Samsung withdrew that first motion to stay in light of Judge Andrews's order mandating dismissal of all Samsung's claims related to the Texas Netlist patents the day before. On August 30, 2022 Samsung moved to stay the action a second time, this time in light of its IPR petitions, and its appeal of the Central District California Judgment at the 9th Circuit Court of Appeals. The matter was fully briefed as of October 17, 2022. As of the reporting date, the claim construction hearing took place on November 4, 2022 in Hon. Magistrate Judge Roy Payne's Court. On December 14, 2022, Magistrate Payne entered an order construing all fourteen claim terms in dispute. As of the reporting date, the matter is set for pretrial proceedings. The Final Pretrial Conference is currently set for March 27, 2023, while the trial start is now set for April 17, 2023.

On February 17, 2022, Samsung filed an IPR request contesting the validity of only claim 16 within the '912 Patent. Samsung then filed two additional IPR requests contesting the validity of the '506 and '339 Patents. Netlist filed its Patent Owner's Preliminary Response for the '912 and '339 Patent IPRs on July 21, 2022, and for the '506 Patent IPR on July 28, 2022. On January 19, 2023, the PTAB instituted IPR trials on both the '912 and '339 Patents. The following day, the PTAB instituted an IPR trial on the '506 Patent. On October 19, 2022, the PTAB instituted IPR trials on the '912 Patent and '339 Patent, while two days later it instituted an IPR trial on the '506 Patent. On November 2, 2022, Netlist file a Request for Rehearing for the '912 Patent institution decision, while simultaneously requesting review of the institution decision be undertaken by the USPTO's Precedential Opinion Panel. On January 5, 2023, USPTO Director Katherine K. Vidal entered an Order in the proceeding mandating a *sua sponte* Director review of the Board's decision granting institution of the '912 Patent, and staying the underlying proceedings in lieu of a supplemental briefing schedule set by the Director herself. On February 3, 2023, Director Vidal entered a decision requiring the assigned PTAB Board to reevaluate Netlist's request for discovery on the admitted relationship between Samsung and Google and ordered that if the Board determines Google is a "Real Party in Interest," the Board must vacate its institution decision and deny Samsung's Petition. As of the reporting date, Netlist has timely filed its Patent Owner Responses for the '339 and '506 Patent IPR proceedings.

On May 17, 2022, Samsung filed two IPR petitions contesting the validity of Netlist's '918 and '054 Patents. On December 6, 2022, the Board instituted an IPR trial for the '054 Patent, and then instituted an IPR trial for the '918 Patent the next day. On December 9, 2022, the Board set a joint schedule for both IPRs, making Netlist's deadline to file its Patent Owner Response March 1, 2023.

On June 3, 2022, Netlist filed a patent infringement lawsuit against Samsung in Dusseldorf, Germany, seeking damages for Samsung's infringement of Netlist's Patents EP735 and EP660. The Dusseldorf Court set an Oral Hearing date for September 5, 2023.

On August 1, 2022, Netlist filed a complaint for patent infringement against Samsung, Samsung Semiconductor, Inc., and Samsung Electronics America, Inc. in the EDTX (Case No. 2:22-cv-00293) under the '912 Patent, which relates generally to technologies to implement rank multiplication. On August 15, 2022, Netlist filed its first amended complaint here, further addressing Samsung's infringement of the '215 Patent and '417 Patent. On August 31, 2022, Samsung Semiconductor, Inc. and Samsung Electronics America, Inc. sought and received extensions of time to respond to Netlist's first amended complaint until October 7, 2022. Before answering on September 20, 2022, Samsung collectively moved the Court to sever and transfer the '912 Patent from the action and stay the remaining portions of this proceeding in light of Samsung's appeal before 9th Circuit Court of Appeals. The matter is fully briefed, but Samsung's response deadline remains currently set for November 29, 2022. Apart from Samsung's early motion practice and its remaining response deadline, on October 21, 2022, Chief Judge Gilstrap ordered that this action and a parallel action by Netlist against Micron on the same patents (22-cv-00294-JRG) be consolidated and set for a joint scheduling conference on November 17, 2022, further instructing that this Samsung action be considered the "LEAD CASE" and that any further filings from either action be submitted in therefore all pretrial matters. On January 20, 2023, following the entry of Samsung's First Amended Answer, Netlist moved the Court for Leave to File a Second Amended Complaint that would include additional claims of infringement related specifically to Samsung's infringement of Netlist's '608 Patent. As of the reporting date, the consolidated case stands ready to proceed with a claim construction hearing set for October 5, 2023, and trial beginning on April 15, 2024.

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On August 26, 2022, Samsung filed two IPR petitions contesting the validity of Netlist's U.S. Patent Nos. 8,787,060 (the "'060 Patent") and 9,318,160 (the "'106 Patent"). On January 19, 2023, Netlist filed its Patent Owner Preliminary Responses in those proceedings. As of the reporting date, the parties await the Board's decision on institution.

On January 10, 2023, Samsung filed two IPR petitions contesting the validity of the '215 and '417 Patents. As of the reporting date, the Board has accorded these IPR a filing date of January 10, 2023, making the deadline for Netlist to file its Patent Owner Preliminary Response April 10, 2023.

Other Contingent Obligations

In the ordinary course of our business, we have made certain indemnities, commitments and guarantees pursuant to which we may be required to make payments in relation to certain transactions. These include, among others: (i) intellectual property indemnities to our customers and licensees in connection with the use, sale and/or license of our products; (ii) indemnities to vendors and service providers pertaining to claims based on our negligence or willful misconduct; (iii) indemnities involving the accuracy of representations and warranties in certain contracts; (iv) indemnities to our directors and officers to the maximum extent permitted under the laws of the State of Delaware; (v) indemnities to SVB pertaining to all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with transactions contemplated by the applicable investment or loan documents, as applicable; and (vi) indemnities or other claims related to certain real estate leases, under which we may be required to indemnify property owners for environmental and other liabilities or may face other claims arising from our use of the applicable premises. The duration of these indemnities, commitments and guarantees varies and, in certain cases, may be indefinite. The majority of these indemnities, commitments and guarantees do not provide for any limitation of the maximum potential for future payments we could be obligated to make. Historically, we have not been obligated to make significant payments as a result of these obligations, and no liabilities have been recorded for these indemnities, commitments and guarantees in the accompanying consolidated balance sheets.

Note 8—Stockholders' Equity

Serial Preferred Stock

Our authorized capital stock includes 10,000,000 shares of serial preferred stock, with a par value of \$0.001 per share. No shares of preferred stock were outstanding as of December 31, 2022 or January 1, 2022.

On April 17, 2017, we entered into a rights agreement (as amended from time to time, the "Rights Agreement") with Computershare Trust Company, N.A., as rights agent. In connection with the adoption of the Rights Agreement and pursuant to its terms, our board of directors authorized and declared a dividend of one right (each, a "Right") for each outstanding share of our common stock to stockholders of record at the close of business on May 18, 2017 (the "Record Date"), and authorized the issuance of one Right for each share of our common stock issued by us (except as otherwise provided in the Rights Agreement) between the Record Date and the Distribution Date (as defined below).

Each Right entitles the registered holder, subject to the terms of the Rights Agreement, to purchase from us, when exercisable and subject to adjustment, one unit consisting of one one-thousandth of a share (a "Unit") of our Series A Preferred Stock (the "Preferred Stock"), at a purchase price of \$6.56 per Unit, subject to adjustment. Subject to the provisions of the Rights Agreement, including certain exceptions specified therein, a distribution date for the Rights (the "Distribution Date") will occur upon the earlier of (i) 10 business days following a public announcement that a person or group of affiliated or associated persons (an "Acquiring Person") has acquired or otherwise obtained beneficial ownership of 15% or more of the then-outstanding shares of our common stock, and (ii) 10 business days (or such later date as may be determined by our board of directors) following the commencement of a tender offer or exchange offer that would result in a person or group becoming an Acquiring Person. The Rights are not exercisable until the Distribution Date and, unless earlier redeemed or exchanged by us pursuant to the terms of the Rights Agreement (as amended on April 16, 2018, April 16, 2019 and August 14, 2020) will expire on the close of business on April 17, 2024.

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In connection with the adoption of the Rights Agreement, our board of directors approved a Certificate of Designation of the Series A Preferred Stock (the “Certificate of Designation”) designating 1,000,000 shares of our serial preferred stock as Series A Preferred Stock and setting forth the rights, preferences and limitations of the Preferred Stock. We filed the Certificate of Designation with the Secretary of State of the State of Delaware on April 17, 2017.

Common Stock

We have one class of common stock with a par value of \$0.001 per share. The number of shares of the common stock authorized for issuance is 450,000,000.

