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 January 1, 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	**95-4812784**
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer Identification No.)
111 Academy, Suite 100 **Irvine, California**	**92617**
(Address of principal executive offices)	(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. ☒

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 3, 2021, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $1.0 billion.

As of February 21, 2022, the registrant had 230,565,477 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

Netlist, Inc. and Subsidiaries

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For the Fiscal Year Ended January 1, 2022

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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:

- specific and overall impacts of the COVID-19 pandemic on our financial condition and results of operations;
- 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;
- 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 and 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.

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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 solid state drives and modular memory solutions to enterprise customers in diverse industries. Our NVMe SSDs 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.

Impact of COVID-19 on our Business

The extent of the continuing impact of the COVID-19 pandemic on our operational and financial performance is uncertain and will depend on many factors outside our control, including the timing, extent, trajectory and duration of the pandemic, the emergence of new variants, the development, availability, distribution and effectiveness of vaccines and treatments, the imposition of protective public safety measures, and the impact of the pandemic on the global economy. We continue to 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. As COVID-19 and its impacts are unprecedented and ever evolving, future events and effects related to the pandemic cannot be determined with precision and actual results could significantly differ from estimates or forecasts.

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 data retention capabilities in the event of unexpected system failure. The proliferation of mobile devices, social media platforms, cognitive/artificial intelligence systems and cloud-based software applications is resulting in the creation of unprecedented amounts of unstructured data. In order to manage and analyze this data, we believe new computing and memory architectures need to be developed to satisfy the needs in the industry.

Technical challenges arising from the production of dynamic random access memory integrated circuits (“DRAM ICs” or “DRAM”) using leading edge semiconductor manufacturing processes 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.

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 the memory module using multiple data buffer devices distributed between the edge connector and the DRAM. The result is 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 distributed buffer architecture.

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 utilize these algorithms in our HybriDIMM product to incorporate load reduction functionality. We also incorporate these algorithms in our NVvault product line, which is also 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.

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.

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. ("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.

Storage Class Memory

Using an industry standard DDR4 LRDIMM interface, we believe HybriDIMM is the industry's first storage class memory product capable of operating in existing Intel x86 servers without BIOS and hardware changes. HybriDIMM unifies DRAM and NAND flash in a plug-and-play module, delivering terabyte storage capacities operating at DRAM-like nanosecond memory speeds. HybriDIMM's architecture combines an on-DIMM co-processor with our software-defined data management algorithm. HybriDIMM's feature set encompasses the non-volatile dual in-line memory modules ("NVDIMM") functionalities adopted by the industry. HybriDIMM dramatically improves application performance by reducing data access latency by up to 1,000 times versus the fastest existing storage solution known to us.

Nonvolatile Memory

Our Vault product line enables customers to accelerate data running through their servers and storage and reliably protect enterprise-level cache, metadata and log data by providing near instantaneous recovery in the event of a system failure or power outage. Our nonvolatile memory offering includes:

*NVvault DDR4 NVDIMM ("*NV4*").* NV4 is an NVDIMM-N that provides data acceleration and protection in the Joint Electron Device Engineering Council ("JEDEC") standard DDR4 interface. It is designed to be integrated into industry standard server or storage solutions.

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

Patents

As of January 1, 2022, we had 99 active U.S. and foreign patents and 31 pending U.S and foreign patent applications. Our patents have various terms expiring between 2022 and 2037. 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.

To this end, we have assembled a team of engineers with 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 also focus on developing and incorporating new techniques, methodologies and processes for testing and manufacturing our products, and 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 January 1, 2022, we had approximately 120 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 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 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. 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

- We face risks related to the impact of the COVID-19 pandemic and the related protective public health measures;
- 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 Samsung and SK hynix, and any decline in these product resales could significantly harm our performance;
- We are subject to risks relating to our focus on developing our HybriDIMM and NVvault 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;
- 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;
- If a standardized memory solution that addresses the demands of our customers is developed, our net product sales and market share may decline;
- 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; and
- 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.

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, that place significant demands on our resources, and the transition to the higher reporting and control standards that will apply 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

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 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 has been generated from resales of component products, 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 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 or others' 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 or others, we may not be able to make these arrangements on financial and other terms comparable to those we have negotiated with SK hynix or others. 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 are subject to risks relating to our focus on developing our HybriDIMM and NVvault products for our target customer markets.

We have historically derived revenues from sales of our high-performance modular memory subsystems to original equipment manufacturers ("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 application-specific integrated circuits ("ASIC") and hybrid devices, including our NVvault family of products and our next-generation HybriDIMM memory subsystem. 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;
- HybriDIMM 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 NVvault products or other new products, such as HybriDIMM, 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, Samsung and 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.

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 Samsung and SK hynix to meet customer demand or in the event of other Samsung and 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 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 if 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 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.

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 People's Republic of China ("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 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.

If a standardized memory solution that addresses the demands of our customers is developed, our net product sales and market share may decline.

Many of our memory subsystems are specifically designed for our OEM customers’ high-performance systems. In a drive to reduce costs and assure supply of their memory module demand, our OEM customers may endeavor to design JEDEC standard DRAM modules into their new products. Although we also manufacture JEDEC modules, this trend could reduce the demand for our higher-priced customized memory solutions, which would have a negative impact on our operating results. In addition, the adoption of a JEDEC standard module instead of a previously custom module might allow new competitors to participate in a share of our customers’ memory module business that previously belonged to us.

If our OEM customers were to adopt JEDEC standard modules, our future business may be limited to identifying the next generation of high-performance memory demands of OEM customers and developing solutions that address these demands. Until fully implemented, any next generation of products may constitute a significantly smaller market, which could reduce our revenues and harm our competitive position.

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 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 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 Samsung and 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 customer's 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 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.

Our independent registered public accounting firm conducted an audited of our internal control over financial reporting as of January 1. 2022 and determined that we have ineffective design and maintenance of controls over user access and program change management related to certain information technology (IT) systems that support our financial reporting processes. User and privileged access were not appropriately provisioned, and program changes were not adequately reviewed prior to being placed in production. As a result, process level automated controls and manual controls that are dependent on the completeness and accuracy of information derived from the affected IT systems were also ineffective because they could have been adversely impacted. This material weakness was due to us having an insufficient number of IT personnel to identify and assess risks associated with changes in the IT environment resulting in inappropriate assignment of user and privileged access as well as insufficient documentation for control operations. This weakness has the potential to increase the likelihood and severity of the risks we face with respect to our global information technology systems.