2019 Lincoln Park Purchase Agreement

On June 24, 2019, we entered into a purchase agreement (“the 2019 Purchase Agreement”) with Lincoln Park Capital Fund, LLC (“Lincoln Park”), pursuant to which we have the right to sell to Lincoln Park up to an aggregate of \$10 million in shares of our common stock subject to the conditions and limitations set forth in the 2019 Purchase Agreement. As consideration for entering into the 2019 Purchase Agreement, we issued to Lincoln Park 818,420 shares of our common stock as initial commitment shares in a noncash transaction on June 24, 2019 and would issue up to 818,420 additional shares of our common stock as additional commitment shares on a pro rata basis in connection with any additional purchases. We would not receive any cash proceeds from the issuance of these additional commitment shares.

During 2020, Lincoln Park did not purchase shares of our common stock under the 2019 Purchase Agreement. During 2021, Lincoln Park purchased an aggregate of 2,075,503 shares of our common stock for a net purchase price of \$3.6 million under the 2019 Purchase Agreement. In connection with the purchases, during 2021, we issued to Lincoln Park an aggregate of 294,787 shares of our common stock as additional commitment shares in noncash transactions. In July 2021, we completed the sales under the 2019 Purchase Agreement.

2020 Lincoln Park Purchase Agreement

On March 5, 2020, we entered into another purchase agreement (“the 2020 Purchase Agreement”) with Lincoln Park, pursuant to which we had the right to sell to Lincoln Park up to an aggregate of \$20 million in shares of our common stock over the 36-month term of the 2020 Purchase Agreement subject to the conditions and limitations set forth in the 2020 Purchase Agreement. As consideration for entering into the 2020 Purchase Agreement, we issued to Lincoln Park 1,529,052 shares of our common stock as initial commitment shares in a noncash transaction on March 6, 2020 and would issue up to 917,431 additional shares of our common stock as additional commitment shares on a pro rata basis in connection with any additional purchases. We would not receive any cash proceeds from the issuance of these additional commitment shares.

During 2020, Lincoln Park purchased an aggregate of 23,400,122 shares of our common stock for a net purchase price of \$12.2 million, under the 2020 Purchase Agreement. In connection with the purchases, during 2020, we issued to Lincoln Park an aggregate of 560,588 shares of our common stock, as additional commitment shares in noncash transactions. During 2021, Lincoln Park purchased an aggregate of 9,544,595 shares of our common stock for a net purchase price of \$7.8 million under the 2020 Purchase Agreement. In connection with the purchases, during 2021, we issued to Lincoln Park an aggregate of 356,843 shares of our common stock as additional commitment shares in noncash transactions. In February 2021, we completed the sales under the 2020 Purchase Agreement.

First 2021 Lincoln Park Purchase Agreement

On July 12, 2021, we entered into a purchase agreement (the “First 2021 Purchase Agreement”) with Lincoln Park, pursuant to which we have the right to sell to Lincoln Park up to an aggregate of \$17.4 million in shares of our common stock subject to the conditions and limitations set forth in the First 2021 Purchase Agreement. As consideration for entering into the First 2021 Purchase Agreement, we issued to Lincoln Park 80,000 shares of our common stock as initial commitment shares in a noncash transaction on July 12, 2021 and would issue up to 120,500 additional shares of

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our common stock as additional commitment shares on a pro rata basis in connection with any additional purchases. We would not receive any cash proceeds from the issuance of these additional commitment shares.

During 2021, Lincoln Park purchased an aggregate of 2,383,748 shares of our common stock for a net purchase price of \$17.4 million under the First 2021 Purchase Agreement. In connection with the purchases, during 2021, we issued to Lincoln Park an aggregate of 120,500 shares of our common stock as additional commitment shares in noncash transactions. In October 2021, we completed the sales under the First 2021 Purchase Agreement.

Second 2021 Lincoln Park Purchase Agreement

On September 28, 2021, we entered into a purchase agreement (the “Second 2021 Purchase Agreement”) with Lincoln Park, pursuant to which we have the right to sell to Lincoln Park up to an aggregate of \$75 million in shares of our common stock subject to the conditions and limitations set forth in the Second 2021 Purchase Agreement. Concurrent with the execution of the Second 2021 Purchase Agreement, we also entered into a registration rights agreement with Lincoln Park relating to our common stock to be sold to Lincoln Park. As consideration for entering into the Second 2021 Purchase Agreement, we issued to Lincoln Park 218,750 shares of our common stock as initial commitment shares in a noncash transaction on September 28, 2021 and will issue up to 143,750 additional shares of our common stock as additional commitment shares on a pro rata basis in connection with any additional purchases. We will not receive any cash proceeds from the issuance of these additional commitment shares.

Pursuant to the Second 2021 Purchase Agreement, on any business day and as often as every other business day over the 36-month term of the Second 2021 Purchase Agreement, we have the right, from time to time, at our sole discretion and subject to certain conditions, to direct Lincoln Park to purchase up to 750,000 shares of our common stock, provided Lincoln Park’s obligation under any single such purchase will not exceed \$4.0 million, unless we and Lincoln Park mutually agree to increase the maximum amount of such single regular purchase. If we direct Lincoln Park to purchase the maximum number of shares of common stock we then may sell in a regular purchase, then in addition to such regular purchase, and subject to certain conditions and limitations in the Second 2021 Purchase Agreement, we may direct Lincoln Park to purchase an additional amount of common stock that may not exceed the lesser of (i) 300% of the number of shares purchased pursuant to the corresponding regular purchase or (ii) 30% of the total number of shares of our common stock traded during a specified period on the applicable purchase date as set forth in the Second 2021 Purchase Agreement. Under certain circumstances and in accordance with the Second 2021 Purchase Agreement, we may direct Lincoln Park to purchase shares in multiple accelerated purchases on the same trading day.

We control the timing and amount of any sales of our common stock to Lincoln Park. There is no upper limit on the price per share that Lincoln Park must pay for our common stock under the Second 2021 Purchase Agreement, but in no event will shares be sold to Lincoln Park on a day the closing price is less than the floor price specified in the Second 2021 Purchase Agreement. In all instances, we may not sell shares of our common stock to Lincoln Park under the Second 2021 Purchase Agreement if that would result in Lincoln Park beneficially owning more than 9.99% of our common stock.

The Second 2021 Purchase Agreement does not limit our ability to raise capital from other sources at our sole discretion, except that, subject to certain exceptions, we may not enter into any Variable Rate Transaction (as defined in the Second 2021 Purchase Agreement, including the issuance of any floating conversion rate or variable priced equity-like securities) during the 36 months after the date of the Second 2021 Purchase Agreement. We have the right to terminate the Second 2021 Purchase Agreement at any time and at no cost to us.

During 2021, Lincoln Park purchased an aggregate of 1,550,000 shares of our common stock for a net purchase price of \$10.9 million under the Second 2021 Purchase Agreement. In connection with the purchases, we issued to Lincoln Park an aggregate of 20,809 shares of our common stock as additional commitment shares in noncash transactions. During 2022, Lincoln Park purchased an aggregate of 1,050,000 shares of our common stock for a net purchase price of \$4.4 million under the Second 2021 Purchase Agreement. In connection with the purchases, we issued to Lincoln Park an aggregate of 8,502 shares of our common stock as additional commitment shares in noncash transactions.

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Subsequent to December 31, 2022, Lincoln Park purchased an aggregate of 2,650,000 shares of our common stock for a net purchase price of \$4.3 million under the Second 2021 Purchase Agreement. In connection with the purchase, we issued to Lincoln Park an aggregate of 8,284 shares of our common stock as additional commitment shares in noncash transactions.

Warrants

Warrant activity during 2021 is as follows:

	Number of Shares (in thousands)	Weighted Average Exercise Price
Outstanding as of January 2, 2021	13,911	\$ 0.59
Granted	—	—
Exercised	(13,911)	0.59
Expired	—	—
Outstanding as of January 1, 2022	<u>—</u>	<u>—</u>

In August and December 2020, we issued warrants to purchase up to 175,000 and 125,000 shares of our common stock at exercise prices of \$0.20 and \$0.50 per share, respectively, to a consulting firm as partial consideration for their services rendered. During 2020, we issued 255,813 shares of our common stock upon the cashless exercise of 300,000 of our warrants. During 2021, we issued (i) 13,111,110 shares of our common stock upon the exercise of 13,111,110 of our warrants for total cash proceeds of \$7.9 million and (ii) 697,387 shares of our common stock upon the cashless exercise of 800,000 of our warrants.

Note 9—Benefit Plans

Equity Incentive Plan

Our Amended and Restated 2006 Equity Incentive Plan (the “Amended 2006 Plan”) provides for broad-based equity grants to our employees and non-employee service providers. We also periodically grant equity-based awards outside the Amended 2006 Plan to certain new hires as an inducement to enter into employment with us. Subject to certain adjustments, as of December 31, 2022, we were authorized to issue a maximum of 17,405,566 shares of our common stock pursuant to awards granted under the Amended 2006 Plan. Pursuant to the terms of the Amended 2006 Plan, beginning January 1, 2017, the automatic annual increase to the number of shares of common stock that may be issued pursuant to awards granted under the Amended 2006 Plan is equal to the lesser of (i) 2.5% of the number of shares of our common stock issued and outstanding as of the first day of the applicable calendar year, and (ii) 1,200,000 shares of our common stock, subject to adjustment for certain corporate actions. As of December 31, 2022, we had 240,982 shares of our common stock available for issuance pursuant to future awards to be granted under the Amended 2006 Plan.