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, that 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;
- 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.

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, all 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.

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. 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 and our independent auditors have identified material weaknesses in our internal control over financial reporting. If we are unable to remediate the material weaknesses, 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 the Sarbanes-Oxley Act of 2002, as amended, our independent registered public accounting firm concluded that our internal control over financial reporting was ineffective as of January 1, 2022 due to two material weaknesses. The identified material weaknesses, at January 1, 2022, relate to (i) the lack of an independent board and audit committee and ineffective risk assessment and monitoring controls and (ii) ineffective design and maintenance of controls over user access and program change management related to certain information technology (IT) systems that support our financial reporting processes.

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 remediate 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 auditors on a quarterly and annual basis. In an effort to remediate the identified material weakness related to our ineffective design and maintenance of controls over user access and program change management related to certain IT systems, we have hired a full-time Senior Director of IT in the fourth quarter of 2021 with primary mandate to focus on SOX compliance and mitigation plans for 2022. If our remedial measures are insufficient to address the material weaknesses, 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 weaknesses 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 of the Sarbanes-Oxley Act of 2002, as amended, that place significant demands on our resources.

Section 404 of the Sarbanes-Oxley Act of 2002 and the related rules and regulations of the SEC, which we collectively refer to as 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. In addition, due to the increase in the value of our worldwide non-affiliate public float, we lost our status as a “smaller reporting company” under applicable SEC rules as of January 2, 2022. As a result, Section 404 requires us to obtain an attestation report from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting.

Our Section 404 evaluations confirmed that enhancements, modifications and changes to our internal control over financial reporting are necessary and desirable. Implementing changes related to ineffective design and maintenance of controls over user access and program change management related to certain IT systems 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 the license fee we received under the SK hynix License Agreement, 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 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 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 SK hynix License Agreement and proceeds from issuances of debt and equity securities, including our equity line with Lincoln Park, and borrowing availability under our credit facility with 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;
- 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 have been volatile and may continue to fluctuate significantly.

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.

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

- the ongoing impacts of the COVID-19 pandemic;
- the results of legal proceedings in which we are involved;
- our operating and financial performance and prospects;
- 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.

In the past we had a funding arrangement with TR Global Funding V, LLC, an affiliate of TRGP Capital Management ("TRGP"). We believe that the SK hynix License Agreement falls outside the scope of the TRGP Agreement and the First Amendment to the TRGP Agreement, and we do not anticipate that we will be obligated to make payments to TRGP under the TRGP Agreement or the First Amendment to the TRGP Agreement.

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 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 January 1, 2022, there were 230,112,740 shares of our common stock outstanding. In addition, 5,898,926 shares of our common stock are subject to outstanding stock options and 2,227,802 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.

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 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 of 2022. 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®.

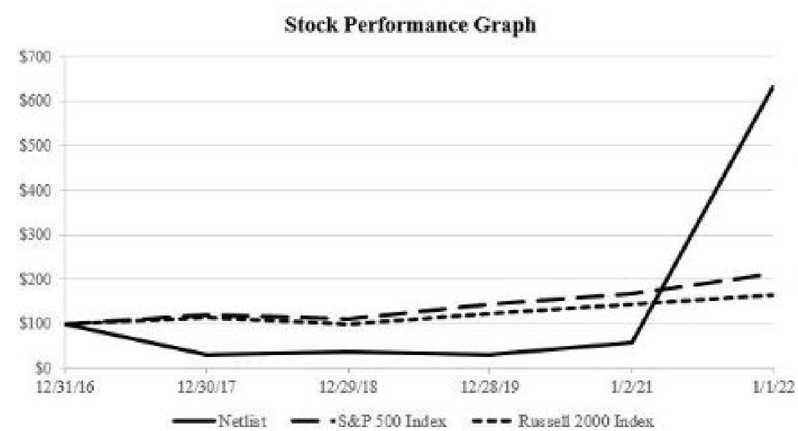
As of February 21, 2022, we had 230,565,477 outstanding shares of common stock and there were approximately 14 holders of our common stock.

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.

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 January 1, 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 31, 2016. Note that past stock price performance is not necessarily indicative of future stock price performance.



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

	12/31/16	12/30/17	12/29/18	12/28/19	1/2/21	1/1/22
Netlist	$ 100	$ 30	$ 37	$ 31	$ 59	$ 632
S&P 500 Index	$ 100	$ 119	$ 111	$ 145	$ 168	$ 213
Russell 2000 Index	$ 100	$ 113	$ 99	$ 123	$ 146	$ 165

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 2021 and 2020 items and year-to-year comparisons between 2021 and 2020. Discussions of 2019 items and year-to-year comparisons between 2020 and 2019 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 2, 2021.

Our fiscal year is the 52- or 53-week period that ends on the Saturday nearest to December 31. Our fiscal year 2021 ended on January 1, 2022, fiscal year 2020 ended on January 2, 2021, and fiscal year 2019 ended on December 28, 2019. 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.

Fiscal Year Highlights

Impact of COVID-19 on our Business

The extent of the continuing impact of the COVID-19 pandemic on our operational and financial performance is uncertain and will depend on many factors outside our control, including the timing, extent, trajectory and duration of the pandemic, the emergence of new variants, the development, availability, distribution and effectiveness of vaccines and treatments, the imposition of protective public safety measures, and the impact of the pandemic on the global economy. We continue to 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. As COVID-19 and its impacts are unprecedented and ever evolving, future events and effects related to the pandemic cannot be determined with precision and actual results could significantly differ from estimates or forecasts.

SK hynix License Agreement and Supply Agreement

On April 5, 2021, we entered into a Strategic Product Supply and License Agreement (the "License Agreement") and Product Purchase and Supply Agreement with SK hynix, Inc., a South Korean memory semiconductor supplier ("SK hynix"). Both agreements have a term of 5 years. Under the License Agreement, (a) we have granted to SK hynix fully paid, worldwide, non-exclusive, non-assignable licenses to certain of our patents covering memory technologies and (b) SK hynix has granted to us fully paid, worldwide, non-exclusive, non-assignable licenses to our patent portfolio. In addition, the License 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.

Amendment to SVB Credit Agreement

On April 9, 2021, we entered into an amendment to a credit agreement dated October 31, 2009 with Silicon Valley Bank ("SVB") (as the same may from time to time be amended, modified, supplemented or restated, the "SVB Credit Agreement") to accrue interest on advances at a per annum rate equal to the greater of 2.25% above the Wall Street Journal prime rate ("Prime Rate") or 5.50% and to extend the maturity date to December 30, 2021. In December 2021, after meeting the conditions set forth in the amendment, the amount available for borrowing was increased to $7.0 million and the maturity date was extended to April 29, 2022 upon our request.

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 had the right to sell to Lincoln Park up to an aggregate of $10 million in shares of our common stock over the 36-month term of the 2019 Purchase Agreement subject to the conditions and limitations set forth in the 2019 Purchase Agreement. From July 2019 through the completion of sales in July 2021, Lincoln Park purchased an aggregate of 21,120,265 shares of our common stock for a net purchase price of $10 million under the 2019 Purchase Agreement. During the same period, in connection with the purchases, we issued to Lincoln Park an aggregate of 818,420 shares of our common stock as 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. From March 2020 through the completion of sales in February 2021, Lincoln Park purchased an aggregate of 32,944,717 shares of our common stock for a net purchase price of $20 million under the 2020 Purchase Agreement. During the same period, in connection with the purchases, we issued to Lincoln Park an aggregate of 917,431 shares of our common stock as 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 had the right to sell to Lincoln Park up to an aggregate of $17.4 million in shares of our common stock over the 36-month term of the First 2021 Purchase Agreement subject to the conditions and limitations set forth in the First 2021 Purchase Agreement. 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 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 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.

Subsequent to January 1, 2022, Lincoln Park purchased an aggregate of 250,000 shares of our common stock for a net purchase price of $1.5 million under the Second 2021 Purchase Agreement. In connection with the purchases, we issued to Lincoln Park an aggregate of 2,860 shares of our common stock as additional commitment shares in noncash transactions.

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”) (“PPP Loan”) administered by the Small Business Administration (“SBA”) and established as part of the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”). The PPP Loan bore interest at 1.0% per annum and would mature in April 2022 with the first six months of interest and principal payments deferred. The amount borrowed under the PPP Loan was eligible for forgiveness if we would meet certain conditions. In May 2021, the full amount outstanding under the PPP Loan was forgiven resulting in a gain of $0.6 million.

Repayment of SVIC Promissory Note

On November 18, 2015, we entered into a Senior Secured Convertible Promissory Note and Warrant Purchase Agreement, with SVIC No. 28 Technology Business Investment L.L.P., a Korean limited liability partnership ("SVIC") and affiliate of Samsung Venture Investment Co., pursuant to which we sold SVIC a Senior Secured Convertible Promissory Note ("SVIC Note") and a Stock Purchase Warrant ("SVIC Warrant"). The SVIC Note had an original principal amount of $15.0 million, accrued interest at a rate of 2% per year, was due and payable in full on December 31, 2021. 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 adjustment as set forth therein, was only exercisable in the event we exercised our right to redeem the SVIC Note prior to December 31, 2025. 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 January 1, 2022.

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 the Sarbanes-Oxley Act of 2002, as amended, our independent registered public accounting firm concluded that our internal control over financial reporting was ineffective as of January 1, 2022 due to two material weaknesses. The identified material weaknesses, at January 1, 2022, relate to (i) the lack of an independent board and audit committee and (ii) ineffective design and maintenance of controls over user access and program change management related to certain information technology (IT) systems that support our financial reporting processes.

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 remediate 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 auditors on a quarterly and annual basis. In an effort to remediate the identified material weakness related to our ineffective design and maintenance of controls over user access and program change management related to certain IT systems, we hired a full-time Senior Director of IT in the fourth quarter of 2021 with a primary mandate to focus on SOX compliance and mitigation plans for 2022. If our remedial 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 weaknesses 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 2021 and 2020 were as follows (dollars in thousands):

	2021	2020	Change
Net product sales	$ 102,355	$ 47,234	117%
License fee	40,000	—	—
Net sales	$ 142,355	$ 47,234	201%
Gross margin - product sales	$ 8,897	$ 6,731	32%
Gross margin percentage - product sales	9%	14%	
Gross margin	$ 48,897	$ 6,731	626%
Gross margin percentage	34%	14%	

Net Sales

Net sales include (i) resales of certain component products, including DIMMs, SSDs and dynamic random access memory integrated circuits (“DRAM ICs” or “DRAM”) products, and sales of our high-performance memory subsystems and (ii) an upfront non-refundable license fee of $40 million recognized for licensing of our patents pursuant to the License Agreement with SK hynix entered into in April 2021.

Net product sales increased by $55.1 million during 2021 compared to 2020 primarily as a result of a $52.0 million increase in the resale of DIMMs and components and an increase of $3.0 million of Netlist SSD and Netlist branded products.

Gross Margin

Product gross margin increased in 2021 compared to 2020 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.

Operating Expenses

Operating expenses for 2021 and 2020 were as follows (dollars in thousands):

	2021	2020	Change	Change
Research and development	$ 7,241	$ 2,953	$ 4,288	145%
Percentage of net product sales	7%	6%		
Intellectual property legal fees	$ 19,494	$ 2,368	17,126	723%
Percentage of net product sales	19%	5%		
Selling, general and administrative	$ 10,779	$ 8,247	2,532	31%
Percentage of net product sales	11%	17%		

Research and Development

Research and development expenses increased in 2021 compared to 2020 primarily as a result of an increase in engineering employee headcount and overhead to support the development of the next generation HybriDIMM.

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 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 2021 compared to 2020 due primarily to higher legal expenses incurred to seek breach of contract of the Joint Development and License Agreement entered into between Netlist and Samsung on November 12, 2015 and to defend and enforce our patent portfolio.