Stock Options

Stock options granted under the Amended 2006 Plan generally vest at a rate of at least 25% per year over four years and expire 10 years from the date of grant. The weighted-average assumptions used in the Black-Scholes option pricing model and the resulting weighted-average grant date fair value of stock options granted were as follows:

	2022	2021	2020
Expected term (in years)	—	6.06	6.26
Expected volatility	— %	121 %	117 %
Risk-free interest rate	— %	0.64 %	0.46 %
Expected dividends	\$ —	\$ —	\$ —
Weighted-average grant date fair value per share	\$ —	\$ 0.87	\$ 0.44

The following table summarizes the activity related to stock options during 2022:

	Number of Shares (in thousands)	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of January 1, 2022	5,899	\$ 0.88	6.46	\$ 32,843
Granted	-	\$ -		
Exercised	(414)	\$ 0.69		
Expired or forfeited	(619)	\$ 0.67		
Outstanding as of December 31, 2022	4,866	\$ 0.93	5.11	\$ 1,836
Exercisable as of December 31, 2022	3,573	\$ 0.94	4.05	\$ 1,261
Vested and expected to vest as of December 31, 2022	4,763	\$ 0.92	5.04	\$ 1,792

The total intrinsic value of stock options exercised during 2022 and 2021 was \$1.5 million and \$10.8 million, respectively. There was no significant intrinsic value of options exercised during 2020.

Restricted Stock Awards and Restricted Stock Units

RSAs granted under the Amended 2006 Plan vest annually on each anniversary of the grant date over a two-year term. RSUs granted for employees and consultants generally vest semi-annually from the grant date over a four-year term and RSUs granted for independent directors fully-vested on the grant date. There was no activity related to RSAs during 2022. The following table summarizes the activity related to RSUs during 2022:

	Number of Shares (in thousands)	Weighted- Average Grant-Date Fair Value per Share
Balance nonvested as of January 1, 2022	2,228	\$ 1.36
Granted	2,901	\$ 4.09
Vested	(1,358)	\$ 1.21
Forfeited	(329)	\$ 5.24
Balance nonvested as of December 31, 2022	3,442	\$ 3.36

Stock-Based Compensation

The following table summarizes the stock-based compensation expense by line item in the consolidated statements of operations (in thousands):

	2022	2021	2020
Cost of sales	\$ 63	\$ 12	\$ 10
Research and development	903	570	196
Selling, general and administrative	2,248	998	557
Total	<u>\$ 3,214</u>	<u>\$ 1,580</u>	<u>\$ 763</u>

As of December 31, 2022, we had approximately \$9.4 million, net of estimated forfeitures, of unearned stock-based compensation, which we expect to recognize over a weighted-average period of approximately 2.9 years.

401(k) Plan

We have a defined contribution plan under Section 401(k) of the Code (“401(k)”) covering full-time domestic employees who meet certain eligibility requirements. Under the 401(k) plan, eligible employees may contribute up to 100% of their eligible compensation on either a pre-tax or after-tax Roth 401(k) basis, or up to the annual maximum allowed by the IRS. We may make matching contributions on the contributions of a participant on a discretionary basis. During 2022 and 2021, our matching contributions totaled \$0.1 million and \$0.1 million, respectively. During 2020, we did not make any matching contributions.

Note 10—Major Customers, Suppliers and Products

Our net product sales have historically been concentrated in a small number of customers. The following table sets forth the percentage of net product sales made to customers that each comprise 10% or more of total net product sales:

	2022	2021	2020
Customer A	39%	16%	*
Customer B	*	*	17%
Customer C	14%	*	*

* Less than 10% of total net product sales

As of December 31, 2022, one customer represented approximately 69% of aggregate gross accounts receivable. As of January 1, 2022, four customers represented approximately 26%, 16%, 13% and 13%, respectively, of aggregate gross accounts receivable. The loss of any of our significant customers or a reduction in sales to or difficulties collecting payments from any of these customers could significantly reduce our net product sales and adversely affect our operating results. We mitigate risks associated with foreign receivables by purchasing comprehensive foreign credit insurance. We resell certain component products to end-customers that are not reached in the distribution models of the component manufacturers, including storage customers, appliance customers, system builders and cloud and datacenter customers. For 2022, 2021 and 2020, resales of these products represented approximately 84%, 79% and 66%, respectively, of our net product sales.

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Our purchases are typically concentrated in a small number of suppliers. The following table shows the percentage of purchases made from suppliers that each comprise 10% or more of total purchases:

	2022	2021	2020
Supplier A	*	40%	28%
Supplier B	73%	30%	*
Supplier C	11%	10%	14%
Supplier D	*	*	11%

* Less than 10% of purchases during the year

While we believe alternative suppliers may be available, our dependence on a small number of suppliers and the lack of any guaranteed sources for the essential components of our products and the components we resell exposes us to several risks, including the inability to obtain an adequate supply of these components, increases in their costs, delivery delays and poor quality. If we cannot obtain these components in the amounts needed on a timely basis and at commercially reasonable prices, we may not be able to develop or introduce new products, we may experience significant increases in our cost of sales if we are forced to procure components from alternative suppliers and are not able to negotiate favorable terms with these suppliers, we may experience interruptions or failures in the delivery of our products, or we may be forced to cease sales of products dependent on the components or resales of the components we resell to customers directly. Any of these events could have a material adverse effect on our business, operating results and financial condition.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Sole Member of the Board of Directors
Netlist, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Netlist, Inc. and subsidiaries (the “Company”) as of December 31, 2022 and January 1, 2022, the related consolidated statements of operations, stockholders’ equity (deficit), and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and the schedule listed in the Index at Item 15 (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 as of December 31, 2022 and January 1, 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 28, 2023 expressed an adverse opinion on the effectiveness of the Company’s internal control over financial reporting.

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 PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. 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 Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the sole member of the board of directors and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Inventory Valuation

Critical Audit Matter Description

As described in Note 1 to the consolidated financial statements, inventories are valued at the lower of cost or the net realizable value. Management evaluates inventory balances for excess quantities and obsolescence on a regular basis by analyzing estimated demand, inventory on hand, sales levels and other information.

Auditing management's assessment of net realizable value for inventory was challenging because the determination of lower of cost or net realizable value and excess and obsolete inventory reserves is judgmental and considers a number of factors that are affected by market and economic conditions, such as forecasted product demand, dynamic pricing environments, product life cycles and industry supply and demand. Additionally, for certain newer products there is limited historical data with which to evaluate forecasts.

How the Critical Audit Matter Was Addressed in the Audit

We tested the effectiveness of internal controls related to management's process for developing the estimates of the net realizable value of inventories and excess and obsolete inventory reserves, including evaluating management's assumptions of forecasted product demand and testing the completeness and accuracy of the underlying data used in the analyses. Evaluating management's product demand forecast for reasonableness involved considering historical sales by product, comparing prior period estimates to actual results of the same period, and considering macroeconomic trends within the industry that could impact the movement of the products provided by the Company. We performed procedures to compare recent sales transactions or market data to cost of inventories in order to assess that the carrying value of inventories was the lower of cost or net realizable value.

/s/ KMJ Corbin & Company LLP

We have served as the Company's auditor since 2005.

Irvine, California
February 28, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Sole Member of the Board of Directors
Netlist, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Netlist, Inc. and subsidiaries (the “Company”) as of December 31, 2022, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). In our opinion, because of the material weakness, described below, on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements of the Company as of December 31, 2022 and January 1, 2022, the related consolidated statements of operations, stockholders’ equity (deficit), and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and the schedule listed in the Index at Item 15 (collectively, “the consolidated financial statements”), and our report dated February 28, 2023 expressed an unqualified opinion on those consolidated financial statements.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company’s annual or interim financial statements will not be prevented or detected on a timely basis. The following material weakness has been identified and included in management’s assessment:

- The Company’s sole member of the board of directors also serves in an executive management role at the Company. As a result, the Company has ineffective oversight of the financial reporting process due to the lack of an audit committee and the lack of an independent board of directors to ensure adequate monitoring and oversight of internal controls.

The material weakness was considered in determining the nature, timing, and extent of audit tests applied in our audit of the fiscal year 2022 consolidated financial statements, and this report does not affect our report on those consolidated financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KMJ Corbin & Company LLP

We have served as the Company's auditor since 2005.

Irvine, California
February 28, 2023

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

Our management conducted an evaluation, with the participation of our principal executive officer and principal financial officer, of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Exchange Act) as of the end of the period covered by this report. Based on this evaluation, due to the material weaknesses in our internal control over financial reporting described below, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were not effective as of December 31, 2022.

Management’s Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Our internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

In designing our disclosure controls and procedures and internal control over financial reporting, our management recognizes that any control system, no matter how well-designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives. Further, the design of our controls and procedures must reflect the fact that there are resource constraints, and management necessarily applies its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Because of the inherent limitations, our disclosure and internal controls may not prevent or detect all instances of fraud, misstatements or other control issues, and our evaluations of disclosure and internal controls cannot provide assurance that all such control issues have been detected. In addition, projections of any evaluation of the effectiveness of disclosure or internal controls to future periods are subject to risks, including, among others, that controls may become inadequate because of changes in conditions or that compliance with policies or procedures may deteriorate.

Our management conducted an evaluation, with the participation of our principal executive officer and principal financial officer, of the effectiveness of our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act) as of the end of the period covered by this report. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in Internal Control-Integrated Framework. Based on this evaluation, due to the lack of an independent board and audit committee and ineffective oversight of the financial reporting process to ensure adequate monitoring and oversight of internal controls, our principal executive officer and our principal financial officer concluded that our internal control over financial reporting was not effective as of December 31, 2022 based on the criteria set forth by COSO.

Notwithstanding the material weakness in our internal control over financial reporting, we have concluded that the consolidated financial statements included in this Form 10-K fairly present, in all material respects, our financial position, results of operations and cash flows for the periods presented in conformity with U.S. GAAP.

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The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by KMJ Corbin & Company LLP, an independent registered public accounting firm, as stated in their report, which is included in Part II, Item 8, of this Form 10-K.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Remediation Initiatives

In an effort to address the identified material weakness and enhance our internal controls related to our lack of an independent board and audit committee, we continue to maintain our financial reporting process we followed to prepare consolidated financial statements in accordance with U.S. GAAP for audit committee meetings on a quarterly and annual basis. We engage all departments groups to identify risks to the achievement of our goals as a basis for determining how the risks should be managed. Our CEO and sole director will oversee the process to ensure all required disclosures are made in our consolidated financial statements on a quarterly and annual basis.

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

In order to proactively address the economic effects of the COVID-19 pandemic, our Board of Directors (referred to as our “Board” or “Board of Directors”) evaluated various cost-cutting measures, including review of the Board and committee structure, operations and compensation of the members thereof. As a result of its evaluation and because we are no longer subject to Nasdaq rules, the Board determined it to be in the best interests of its stockholders to reduce the number of directors serving on the Board to one director and to dissolve all committees of the Board effective immediately after our 2020 Annual Meeting of Stockholders on August 7, 2020.

Each member of the Board is elected annually at a meeting of our stockholders and serves for a one-year term until the next annual meeting of our stockholders and until his or her successor is elected and qualified, or until an earlier resignation or removal. Each of our executive officers is appointed by, and serves at the direction of, our Board, subject to the terms of our employment agreement with our President and CEO, which is described under “Employment Agreements” in Item 11 of this Form 10-K, and which establishes, among other things, such executive officer’s term of office.

The table and narrative below provide, for our current director and executive officers, each such individual’s name; age as of February 21, 2023; current position(s) with our Company; tenure in such position(s); information about such individual’s business experience and qualifications, including principal occupation or employment and principal business of the employer, if any, for at least the past five years, and involvement in certain legal or administrative proceedings, if any; and, for our director, other public company director positions held currently or at any time in the last five years and the experiences, qualifications, attributes and skills that led to the conclusion that such individual should serve as a director of our Company. There is no arrangement or understanding between any director or executive officer and any other person(s) pursuant to which such director or executive officer was or is to be selected as a director or executive officer of our Company, and there are no family relationships between any of our directors or executive officers.

Name	Age	Position(s)
Chun K. Hong	62	President, Chief Executive Officer and Sole Director
Gail Sasaki	66	Executive Vice President, Chief Financial Officer and Secretary

Chun K. Hong is one of the founders of Netlist and has been our President and CEO and a director since our inception in June 2000. Mr. Hong assumed the title of Chairman of the Board of Directors in January 2004 and became a sole member of the Board of Directors in August 2020. Prior to his tenure at Netlist, Mr. Hong has served in various other executive positions including President and Chief Operating Officer of Infinilink Corporation, a DSL equipment company, as Executive Vice President of Viking Components, Inc., a memory subsystems manufacturing company, and as General Manager of Sales at LG Semicon Co., Ltd., a public semiconductor manufacturing company in South Korea. Mr. Hong received his Bachelor of Science degree in economics from Virginia Commonwealth University and his Master of Science degree in technology management from Pepperdine University’s Graduate School of Management. As one of our founders and as our Chief Executive Officer, Mr. Hong brings to the Board extensive knowledge of our organization and our market.

Gail Sasaki is our Executive Vice President and Chief Financial Officer (“CFO”). Ms. Sasaki has been our Secretary since August 2007. Ms. Sasaki joined us in 2006 as Vice President of Finance and subsequently assumed the role of CFO in January 2008. Prior to her tenure at Netlist, Ms. Sasaki served in various senior financial roles, including CFO of eMaiMai, Inc., a commercial technology company based in Hong Kong and mainland China; CFO, Senior Vice President of Finance, Secretary and Treasurer of eMotion, Inc. (a Kodak subsidiary and formerly Cinebase Software), a developer of business-to-business media management software and services, and CFO of MicroNet Technology, Inc., a leader in storage technology. Ms. Sasaki also spent seven years in public accounting leaving as an audit manager with Arthur Young (now known as Ernst & Young LLP). Ms. Sasaki earned a Bachelor’s degree from the University of California at Los Angeles, and also earned a Master of Business Administration degree from the University of Southern California.

Code of Business Conduct and Ethics

Our Board has adopted a Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, as well as all of our other executive officers and employees and all of our directors. Shareholders may download a free copy of our Code of Business Conduct and Ethics from our website (www.netlist.com). We intend to disclose on our website any amendments to or waivers from this code by posting the relevant material on our website (www.netlist.com) in accordance with SEC rules.

Item 11. Executive Compensation

Compensation Discussion and Analysis

The following discussion and analysis of compensation arrangements of our named executive officers for 2022 should be read together with the compensation tables and related disclosures set forth below. This discussion contains forward-looking statements that are based on our current considerations, expectations and determinations regarding future compensation programs. The actual amount and form of compensation and the compensation programs that we adopt may differ materially from current or planned programs as summarized in this discussion.

The following discussion and analysis relates to the compensation arrangements for 2022 of (i) our principal executive officer, (ii) our principal financial officer and (iii) the most highly compensated person, other than our principal executive officer and principal financial officer, who was serving as an executive officer at the end of our fiscal year ended December 31, 2022 (our “named executive officers”). We had no other executive officers serving at the end of our fiscal year ended December 31, 2022. Our named executive officers for fiscal year 2022 were:

<u>Name</u>	<u>Age</u>	<u>Position(s)</u>
Chun K. Hong	62	President, Chief Executive Officer and Sole Director
Gail Sasaki	66	Executive Vice President, Chief Financial Officer and Secretary

Compensation Philosophy

Our compensation programs are intended to attract and retain employees with skills necessary to enable us to achieve our financial and strategic objectives and to motivate them through the use of appropriate incentives tied to our performance and market value to achieve those objectives. We recognize that the goals of employee attraction, retention and motivation must be balanced against the necessity of controlling compensation expense, with the ultimate objective of building shareholder value. With respect to the compensation of our named executive officers, our President, CEO and Sole Director, who has the responsibility to design a compensation program and set levels of compensation that attempt to achieve the optimal balance between employee attraction, retention and motivation, adjusted the executive officers’ compensation for 2022.

Key Factors in Determining Executive Compensation

Role of Compensation Consultants

Our sole Director has from time to time engaged the services of outside consultants to assist in making decisions regarding the establishment of Netlist’s compensation philosophy and programs.

Role of Executive Officers in Compensation Decisions

Our sole Director has overall responsibility for the compensation of our CEO and CFO. Our sole Director considered the executive officers’ responsibilities, performance, compensation, and the compensation program’s ability to attract, retain and motivate executive talent. These considerations reflected compensation levels that our sole Director

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believed were qualitatively commensurate with executive officers' individual qualifications, experience, responsibility level, functional role, knowledge, skills and individual performance, as well as Netlist's performance.