Selling, General and Administrative

Selling, general and administrative expenses increased in 2021 compared to 2020 due primarily to an increase in employee headcount and overhead and outside services. As a result of the significant increase in the value of our non-affiliate public float in recent periods, we transitioned to becoming a “large accelerated filer” as of January 1, 2022 which means that we need to file our quarterly and annual reports on an accelerated basis and that we need to be prepared to have our independent registered public accounting firm audit and attest to our internal control over financial reporting. Complying with these new requirements require us to invest a material amount in enhancing our financial reporting infrastructure that will cause our selling, general and administrative expenses to increase in future periods.

Other Income (Expense), Net

Other expense, net for 2021 and 2020 was as follows (dollars in thousands):

	2021	2020	Change
Interest expense, net	$ (568)	$ (531)	
Other income, net	643	101	
Total	$ 75	$ (430)	117%

Interest expense, net, consists primarily of interest expense on the $15 million secured convertible note issued to Samsung Venture Investment Co. (“SVIC”) (“SVIC Note”) in November 2015 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. In December 2021, we repaid the full amounts outstanding under the SVIC Note. During 2021, other income (expense), net includes the gain on forgiveness of the PPP Loan of $0.6 million recognized during the second quarter of 2021.

Provision for Income Taxes

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 license fee 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%. For 2020, our effective tax rate was 0% with the statutory tax rate of 21% due primarily to our net loss and valuation allowances.

Liquidity and Capital Resources

We believe our existing balance of cash and cash equivalents, which totaled $58.5 million as of January 1, 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.

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):

	2021	2020
Net cash provided by (used in):		
Operating activities	$ 6,007	$ (8,134)
Investing activities	(520)	(43)
Financing activities	36,466	12,987
Net change in cash, cash equivalents and restricted cash	$ 41,953	$ 4,810

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 2019, 2020 and First and Second 2021 Lincoln Park Purchase Agreements, $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.

Net cash used in operating activities for 2020 was primarily a result of a net loss of $7.3 million, adjusted for non-cash charges of $2.1 million, offset by net cash outflows from changes in working capital balances of $2.9 million driven predominantly by a decrease in accounts payable, partially offset by an increase in accounts receivable. Net cash provided by financing activities for 2020 primarily consisted of $12.2 million in net proceeds from issuance of common stock under the 2020 Lincoln Park Purchase Agreement, $0.6 million in proceeds from the issuance of the PPP Loan and $0.7 million in net borrowings under the SVB Credit Agreement, partially offset by $0.4 million in payments of note payable to finance insurance policies.

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 2021 Purchase Agreement. As of January 1, 2022, $64.1 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 $5.0 million. The borrowing base is limited to 85% of eligible accounts receivable, subject to certain adjustments as set forth in the SVB Credit Agreement. On April 9, 2021, we entered into an amendment to the SVB Credit Agreement to accrue interest on advances at a per annum rate equal to the greater of 2.25% above the Prime Rate or 5.50% and to extend the maturity date to December 30, 2021 In December 2021, after meeting the conditions set forth in the amendment, the amount available for borrowing was increased to $7.0 million and the maturity date was extended to April 29, 2022 upon our request.

As of January 1, 2022, the outstanding borrowings under the SVB Credit Agreement were $7.0 million. During the year ended January 1, 2022, we made net borrowings of $3.3 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. Note 1 "Summary of Significant Accounting Policies" of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K describes the significant accounting policies and methods used in the preparation of our consolidated financial statements. 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.

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 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 functional currency for all of our operations is the U.S. dollar, and our sales are transacted in the U.S. dollar. A portion of our operating expenditures and capital purchases, and certain assets and liabilities, are incurred in or exposed to Chinese yuan; however, a substantial majority of our operations and investment activities are transacted in the U.S., and therefore our foreign currency risk is not material at this date. Therefore, we do not currently enter into hedging arrangements to minimize the impact of foreign currency fluctuations on our operations.

We import component products for resale from foreign countries. As a result, any significant or sudden change in the financial, banking or currency policies and practices of these countries could have a material adverse impact on our financial position, results of operations and cash flows.

Item 8. Financial Statements and Supplementary Data

Netlist, Inc. and Subsidiaries

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

	January 1, 2022	January 2, 2021
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 47,679	$ 13,326
Restricted cash	10,800	3,200
Accounts receivable, net of allowances of $283 (2021) and $157 (2020)	12,727	4,680
Inventories	15,670	3,198
Prepaid expenses and other current assets	1,126	514
Total current assets	88,002	24,918
Property and equipment, net	989	182
Operating lease right-of-use assets	1,891	114
Other assets	294	58
Total assets	$ 91,176	$ 25,272
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current Liabilities:		
Accounts payable	$ 25,887	$ 5,327
Revolving line of credit	7,000	3,678
Accrued payroll and related liabilities	1,308	806
Accrued expenses and other current liabilities	632	777
Long-term debt due within one year	562	17,056
Total current liabilities	35,389	27,644
Long-term debt	—	146
Operating lease liabilities	1,593	—
Other liabilities	152	102
Total liabilities	37,134	27,892
Commitments and contingencies		
Stockholders' equity (deficit):		
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; 230,113 (2021) and 195,978 (2020) shares issued and outstanding	231	195
Additional paid-in capital	243,866	192,071
Accumulated deficit	(190,055)	(194,886)
Total stockholders' equity (deficit)	54,042	(2,620)
Total liabilities and stockholders' equity (deficit)	$ 91,176	$ 25,272

See accompanying Notes to Consolidated Financial Statements.

Netlist, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Year Ended		
	January 1, 2022	**January 2, 2021**	**December 28, 2019**
Net product sales	$ 102,355	$ 47,234	$ 26,103
License fee	40,000	—	—
Net sales	142,355	47,234	26,103
Cost of sales	93,458	40,503	23,533
Gross margin	48,897	6,731	2,570
Operating expenses:			
Research and development	7,241	2,953	2,383
Intellectual property legal fees	19,494	2,368	4,131
Selling, general and administrative	10,779	8,247	7,546
Total operating expenses	37,514	13,568	14,060
Operating income (loss)	11,383	(6,837)	(11,490)
Other income (expense), net:			
Interest expense, net	(568)	(531)	(945)
Other income (expense), net	643	101	(4)
Total other income (expense), net	75	(430)	(949)
Income (loss) before provision for income taxes	11,458	(7,267)	(12,439)
Provision for income taxes	6,627	1	13
Net income (loss)	$ 4,831	$ (7,268)	$ (12,452)
Earnings (loss) per share:			
Basic	$ 0.02	$ (0.04)	$ (0.08)
Diluted	$ 0.02	$ (0.04)	$ (0.08)
Weighted-average common shares outstanding:			
Basic	218,171	183,594	148,132
Diluted	225,589	183,594	148,132

See accompanying Notes to Consolidated Financial Statements.

Netlist, Inc. and Subsidiaries

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

	Common Stock		Additional Paid-in	Accumulated	Total Stockholders'
	Shares	**Amount**	**Capital**	**Deficit**	**Equity (Deficit)**
Balance, December 28, 2019	139,283	$ 139	$ 169,355	$ (175,166)	$ (5,672)
Net loss	—	—	—	(12,452)	(12,452)
Issuance of common stock, net, and commitment shares	20,387	20	6,332	—	6,352
Common stock issued on conversion of Iliad Note	9,167	9	2,439	—	2,448
Exercise of stock options	175	—	49	—	49
Stock-based compensation	—	—	989	—	989
Restricted stock units vested and distributed	749	1	(1)	—	—
Tax withholdings related to net share settlements of equity awards	(222)	—	(77)	—	(77)
Balance, December 28, 2019	169,539	169	179,086	(187,618)	(8,363)
Net loss	—	—	—	(7,268)	(7,268)
Issuance of common stock, net, and commitment shares	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, and commitment shares	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

See accompanying Notes to Consolidated Financial Statements.

Netlist, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended		
	January 1, 2022	**January 2, 2021**	**December 28, 2019**
Cash flows from operating activities:			
Net income (loss)	$ 4,831	$ (7,268)	(12,452)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	127	147	172
Interest accrued on convertible promissory notes	300	309	415
Amortization of debt discounts	228	212	480
Non-cash lease expense	375	489	534
Gain on extinguishment of debt	(643)	—	—
Stock-based compensation	1,580	763	989
Issuance of warrant in lieu of payment	—	145	—
Changes in operating assets and liabilities:			
Accounts receivable	(8,047)	(1,008)	(755)
Inventories	(12,472)	298	(550)
Prepaid expenses and other assets	(286)	1,693	480
Accounts payable	20,166	(3,807)	(363)
Accrued payroll and related liabilities	502	66	136
Accrued expenses and other liabilities	(654)	(173)	(571)
Net cash provided by (used in) operating activities	6,007	(8,134)	(11,485)
Cash flows from investing activities:			
Acquisition of property and equipment	(520)	(43)	(83)
Net cash used in investing activities	(520)	(43)	(83)
Cash flows from financing activities:			
Net borrowings under line of credit	3,322	688	697
Proceeds from issuance of long-term debt	—	637	—
Principal repayments under finance lease	(20)	(18)	(13)
Repayments of long-term debt	(17,087)	(423)	(376)
Proceeds from issuance of common stock, net	39,569	12,174	6,352
Proceeds from exercise of stock options and warrants	11,818	32	49
Payments for taxes related to net share settlement of equity awards	(1,136)	(103)	(77)
Net cash provided by financing activities	36,466	12,987	6,632
Net change in cash, cash equivalents and restricted cash	41,953	4,810	(4,936)
Cash, cash equivalents and restricted cash at beginning of period	16,526	11,716	16,652
Cash, cash equivalents and restricted cash at end of period	$ 58,479	$ 16,526	$ 11,716
Reconciliation of cash, cash equivalents and restricted cash at end of period:			
Cash and cash equivalents	$ 47,679	$ 13,326	8,966
Restricted cash	10,800	3,200	2,750
Cash, cash equivalents and restricted cash at end of period	$ 58,479	$ 16,526	11,716

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 "Netlist," "we," "us," or "our") provides high-performance solid state drives and modular memory solutions to enterprise customers in diverse industries. Our NVMe SSDs 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 January 1, 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 2021 ended on January 1, 2022, fiscal year 2020 ended on January 2, 2021, and fiscal year 2019 ended on December 28, 2019. 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 2021, we adopted the Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2019-12, *Income Taxes (Topic 740) Simplifying the Accounting for Income Taxes*, which eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. This ASU also clarifies and simplifies other aspects of the accounting for income taxes. The adoption of this ASU did not have an impact on our consolidated financial statements.

Recently Issued Accounting Standards

In August 2020, the FASB issued 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. This ASU will be effective for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years and early adoption is permitted. We do not expect a material impact on our consolidated financial statements upon the adoption of this ASU.

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 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 60 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 2, 2021, we recorded a contract liability of $0.3 million related to volume rebates to a customer, which is included in accrued expenses and other current liabilities in the consolidated balance sheets. As of January 1, 2022, there was no such liability.

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, an unsecured promissory note and a convertible promissory note. 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, the unsecured promissory note and convertible promissory note 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 January 1, 2022 and January 2, 2021 and the unsecured promissory note as of January 2, 2021 approximate fair value because the interest rate yield is near current market rates for comparable debt instruments. The fair value of the convertible promissory note is estimated by using a discounted cash flow analysis using borrowing rates available to us for debt instruments with similar terms and maturities and is classified in Level 2 of the valuation hierarchy. The carrying value and estimated fair value of the convertible promissory note as of January 2, 2021 were $14.8 million and $12.1 million, respectively. As of January 1, 2022, there was no outstanding balance of the convertible promissory note.

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 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 January 1, 2022 and January 2, 2021.

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 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 2021, 2020 or 2019.

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):

	2021	2020
Raw materials	$ 4,208	$ 578
Work in process	154	2
Finished goods	11,308	2,618
	$ 15,670	$ 3,198

Property and Equipment, net

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

	2021	2020
Machinery and equipment	$ 7,814	$ 7,811
Computer equipment and software	2,145	2,523
Leasehold improvements	639	737
Furniture and fixtures	474	55
Construction in progress	273	—
	11,345	11,126
Less: accumulated depreciation and amortization	(10,356)	(10,944)
	$ 989	$ 182

Substantially all our property and equipment, net, are located within the United States as of January 1, 2022 and January 2, 2021.