Role of Stockholder Say-on-Pay Votes

At each annual meeting held every three years, including most recently in 2022, we held triennial stockholder advisory "say-on-pay" votes on the compensation of our named executive officers for the immediately preceding fiscal years. At the 2022 annual meeting, our stockholders overwhelmingly approved the compensation of our named executive officers, with over 85% of our stockholders present and entitled to vote at the meeting voting in favor of our compensation policies for our named executive officers. Given this result, and following consideration of them, the former Compensation Committee had decided to retain our overall approach to executive compensation while continuing to evaluate our practices frequently, including in response to future say-on-pay votes. Moreover, we are required to hold a vote at least every six years regarding how often to hold a stockholder advisory vote on the compensation of our named executive officers. We held our most recent such vote at the 2022 annual meeting of stockholders, at which our stockholders indicated a preference for a triennial vote. Consequently, the Board determined that we will hold a triennial stockholder advisory vote on the compensation of our named executive officers until they consider the results of our next say-on-pay frequency vote, which will be held at the 2025 annual meeting of stockholders.

Current Elements of Named Executive Officer Compensation

Overview and Fiscal Year 2022 Highlights

Our current executive compensation program generally consists of base salary, annual cash incentive compensation, equity-based incentives and other benefits. We combine these elements in order to formulate compensation packages that provide competitive pay and align the interests of our named executive officers with long-term stockholder interests by rewarding the achievement of financial, operational and strategic objectives. In 2022, our full-year accomplishments under our executive leadership included the following:

- Total net product sales of \$161.6 million, representing an increase of \$59.3 million compared to the prior year; and
- Total product gross profit of \$11.9 million, representing an increase of \$3.0 million compared to the prior year.

Base Salary

The following table sets forth information regarding the annualized base salary rates at the end of 2022 for our named executive officers:

Name	Fiscal Year 2022 Base Salary (\$)
Chun K. Hong	450,000
Gail Sasaki	275,000

Equity-Based Incentives

Our equity award program is the primary vehicle for offering long-term incentives to our named executive officers. Our equity-based incentives have historically been granted in the form of options to purchase shares of our common stock and restricted stock unit awards that are settled in shares of our common stock upon vesting, and we have granted to both our named executive officers awards that vest over a long-term period subject to continued service. We believe that equity awards more closely align the interests of our named executive officers with our stockholders, provide our named executive officers with incentives linked to long-term performance, and create an ownership culture. In addition, the vesting features of our equity awards contribute to executive retention because these features provide an incentive to our named executive officers to remain in our employment during the scheduled vesting periods or until the achievement of the applicable performance milestones, which are expected to be achieved over the medium- to long-term. To date, we have not had an established set of criteria for granting equity awards; instead, the Board or our sole Director exercises judgment and discretion. The sole Director considers, among other things, the role and responsibility

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of the named executive officer, competitive factors, the amount of stock-based equity compensation already held by the named executive officer, and the cash-based compensation received by the named executive officer, to determine the level and types of equity awards that it approves.

Bonus

Our bonuses are discretionary with substantial weight given to financial performance during the year and the enhancement of long-term stockholder value.

Perquisites

Generally, we do not provide any perquisites or other personal benefits to our named executive officers except in certain limited circumstances and as provided in employment agreements.

Health and Welfare Benefits

We provide the following benefits to our named executive officers on the same basis provided to all of our employees:

- medical insurance including mental health, dental and vision;
- life insurance and accidental death and dismemberment insurance;
- a Section 401(k) plan for which discretionary matching contributions provided by Netlist;
- short-and long-term disability insurance;
- medical and dependent care flexible spending account; and
- a health savings account.

Employment Agreements – CEO

In September 2006, we entered into an employment agreement with our President and CEO, Mr. Hong. This agreement provides for a base salary plus other specified benefits, including the reimbursement of professional fees and expenses incurred in connection with income and estate tax planning and preparation, income tax audits and the defense of income tax claims; the reimbursement of membership fees and expenses for professional organizations and one country club; the reimbursement of employment-related legal fees; automobile rental payments and other vehicle-related expenses; and the reimbursement of health club membership fees and other similar health-related expenses. Mr. Hong may earn annual cash performance bonuses, at the discretion of our Board, of up to 100% of his base salary based upon the achievement of individual and Company performance objectives.

Mr. Hong's employment agreement automatically renews for additional one-year periods unless we provide or Mr. Hong provides notice of termination six months prior to the renewal date, but at all times Mr. Hong may terminate his employment upon six months' advance written notice to us and we may terminate Mr. Hong's employment upon 30 days' advance written notice to Mr. Hong. If we terminate Mr. Hong's employment without cause or if he resigns from his employment for good reason, which includes a termination or resignation upon a change of control of our Company, Mr. Hong would be entitled to receive continued payments of his base salary for one year, reimbursement of medical insurance premiums during that period unless he becomes employed elsewhere, a pro-rated portion of his annual performance bonus, and, if any severance payment is deemed to be an "excess parachute payment" within the meaning of Section 280G of the Code, an amount equal to any excise tax imposed under Section 4999 of the Code. In addition, upon any such termination or resignation, any unvested stock options held by Mr. Hong would immediately become fully vested and exercisable as of the effective date of the termination or resignation. If Mr. Hong's employment is terminated due to death or disability, he or his estate would receive a lump-sum payment equal to half of his annual base salary and any stock options held by Mr. Hong would vest to the same extent as they would have vested one year thereafter. Additionally, if Mr. Hong's employment is terminated due to death or disability, 25% of the shares subject to outstanding stock options, or such lesser amount as is then unvested, would immediately vest and become exercisable. If Mr. Hong resigns without good reason or is terminated for cause, we would have no further obligation to him other than to pay his base salary or other amounts earned by him through the date of resignation or termination.

For purposes of Mr. Hong's employment agreement:

- "cause" means a reasonable determination by the Board, acting in good faith based upon actual knowledge at the time, that Mr. Hong has (i) materially breached the terms of his employment agreement, or any other material agreement between us and Mr. Hong, including an arbitration agreement and a proprietary information and invention assignment agreement, (ii) committed gross negligence or engaged in serious misconduct in the execution of his assigned duties, (iii) been convicted of a felony or other serious crime involving moral turpitude, (iv) materially refused to perform any lawful duty or responsibility consistent with Mr. Hong's position with our Company, or (v) materially breached his fiduciary duty or his duty of loyalty to our Company;
- "good reason" means (i) the assignment to Mr. Hong, without his consent, of duties inconsistent with his position so as to constitute a diminution of status with our Company, including an assignment of Mr. Hong to a position other than President and CEO of our Company, (ii) our reduction of Mr. Hong's base salary as in effect at any time without Mr. Hong's consent, other than a decrease of up to (and including) 10% in connection with an adverse change in the business operations or financial condition of our Company, (iii) the occurrence of a change of control, or (iv) a requirement that Mr. Hong relocate (or report on a regular basis) to an office outside of Orange County without his consent; and
- a "change of control" means the occurrence of any of the following: (i) any person or entity is or becomes the beneficial owner (within the meaning of Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of our Company representing a percentage of the combined voting power of our then-outstanding securities that is greater than 50%, (ii) the following individuals cease for any reason to constitute a majority of the number of directors then serving: individuals who, on the date of Mr. Hong's employment agreement, constituted our Board and any new director (other than a director whose initial assumption of office is in connection with an actual or threatened election contest, including but not limited to a consent solicitation, relating to the election of directors of our Company) whose appointment or election by the Board or nomination for election by our stockholders is approved or recommended by a vote of at least two-thirds of the directors then still in office who either were directors on the date of Mr. Hong's employment agreement or whose appointment, election or nomination for election was previously so approved or recommended; (iii) there is consummated a merger or consolidation of our Company in which our Company does not survive or our Company survives but the shares of our common stock outstanding immediately prior to such merger or consolidation represent 50% or less of the voting power of our Company after such merger or consolidation; or (iv) our stockholders approve a plan of our complete liquidation or dissolution or there is consummated an agreement for our sale or disposition of all or substantially all of our assets, other than a sale or disposition of all or substantially all of our assets to an entity, at least 50% of the combined voting power of the voting securities of which are owned by our stockholders in substantially the same proportions as their ownership of our Company immediately prior to such sale.

We have not entered into an employment agreement with Ms. Sasaki, our Executive Vice President, Chief Financial Officer and Secretary. For 2022, 2021 and 2020, Ms. Sasaki received an annualized base salary of \$275,000, \$275,000 and \$285,577, respectively. If the employment of Ms. Sasaki is terminated due to death or disability, any stock options held by Ms. Sasaki would vest to the same extent as they would have vested one year thereafter. Additionally, if the employment of Ms. Sasaki is terminated due to death or disability, 25% of the shares subject to outstanding stock options, or such lesser amount as is then unvested, would immediately vest and no additional shares would vest thereafter. Ms. Sasaki is eligible for a target cash bonus of 75% of her base salary, which are to be determined by our Board in its discretion based on various factors.

Summary Compensation Table

The table below provides information about the compensation awarded to, earned by or paid to each of the following individuals, which we refer to collectively as our “named executive officers,” for each of the last three fiscal years.

<u>Name and Principal Position</u>	<u>Year</u>	<u>Base Salary(\$)</u>	<u>Bonus(\$)</u>	<u>Stock Awards(\$) (1)</u>	<u>Option Awards(\$) (2)</u>	<u>All Other Compensation(\$) (3)</u>	<u>Total(\$)</u>
Chun K. Hong(4) <i>President, Chief Executive Officer and Sole Director</i>	2022	450,000	—	2,696,000	—	58,888	3,204,888
	2021	450,000	665,000	—	627,060	58,215	1,800,275
	2020	467,308	180,000	94,290	—	62,092	803,690
Gail Sasaki <i>Executive Vice President, Chief Financial Officer and Secretary</i>	2022	275,000	—	674,000	—	855	949,855
	2021	275,000	205,000	72,400	—	22,007	574,407
	2020	285,577	103,125	23,573	—	22,254	434,529

- (1) Represents the grant date fair value of the RSUs granted during the year calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, Compensation—Stock Compensation (“ASC 718”). The grant date fair value was determined using the fair value of the underlying shares of our common stock.
- (2) Represents the grant date fair value of the option awards granted during the year calculated in accordance with ASC 718. The assumptions used in the calculations for these amounts are described in Note 1—Summary of Significant Accounting Policies—Stock-Based Compensation and Note 9—Benefit Plans to our consolidated financial statements included in this Form 10-K. The material terms of each stock option award granted in 2022 are described below under “Outstanding Equity Awards at Fiscal Year End.
- (3) For 2022, the amount consists of (a) for Mr. Hong, \$11,860 for automobile rental payments, \$2,414 for other vehicle-related costs, \$35,083 for a country club membership, \$826 for a health club membership, and \$8,705 for income tax and estate planning costs incurred on Mr. Hong’s behalf and (b) for Ms. Sasaki, the amount is for a health club membership. For 2021, the amount consists of (a) for Mr. Hong, \$10,816 for automobile rental payments, \$7,527 for other vehicle-related costs, \$26,027 for a country club membership, \$5,480 for a health club membership, and \$8,365 for income tax and estate planning costs incurred on Mr. Hong’s behalf and (b) for Ms. Sasaki, the amount is for a health club membership. For 2020, the amount consists of (a) for Mr. Hong, \$10,936 for automobile rental payments, \$7,509 for other vehicle-related costs, \$24,600 for a country club membership, \$14,769 for a health club membership, and \$4,278 for income tax and estate planning costs incurred on Mr. Hong’s behalf, and (b) for Ms. Sasaki, the amount is for weekly fitness training.
- (4) Mr. Hong received no additional compensation for his service as a director.

CEO Pay Ratio – 2022

We compared the 2022 annual total compensation of our CEO of \$3,204,888 and the 2022 annual total compensation of our median global compensated employee of \$77,099. The result of this calculation was a CEO Pay Ratio of 42 to 1.

We determined the median global compensated employee’s total compensation by using the same methodology used to calculate our CEO’s annual total compensation (see the table entitled “Summary Compensation Table”). We then applied this measure to our global employee population as of December 31, 2022 (the last day of our 2022 fiscal year). For the calculation, approximately 56% of the global employee population was based in the United States and 44% was based in our Suzhou, China factory.

Retirement Benefits

We maintain a savings plan that qualifies as a defined contribution plan under Section 401(k) of the Code, to which all of our employees, including our named executive officers, are able to contribute up to the limit prescribed by applicable tax rules on a before-tax basis. All of these employee contributions are fully vested upon contribution. In addition, we may make matching contributions on the contributions of our employees on a discretionary basis. In 2022 and 2021, we made matching contributions of \$135,411 and \$105,161, respectively. In 2020, we did not make matching contributions.

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Grants of Plan-Based Awards – 2022

The following table shows information regarding the incentive awards granted to the named executive officers for 2022:

Name	Award Type	Grant Date	Estimated future payouts under non-equity incentive plan awards(1)			All other stock awards: number of shares of stock or units (#)	All other option awards: number of securities underlying options (#)	Exercise or base price of option awards (\$/sh)	Grant date fair value of stock and option awards
			Threshold (\$)	Target (\$)	Maximum (\$)				
Chun K. Hong	Cash Incentive	1/25/2022	—	450,000	—	—	—	—	
	Time-Based RSUs(2)		—	—	—	800,000	—	—	2,696,000
Gail Sasaki	Cash Incentive	1/25/2022	—	206,250	—	—	—	—	
	Time-Based RSUs(2)		—	—	—	200,000	—	—	674,000

- (1) The amounts shown in these columns represent the threshold, target, and maximum payout levels. The actual bonus amount paid to each named executive officer is reported under the "Bonus" column of the Summary Compensation Table. The material terms of each stock option award granted in 2022 are described below under "Outstanding Equity Awards at Fiscal Year End."
- (2) The material terms of each RSU award granted in 2022 are described below under "Outstanding Equity Awards at Fiscal Year End."

Outstanding Equity Awards at Fiscal Year End

The following table shows information about the equity awards held by our named executive officers as of December 31, 2022:

Name	Grant Date	Option Awards				Stock Awards	
		Number of Securities Underlying Unexercised Options Exercisable(1)(1)	Number of Securities Underlying Unexercised Options Unexercisable(1)(1)	Option Exercise Price(\$)	Option Expiration Date	Number of Shares That Have Not Vested(1)(2)	Market Value of Shares That Have Not Vested(\$)(2)
Chun K. Hong	2/11/2013	300,000	—	0.71	2/11/2023	—	—
	2/21/2014	300,000	—	2.05	2/21/2024	—	—
	1/6/2015	300,000	—	0.84	1/6/2025	—	—
	1/18/2016	300,000	—	0.70	1/18/2026	—	—
	2/14/2017	300,000	—	1.02	2/14/2027	—	—
	1/13/2021	437,500	562,500	0.72	1/13/2031	—	—
	3/7/2019	—	—	—	—	92,812	106,734
	3/6/2020	—	—	—	—	112,500	129,375
	1/25/2022	—	—	—	—	700,000	805,000
Gail Sasaki	3/18/2019	—	—	—	—	51,468	59,188
	3/6/2020	—	—	—	—	28,125	32,344
	1/13/2021	—	—	—	—	62,500	71,875
	1/25/2022	—	—	—	—	175,000	201,250

- (1) Represents stock option awards granted under the Netlist, Inc. Amended 2006 Plan. These stock option awards that are not fully exercisable vest in 16 equal quarterly installments, subject to continued service on each vesting date, subject to accelerated vesting in certain circumstances as described under "Employment Agreements" above.
- (2) Represents RSUs granted under the Equity Plan. Restrictions on RSUs lapse in eight equal semi-annual installments from the grant date.

[Table of Contents](#)*2022 Option Exercised and Stock Vested*

The following table show information regarding the vesting during 2022 of stock options and RSUs previously granted to the named executive offers.

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise(#)	Value Realized on Exercise\$(1)	Number of Shares Acquired on Vesting(#)	Value Realized on Vesting\$(2)
Chun K. Hong	—	—	360,624	1,290,681
Gail Sasaki	—	—	171,687	664,116

- (1) Reflects the product of the number of shares of stock subject to the exercised option multiplied by the difference between the market price of our common stock at the time of exercise on the exercise date and the exercise price of the option
- (2) Reflects the product of the number of shares of stock vested multiplied by the market price of our common stock on the vesting date

Employee Compensation Risks

Our management oversees management of risks relating to our compensation plans and programs and has assessed the risks associated with our compensation policies and practices for all employees, including non-executive officers. These include risks relating to setting ambitious targets for our employees' compensation or the vesting of their equity awards and our emphasis on equity-based compensation, and the potential impact of such practices on the retention or decision-making of our employees, particularly our senior management. Based on the results of this assessment, we do not believe that our compensation policies and practices for all employees, including non-executive officers, create risks that are reasonably likely to have a material adverse effect on us.

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

The table below sets forth information regarding the ownership of our common stock, as of February 21, 2023 (the "Table Date") unless otherwise indicated in the footnotes to the table, by (i) all persons known by us to beneficially own more than 5% of our common stock, (ii) each of our current directors, (iii) each of our named executive officers, and (iv) all of our directors and executive officers as a group. Unless otherwise indicated, each person named below possesses sole voting and investment power over all shares of common stock shown as beneficially owned by such person. Unless otherwise indicated, the address for each person named below is c/o Netlist, Inc., 111 Academy, Suite 100, Irvine, CA 92617.

Name of Beneficial Owner	Shares Beneficially Owned	Percent of Class(1)
Chun K. Hong (2)	7,625,827	3.2%
Gail Sasaki (3)	217,345	*
All executive officers and directors as a group (2 persons) (4)	7,843,172	3.3%

* Represents beneficial ownership of less than 1%.