Disaggregation of Net Sales

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

	2021	2020	2019
Resales of third-party products	$ 81,309	$ 31,031	$ 19,982
Sale of our modular memory subsystems	21,046	16,203	6,121
License fee	40,000	—	—
Total net sales	$ 142,355	$ 47,234	$ 26,103

During the second quarter of 2021, we received an upfront non-refundable license fee of $40 million as consideration to enter into a license 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 the license 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.

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

	2021	2020	2019
United States	$ 53,519	$ 35,826	$ 19,919
China(1)	39,480	6,071	2,167
Other countries	9,356	5,337	4,017
Total net product sales	$ 102,355	$ 47,234	$ 26,103

(1) China includes Hong Kong and Taiwan.

The United States and China accounted for more than 10% of our net product sales for 2021 and 2020. For 2019, the United States was the only country that accounted for more than 10% of our net product sales.

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):

	2021	2020	2019
Numerator:			
Net income (loss)	$ 4,831	$ (7,268)	$ (12,452)
Denominator:			
Weighted-average basic shares outstanding	218,171	183,594	148,132
Effect of dilutive securities	7,418	—	—
Weighted-average diluted shares	225,589	183,594	148,132
Basic earnings (loss) per share	$ 0.02	$ (0.04)	$ (0.08)
Diluted earnings (loss) per share	$ 0.02	$ (0.04)	$ (0.08)

We computed net loss per share using the two-class method required for unvested participating securities through the three months ended March 28, 2020. 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 2020 and 2019 calculations above as their effect would be anti-dilutive (in thousands):

	2021	2020	2019
Weighted average common share equivalents	7,418	13,644	13,357

Cash Flow Information

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

	2021	2020	2019
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Interest	$ 56	$ 70	$ 62
Income taxes	$ 6,601	$ —	$ —
Supplemental disclosure of non-cash investing and financing activities:			
Acquisition of property and equipment included in liabilities	$ 414	$ —	$ —
Gain on extinguishment of debt	$ 643	$ —	$ —
Debt financing of insurance	$ 562	$ 262	$ 412
Common stock issued on conversion of convertible note payable and accrued interest	$ —	$ —	$ 2,448

Note 3—Credit Agreement

On October 31, 2009, Netlist and Silicon Valley Bank ("SVB") entered into a credit agreement (as the same 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 $5.0 million. The borrowing base is limited to 85% of the eligible accounts receivable, subject to certain adjustments. On April 9, 2021, we entered into an amendment to the SVB Credit Agreement to accrue interest on borrowings at a per annum rate equal to the greater of 2.25% above the Wall Street Journal prime rate ("Prime Rate") or 5.50% from the Prime Rate plus 2.75% and to extend the maturity date to December 30, 2021. In December 2021, after meeting the conditions set forth in the amendment, the amount available for borrowing was increased to $7.0 million and the maturity date was extended to April 29, 2022 upon our request.

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 January 1, 2022 and January 2, 2021, (i) outstanding letters of credit were $10.8 million and $3.2 million, respectively, and (ii) outstanding borrowings were $7.0 million and $3.7 million, respectively. As of January 2, 2021, the availability under the revolving line of credit was $0.1 million. There was no availability under the revolving line of credit as of January 1, 2022.

On April 12, 2017, Netlist and SVB entered into an amendment to the SVB Credit Agreement to, among other things, obtain SVB's consent in connection with our rights agreement with Computershare Trust Company, N.A., as rights agent (see Note 8), and make certain administrative changes in connection with our funding arrangement with TR Global Funding V, LLC, an affiliate of TRGP Capital Management, LLC ("TRGP") (see Note 7).

As of January 1, 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 January 1, 2022, we were in compliance with our covenants under the SVB Credit Agreement.

Note 4—Debt

Our debt consisted of the following (in thousands):

	2021	2020
Secured convertible note, due December 2021, including accrued interest of $1,538 (2020)	$ —	$ 16,538
Paycheck protection program loan, due April 2022, including accrued interest of $4 (2020)	—	641
Note payable	562	251
Unamortized debt discounts and issuance costs	—	(228)
Total debt	562	17,202
Less: amounts due within one year	(562)	(17,056)
Long-term debt	$ —	$ 146

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 ("SVIC Note") and stock purchase warrant ("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 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, 2020 and 2019, we amortized $0.2 million, $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%. As of January 2, 2021, the outstanding principal and accrued interest on the SVIC Note was $16.5 million and the outstanding SVIC Note balance, net of unamortized debt discounts and issuance costs, was $16.3 million.

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. In May 2017, SVIC, SVB and TRGP entered into additional Intercreditor Agreements to modify certain of these lien priorities. 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 $0.3 per share on December 28, 2021. As a result, neither the SVIC Note nor the SVIC Warrant remained outstanding as of 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”) (“PPP Loan”) administered by the Small Business Administration (“SBA”) and established as part of the Coronavirus Aid, Relief and Economic Security 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.

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.

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

	2021	2020	2019
Lease cost:			
Operating lease cost	$ 422	$ 565	$ 623
Finance lease cost			
Amortization of right-of-use assets	$ 21	$ 19	$ 14
Interest on lease liabilities	3	4	3
Total finance lease cost	$ 24	$ 23	$ 17
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	$ 403	$ 561	$ 592
Operating cash flows from finance leases	3	4	3
Financing cash flows from finance leases	20	18	13
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	$ 2,152	$ (365)	$ —
Finance leases	20	—	96

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

	2021	2020
Operating Leases		
Operating lease right-of-use assets	$ 1,891	$ 114
Accrued expenses and other current liabilities	$ 318	$ 118
Operating lease liabilities	1,593	—
Total operating lease liabilities	$ 1,911	$ 118
Finance Leases		
Property and equipment, at cost	$ 116	$ 96
Accumulated depreciation	(54)	(34)
Property and equipment, net	$ 62	$ 62
Accrued expenses and other current liabilities	$ 24	$ 19
Other liabilities	41	46
Total finance lease liabilities	$ 65	$ 65

The following table includes supplemental information:

	2021	2020
Weighted Average Remaining Lease Term (in years)		
Operating lease	4.8	0.4
Finance lease	2.9	3.3
Weighted Average Discount Rate		
Operating lease	5.5%	6.1%
Finance lease	5.2%	5.1%

Maturities of lease liabilities as of January 1, 2022 were as follows (in thousands):

Fiscal Year	Operating Leases	Finance Leases
2022	$ 413	$ 26
2023	330	26
2024	474	10
2025	488	5
2026	501	3
Total lease payments	2,206	70
Less: imputed interest	(295)	(5)
Total	$ 1,911	$ 65

As of January 1, 2022, we had $0.5 million of future payments under an additional lease for a corporate facility that had not yet commenced. The lease will commence during 2022, with a lease term of five years.

Note 6—Income Taxes

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

	2021	2020	2019
United States	$ 12,016	$ (6,741)	$ (11,916)
Foreign	(558)	(526)	(523)
	$ 11,458	$ (7,267)	$ (12,439)

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

	2021	2020	2019
Current:			
Federal	$ —	$ —	$ —
State	27	1	13
Foreign	6,600	—	—
Total current	6,627	1	13
Deferred:			
Federal	(1,897)	(1,402)	(2,256)
State	(1,913)	(415)	(769)
Foreign	15	67	166
Change in valuation allowance	3,795	1,750	2,859
Total deferred	—	—	—
Provision for income taxes	$ 6,627	$ 1	$ 13

Income taxes differ from the amounts computed by applying the statutory federal income tax rate of 21% for 2021, 2020 and 2019. The reconciliation of this difference is as follows (in thousands):

	2021	2020	2019
Statutory federal income tax rate	21%	21%	21%
Foreign withholding taxes	46%	—%	—%
Excess tax benefits from equity awards	(27)%	—%	—%
Change in valuation allowance	15%	(19)%	(18)%
Other	3%	(2)%	(3)%
Effective tax rate	58%	—%	—%

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):

	2021	2020
Deferred tax assets:		
Operating loss carryforward	$ 36,563	$ 33,564
Tax credit carryforwards	4,324	3,779
Reserves and allowances	748	707
Foreign operating loss carryforward	677	692
Stock-based compensation	551	236
Other	958	573
Total deferred tax assets	43,821	39,551
Deferred tax liabilities:		
Operating lease right-of-use assets	(450)	(121)
Prepaid expenses	(232)	(31)
Basis difference in warrant and note	—	(57)
Total deferred tax liabilities	(682)	(209)
Net deferred tax assets	43,139	39,342
Valuation allowance	(43,139)	(39,342)
	$ —	$ —

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 January 1, 2022 and January 2, 2021, a valuation allowance of $43.1 million and $39.3 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 $3.8 million, $1.7 million and $2.9 million during 2021, 2020, and 2019, respectively. These increases in these years primarily relate to the increases in the net operating loss (“NOL”) carryforward and tax credit carryforwards.

As of January 1, 2022, we had (i) $142.2 million of federal NOL carryforwards, of which $104.2 million will expire from 2029 through 2037, and $38.0 million of which will be carried forward indefinitely, (ii) $75.9 million of state NOL carryforwards, which begin to expire in 2029, (iii) federal tax credit carryforwards of $2.3 million, which begin to expire in 2026, and (iv) state tax credit carryforwards of $2.1 million, which will be carried forward indefinitely. In addition, as of January 1, 2022, we had $2.7 million of foreign NOL carryforwards from various jurisdictions, which begin to expire in 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 2017, although certain carryforward attributes that were generated prior to 2017 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 January 1, 2022 and January 2, 2021, the interest or penalties accrued related to unrecognized tax benefits were insignificant, and during 2021, 2020 and 2019, the interest and penalties related to uncertain tax position recorded were insignificant. As of January 1, 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.

TRGP Agreement

Netlist and TRGP are parties to both an initial and an amended investment agreement (the “TRGP Agreement”), which generally provided that TRGP directly fund the costs incurred by or on our behalf in connection with our first action in the U.S. International Trade Commission (“ITC”) and the U.S. district court proceedings, but excluding all other proceedings (all such funded costs, collectively, the “Funded Costs”). In exchange for such funding, we agreed that, if we recovered any proceeds in connection with the funded SK hynix proceedings relating to certain patents, it would pay to TRGP the amount of the Funded Costs paid by TRGP plus an escalating premium based on when any such proceeds are recovered. On January 23, 2020, Netlist and TRGP entered into an amendment to the TRGP Agreement to alter the recovery sharing formula related to claims against SK hynix for alleged infringement of our patents (the “First Amendment”). We believe that the SK hynix License Agreement entered into on April 5, 2021 falls outside the scope of the TRGP Agreement and the First Amendment to the TRGP Agreement and does not anticipate that we will be obligated to make payments to TRGP under the TRGP Agreement or the First Amendment.

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. We are also subject to litigation based on claims that we have infringed on the intellectual property rights of others.

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 infringement claims or patent 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 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 Litigation

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"). The NDCA case was stayed, pending challenges to the '912 patent before the United States Patent and Trademark Office. Eventually, the United States Court of Appeals for the Federal Circuit confirmed the '912 patent's validity on June 15, 2020, and the NDCA case stay was lifted which relates generally to technologies to implement rank multiplication. As of the reporting date, the NDCA case was re-assigned to Chief Judge Seeborg of NDCA, and a set of parties' cross-motions is set for hearing on March 3, 2022.

Inphi Litigation

On September 22, 2009, Netlist filed a patent infringement lawsuit against Inphi Corporation ("Inphi") in the U.S. District Court for the Central District of California (the "Central District Court"). The complaint, as amended, alleges that Inphi is contributorily infringing and actively inducing the infringement of U.S. patends owned by us, including the '912 patent, U.S. Patent No. 7,532,537 (the "'537 patent"), and U.S. Patent No. 7,636,274 (the "'274 patent"), which was stayed pending the outcome of *Inter Partes* Reexamination proceedings of the patents. After the United States Court of Appeals for the Federal Circuit upheld the validity of the claims in the '912 patent, Netlist eventually dismissed its lawsuit against Inphi without prejudice on August 18, 2021.