- (1) All ownership percentages are based on 235,523,847 shares of our common stock outstanding as of the Table Date.
- (2) Represents (i) 1,992,812 shares of common stock issuable upon the exercise of stock options that are or will be vested and exercisable within 60 days after the Table Date and (ii) 5,633,015 outstanding shares of common stock, of which 4,611,177 shares are held by Mr. Hong and his wife, Won K. Cha, as co-trustees of the Hong-Cha Community Property Trust. Mr. Hong and Ms. Cha possess shared voting and investment power over the shares of common stock held by the Hong-Cha

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Community Property Trust, and each disclaims beneficial ownership of such shares except to the extent of his or her pecuniary interest therein.

- (3) Represents 85,843 shares of common stock from restricted stock that will vest within 60 days after the Table date and 131,502 shares of common stock outstanding.
- (4) Represents (i) 2,078,655 shares of common stock issuable upon the exercise of stock options and restricted stock units that are or will be vested and exercisable within 60 days after the Table Date and (ii) 5,764,517 outstanding shares of common stock.

Securities Authorized for Issuance under Equity Compensation Plans

The following table provides information as of December 31, 2022 about compensation plans under which our equity securities are authorized for issuance:

Plan Category	Equity Compensation Plan Information		
	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights(\$)(1)	(c) Number of securities remaining available for future equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	7,523,367(2)	0.93	240,982(3)
Equity compensation plans not approved by security holders	784,833(4)	4.71	—
Total	8,308,200	1.28	240,982

- (1) The weighted-average exercise price is calculated based solely on the exercise prices of the outstanding options and do not reflect the shares that will be issued upon the vesting of outstanding awards of RSUs, which have no exercise price.
- (2) This number includes the following outstanding awards granted under the Equity Plan: 4,866,239 shares subject to outstanding stock options and 2,657,128 shares subject to outstanding RSUs.
- (3) Subject to certain adjustments, as of December 31, 2022, we were authorized to issue a maximum of 17,405,566 shares of our common stock pursuant to awards granted under the Equity Plan.
- (4) Consists of 784,833 RSUs outstanding as of December 31, 2022.

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

Related Party Transactions

Related party transactions are reviewed by our sole Director in accordance with our related party transaction policy. Related parties include our directors and officers, their family members and affiliates, and certain beneficial owners. In cases where the related party is a director or an affiliate of a director, that director does not participate in the review of the proposed transaction. Except as described below and except for employment arrangements, which are described in Item 11 above, during 2022, there were no actual or proposed related party transactions in excess of \$120,000 other than the following:

Our Executive Vice President of Sales and Operations (formerly, our Vice President of Netlist Base and Commodity Sales), Paik K. Hong, is the brother of Chun K. Hong, our President, CEO and Sole Director. For 2022, Mr. P. K. Hong earned cash salary of \$182,500, received \$34,067 for weekly fitness training, and was granted 200,000 shares of restricted stock units with the grant-date fair value of \$674,000 measured in accordance with ASC 718. The grant-date fair value was determined using the fair value of the underlying shares of our common stock. For 2021, Mr. P. K. Hong earned cash salary of \$250,000 and cash bonus of \$175,000 and received \$19,098 for weekly fitness training.

We have entered into indemnification agreements with each of our director and executive officers. In general, these agreements require us to indemnify each such individual to the fullest extent permitted under Delaware law against certain liabilities that may arise by reason of their service for us, and to advance expenses incurred as a result of any such proceeding as to which any such individual could be indemnified.

Director Independence

Due to the dissolution of all committees of the Board and reduction of the number of directors to one director, our President and CEO, Mr. Hong, in August 2020, we currently do not have an independent director.

Item 14. Principal Accountant Fees and Services

Fees Paid to Independent Registered Public Accounting Firm

The following table presents the aggregate fees billed to us by our independent registered public accounting firm, KMJ Corbin & Company LLP (“KMJ”), for 2022 and 2021:

	<u>2022(\$)</u>	<u>2021(\$)</u>
Audit Fees (1)	218,750	202,650
Audit-Related Fees (2)	—	—
Tax Fees (2)	—	—
All Other Fees (2)	—	—
Total Fees	<u>218,750</u>	<u>202,650</u>

- (1) Audit fees consist of fees billed to us for professional services rendered for the audit of our annual consolidated financial statements, the review of our interim condensed consolidated financial statements included in our quarterly reports and the audit of our internal control over financial reporting as required by Section 404 of SOX. These fees also include fees billed to us for professional services that are normally provided in connection with statutory and regulatory filings or engagements, including the review of our registration statements on Form S-3 and Form S-8 and certain other related matters, such as the delivery of comfort letters and consents in connection with these registration statements.
- (2) KMJ did not bill to us any audit-related fees, tax fees or other fees in 2022 or 2021.

Pre-Approval Policies and Procedures

Our Sole Director pre-approves all audit and permissible non-audit services to be performed for us by our independent registered public accounting firm, except for certain “de minimus” non-audit services that may be ratified by Sole Director. Our Sole Director pre-approved all services performed by KMJ in 2022.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Documents filed as part of this report

(1) All financial statements

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Consolidated Statements of Stockholders' Equity (Deficit)	49
Consolidated Statements of Cash Flows	50
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Reports of Independent Registered Public Accounting Firm	75
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(2) Financial statement schedules

Schedule II – Valuation and Qualifying Accounts (in thousands)

AR Allowance and Sales Returns Reserve	Balance at Beginning of Year	Charged to Expense	Write-offs	Balance at End of Year
January 2, 2021	\$ 61	\$ (541)	\$ 637	\$ 157
January 1, 2022	\$ 157	\$ (104)	\$ 230	\$ 283
December 31, 2022	\$ 283	\$ (146)	\$ —	\$ 137

All other financial statement schedules have been omitted, as they are not required, not applicable, or the required information is otherwise included.

(3) Exhibit listing

Exhibit No.	Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
3.1	Restated Certificate of Incorporation of Netlist, Inc.		10-Q	001-33170	3.1	August 15, 2017
3.1.1	Certificate of Amendment to the Restated Certificate of Incorporation of Netlist, Inc.		10-Q	001-33170	3.1.1	August 15, 2017
3.1.2	Certificate of Amendment of the Restated Certificate of Incorporation of Netlist, Inc.		8-K	001-33170	3.1	August 17, 2018
3.1.3	Certificate of Designation of the Series A Preferred Stock of Netlist, Inc.		10-Q	001-33170	3.1.2	August 15, 2017
3.2	Amended and Restated Bylaws of Netlist, Inc.		8-K	001-33170	3.1	December 20, 2012
3.2.1	Certificate of Amendment to Amended and Restated Bylaws of Netlist, Inc.		8-K	001-33170	3.1	December 29, 2017
4.1	Description of the Registrant's Securities		10-K	001-33170	4.1	March 10, 2020
4.2	Rights Agreement, dated as of April 17, 2017, by and between Netlist, Inc. and Computershare Trust Company, N.A., As Rights Agent		8-K	001-33170	4.1	April 17, 2017

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Exhibit No.	Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
4.3	Amendment No. 1 to Rights Agreement, dated as of April 16, 2018, by and between Netlist, Inc. and Computershare Trust Company, N.A., As Rights Agent		8-K	001-33170	4.1	April 17, 2018
4.4	Amendment No. 2 to Rights Agreement, dated as of April 16, 2019, by and between Netlist, Inc. and Computershare Trust Company, N.A., As Rights Agent		8-K	001-33170	4.1	April 17, 2019
4.5	Amendment No. 3 to Rights Agreement, dated as of August 14, 2020, by and between Netlist, Inc. and Computershare Trust Company, As Rights Agent		8-K	001-33170	4.1	August 14, 2020
4.6	Form of Warrant Agreement to Purchase Common Stock issued pursuant to the Securities Purchase Agreement, dated September 12, 2018		8-K	001-33170	4.1	September 14, 2018
10.1#	Form of Indemnity Agreement for officers and directors		S-1	333-136735	10.12	August 18, 2006
10.2#	Employment Agreement, dated September 5, 2006, between Netlist, Inc. and Chun K. Hong		S-1	333-136735	10.13	September 27, 2006
10.3#	Amended and Restated 2006 Equity Incentive Plan of Netlist, Inc.		10-K	001-33170	10.3	March 22, 2019
10.4#	Form of Restricted Stock Award Agreement issued pursuant to the Amended and Restated 2006 Equity Incentive Plan of Netlist, Inc.		10-Q	001-33170	10.2	May 17, 2010
10.5#	Form of Incentive Stock Option Award Agreement issued pursuant to the Amended and Restated 2006 Equity Incentive Plan of Netlist, Inc.		10-K	001-33170	10.6	March 31, 2017
10.6	Loan and Security Agreement, dated October 31, 2009, between Silicon Valley Bank and Netlist, Inc.		8-K	001-33170	10.1	November 2, 2009
10.7	Intercompany Subordination Agreement, dated October 31, 2009, among Silicon Valley Bank, Netlist, Inc., and Netlist Technology Texas, L.P.		8-K	001-33170	10.2	November 2, 2009
10.8	Guarantor Security Agreement, dated October 31, 2009, between Silicon Valley Bank and Netlist Technology Texas LP		8-K	001-33170	10.3	November 2, 2009
10.9	Intellectual Property Security Agreement, dated October 31, 2009, between Silicon Valley Bank and Netlist, Inc.		8-K	001-33170	10.4	November 2, 2009
10.10	Amendment to Loan Documents, dated March 24, 2010, between Silicon Valley Bank and Netlist, Inc.		10-Q	001-33170	10.1	May 7, 2010
10.11	Amendment to Loan Documents, dated June 30, 2010, between Silicon Valley Bank and Netlist, Inc.		10-Q	001-33170	10.2	August 12, 2010

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Exhibit No.	Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.12	Amendment to Loan Documents, dated September 30, 2010, between Silicon Valley Bank and Netlist, Inc.		10-Q	001-33170	10.1	November 16, 2010
10.13	Amendment to Loan Documents, dated May 11, 2011, between Silicon Valley Bank and Netlist, Inc.		10-Q	001-33170	10.1	May 12, 2011
10.14	Amendment to Loan Documents, dated August 10, 2011, between Silicon Valley Bank and Netlist, Inc.		10-Q	001-33170	10.1	August 15, 2011
10.15	Amendment to Loan Documents, dated May 14, 2012, between Silicon Valley Bank and Netlist, Inc.		10-Q	001-33170	10.1	May 15, 2012
10.16	Forbearance to Loan and Security Agreement, dated March 27, 2013, between Netlist, Inc. and Silicon Valley Bank		10-K	001-33170	10.32	March 29, 2013
10.17	Amendment to Loan Documents, dated July 17, 2013, between Netlist, Inc. and Silicon Valley Bank		10-Q	001-33170	10.6	November 12, 2013
10.18	Amendment to Loan Documents, dated September 30, 2014, between Netlist, Inc. and Silicon Valley Bank		10-K	001-33170	10.24	March 27, 2015
10.19	Senior Secured Convertible Promissory Note and Warrant Purchase Agreement, dated November 18, 2015, between Netlist, Inc. and SVIC No. 28 New Technology Business Investment LLP		8-K	001-33170	10.1	November 19, 2015
10.20	Registration Rights Agreement, dated November 18, 2015, between Netlist, Inc. and SVIC No. 28 New Technology Business Investment LLP		8-K	001-33170	10.2	November 19, 2015
10.21	Amendment to Loan Documents, dated January 29, 2016, between Netlist, Inc. and Silicon Valley Bank		8-K	001-33170	10.1	February 1, 2016
10.22	Amendment to Loan and Security Agreement, dated March 27, 2017, between Netlist, Inc. and Silicon Valley Bank		8-K	001-33170	10.1	March 29, 2017
10.23	Amendment to Loan and Security Agreement, dated April 12, 2017, by and between Netlist, Inc. and Silicon Valley Bank		10-Q	001-33170	10.1	August 15, 2017
10.24	Amendment to Loan and Security Agreement, dated March 20, 2018, by and between Netlist, Inc. and Silicon Valley Bank		8-K	001-33170	10.1	March 26, 2018
10.25	Amendment to Loan and Security Agreement, dated March 21, 2019, by and between Netlist, Inc. and Silicon Valley Bank		10-K	001-33170	10.25	March 22, 2019

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Exhibit No.	Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.26	Amendment to Loan and Security Agreement, dated February 27, 2020, by and between Netlist, Inc. and Silicon Valley Bank		10-K	001-33170	10.26	March 10, 2020
10.27	Amendment to Loan and Security Agreement dated April 9, 2021, by and between Netlist, Inc. and Silicon Valley Bank		10-Q	001-33170	10.1	May 18, 2021
10.28	Amendment to Loan and Security Agreement, dated April 29, 2022, by and between Netlist, Inc. and Silicon Valley Bank		10-Q	001-33170	10.1	May 9, 2022
10.29	Purchase Agreement, dated June 24, 2019, by and between Netlist, Inc. and Lincoln Park Capital Fund, LLC		8-K	001-33170	1.1	June 24, 2019
10.30	Purchase Agreement, dated March 5, 2020, by and between Netlist, Inc. and Lincoln Park Capital Fund, LLC		10-K	001-33170	10.37	March 10, 2020
10.31	Purchase Agreement dated July 12, 2021, by and between Netlist, Inc. and Lincoln Park Capital Fund, LLC		8-K	001-33170	1.1	July 12, 2021
10.32	Registration Rights Agreement, dated July 12, 2021, by and between Netlist, Inc. and Lincoln Park Capital Fund, LLC		8-K	001-33170	1.2	July 12, 2021
10.33	Purchase Agreement, dated September 28, 2021, by and between Netlist, Inc. and Lincoln Park Capital, LLC		8-K	001-33170	1.1	September 28, 2021
10.34	Registration Rights Agreement, dated September 28, 2021, by and between Netlist, Inc. and Lincoln Park Capital Fund, LLC		8-K	001-33170	1.2	September 28, 2021
10.35	Lease, dated April 28, 2021, by and between Netlist, Inc. and University Research Park, LLC		8-K	001-33170	10.1	May 3, 2021
21.1	Subsidiaries of Netlist, Inc.		10-K	001-33170	21.1	March 1, 2022
23	Consent of KMJ Corbin & Company LLP	X				
31.1	Rule 13a-14(a) / 15d-14(a) Certification of Chief Executive Officer	X				
31.2	Rule 13a-14(a) / 15d-14(a) Certification of Chief Financial Officer	X				
32+	Section 1350 Certifications of Chief Executive Officer and Chief Financial Officer	X				
101.INS	Inline XBRL Instance Document	X				
101.SCH	Inline XBRL Taxonomy Extension Schema Document	X				
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	X				
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	X				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	X				

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Exhibit No.	Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document	X				
104	The cover page from the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 (formatted as inline XBRL and contained in Exhibit 101)	X				

+ Furnished herewith.

Management contract or compensatory plan or arrangement.

§ Confidential treatment has been granted with respect to portions of this exhibit.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 28, 2023

Netlist, Inc.

By: /s/ Chun K. Hong
Chun K. Hong
President, Chief Executive Officer and Sole Director

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/ Chun K. Hong</u> Chun K. Hong	President, Chief Executive Officer and Sole Director (Principal Executive Officer)	February 28, 2023
<u>/s/ Gail Sasaki</u> Gail Sasaki	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 28, 2023

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-139435, 333-146141, 333-151644, 333-161832, 333-161834, 333-164261, 333-165916, 333-168330, 333-173646, 333-179776, 333-193862, 333-211658, 333-221655, 333-224287, 333-228349, 333-230443, 333-237047, 333-254776, 333-263233, and 333-266679 on Form S-8 and in Registration Statement Nos. 333-164290, 333-177118, 333-199446, 333-227291, 333-228348, and 333-259838 on Form S-3 of our reports dated February 28, 2023, relating to the consolidated financial statements of Netlist, Inc. and subsidiaries (the “Company”) as of December 31, 2022 and January 1, 2022, the related consolidated statements of operations, stockholders’ equity (deficit), and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedule II, and the effectiveness of internal control over financial reporting as of December 31, 2022, which reports are included in the Annual Report on Form 10-K of Netlist, Inc. for the year ended December 31, 2022.

Our report dated February 28, 2023, on the effectiveness of internal control over financial reporting as of December 31, 2022, expresses our opinion that Netlist, Inc. and subsidiaries did not maintain effective internal control over financial reporting as of December 31, 2022 because of the effect of a material weakness on the achievement of the objectives of the control criteria and contains an explanatory paragraph that states the following material weakness has been identified:

- The Company’s sole member of the board of directors also serves in an executive management role at the Company. As a result, the Company has ineffective oversight of the financial reporting process due to the lack of an audit committee and the lack of an independent board of directors to ensure adequate monitoring and oversight of internal controls.

/s/ KMJ Corbin & Company LLP

Irvine, California
February 28, 2023

CERTIFICATION

I, Chun K. Hong, certify that:

1. I have reviewed this annual report on Form 10-K of Netlist, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2023

/s/ Chun K. Hong

Chun K. Hong
President, Chief Executive Officer and Sole Director

CERTIFICATION

I, Gail Sasaki, certify that:

1. I have reviewed this annual report on Form 10-K of Netlist, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: February 28, 2023

/s/ Gail Sasaki

Gail Sasaki

Executive Vice President and Chief Financial Officer

**CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of Netlist, Inc. (the “Company”) for the fiscal year ended December 31, 2022, as filed with the Securities and Exchange Commission on or about the date hereof (the “Report”), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of such officer’s knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2023

/s/ Chun K. Hong

Chun K. Hong

President, Chief Executive Officer and Sole Director

Date: February 28, 2023

/s/ Gail Sasaki

Gail Sasaki

Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.