Micron Litigation

On April 28, 2021, Netlist filed a complaint for patent infringement against Micron Technology, Inc. ("Micron") in the United States District Court for the Western District of Texas, Waco Division (Case No. 6:21-cv-00431 & Case No. 6:21-cv-00430) These proceedings are based on the alleged infringement by Micron's load reduced dual in line memory modules ("LRDIMM") and Micron's non-volatile dual in line memory modules ("NVDIMM") enterprise memory modules under four U.S. patents – US Pat. No. 10,489,314; US Pat. No. 9,824,035; US Pat. No. 10,268,608; & US Pat. No. 8,301,833. As of the reporting date, Micron filed its opening claim construction brief and the parties stipulated to transfer the matter to the Austin division. The case has been assigned to Hon. Judge Lee Yeakel, with the parties agreeing on a schedule for remaining claim construction briefing, and the matter is set for a case management conference March 3, 2022.

In parallel, Micron filed requests to bring Inter Partes Review ("IPR") proceedings against three of the four asserted patents: U.S. Patents 8,301,833, 9,854,035, and 10,268,608. As of the reporting date, the PTAB has not made a decision to institute any of these IPR requests.

Samsung Litigations

On May 28, 2020, Netlist filed a complaint against Samsung in the United States District Court for the Central District of California for Samsung's breach of the parties' 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 setting Samsung's deadline to file an opening appeal brief as June 6, 2022.

On October 15, 2021, Samsung filed a declaratory judgement action against Netlist in the United States 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. 7,619,912, 9,858,218, 10,217,523, 10,474,595, 10,860,506, 10,949,339, and 11,016,918. As of the reporting date, Samsung seeks leave to add U.S. Pat. 11,232,054 (issued Jan. 25, 2022) to the list. Netlist believes Samsung's claims levied in the DDE action meritless, and the relief Samsung requests unjustified. As of the reporting date, Netlist filed a motion seeking dismissal of Samsung's DDE complaint, and an opposition contesting the inclusion of U.S. Pat. 11,232,054 as part of a second amended complaint filing.

On November 19, 2021, Samsung filed IPR proceedings contesting the invalidity of U.S. Patents 9,858,218, 10,474,595, and 10,217,523. 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 not yet made decision to institute any of these IPR requests. On February 17, 2022, Samsung filed a separate IPR request contesting the invalidity of only claim 16 within Netlist's U.S. Patent 7,619,912. As of the reporting date, the PTAB has not yet issued a filing date for their latest challenge.

On December 20, 2021, Netlist filed for a complaint for patent infringement against Samsung in the United States Court for the Eastern District of Texas (Case No. 2:21-cv-463) under US Pat. No. 10,860,506; US Pat. No. 10,949,339; & US Pat. No. 11,016,918. As of the reporting date, no schedule has been set for this action.

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 January 1, 2022 or January 2, 2021.

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.

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. On August 7, 2020, our stockholders approved an amendment to the Restated Certificate of Incorporation to increase the number of shares of the common stock authorized for issuance from 300,000,000 to 450,000,000.

2019 Lincoln Park Purchase Agreement

On June 24, 2019, we entered into the 2019 Purchase Agreement with 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 2019, Lincoln Park purchased an aggregate of 19,044,762 shares of our common stock for a net purchase price of $6.4 million under the 2019 Purchase Agreement. In connection with the purchases, during 2019, we issued to Lincoln Park an aggregate of 523,633 shares of our common stock as additional commitment shares in noncash transactions. 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 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 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. Subsequent to January 1, 2022, Lincoln Park purchased an aggregate of 200,000 shares of our common stock for a net purchase price of $1.3 million under the Second 2021 Purchase Agreement. In connection with the purchases, we issued to Lincoln Park an aggregate of 2,410 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	—	—

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

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 January 1, 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 January 1, 2022, we had 1,726,990 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:

	2021	2020	2019
Expected term (in years)	6.06	6.26	6.06
Expected volatility	121 %	117 %	108 %
Risk-free interest rate	0.64 %	0.46 %	1.92 %
Expected dividends	$ —	$ —	$ —
Weighted-average grant date fair value per share	$ 0.87	$ 0.44	$ 0.29

The following table summarizes the activity related to stock options during 2021:

	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 2, 2021	7,519	$ 1.12	5.21	$ 430
Granted	1,995	$ 1.01		
Exercised	(2,865)	$ 1.38		
Expired or forfeited	(750)	$ 1.71		
Outstanding as of January 1, 2022	5,899	$ 0.88	6.46	$ 32,843
Exercisable as of January 1, 2022	3,082	$ 0.94	4.17	$ 16,992
Vested and expected to vest as of January 1, 2022	5,543	$ 0.88	6.29	$ 30,871

The total intrinsic value of stock options exercised during 2021 was $10.8 million. There was no significant intrinsic value of options exercised during 2020 and 2019.

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 2021. The following table summarizes the activity related to RSUs during 2021:

	Number of Shares (in thousands)	Weighted-Average Grant-Date Fair Value per Share
Balance nonvested as of January 2, 2021	3,037	$ 0.53
Granted	418	$ 5.14
Vested	(1,140)	$ 0.59
Forfeited	(87)	$ 0.51
Balance nonvested as of January 1, 2022	2,228	$ 1.36

Stock-Based Compensation

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

	2021	2020	2019
Cost of sales	$ 12	$ 10	$ 26
Research and development	570	196	213
Selling, general and administrative	998	557	750
Total	$ 1,580	$ 763	$ 989

As of January 1, 2022, we had approximately $4.2 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 2021, our matching contributions totaled $0.1 million. During 2020 and 2019, 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:

	2021	2020	2019
Customer A	16%	*	*
Customer B	*	17%	*

* Less than 10% of total net product sales

As of January 1, 2022, four customers represented approximately 26%, 16%, 13% and 13%, respectively, of aggregate gross accounts receivable. As of January 2, 2021, one customer represented approximately 50% 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 2021, 2020 and 2019, resales of these products represented approximately 79%, 66% and 77%, respectively, of our net product sales.

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:

	2021	2020	2019
Supplier A	40%	28%	37%
Supplier B	30%	*	*
Supplier C	10%	14%	*
Supplier D	*	11%	17%

* 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 January 1, 2022 and January 2, 2021, the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for each of the three years in the period ended January 1, 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 January 1, 2022 and January 2, 2021, and the results of its operations and its cash flows for each of the three years in the period ended January 1, 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 January 1, 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 March 1, 2022 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
March 1, 2022

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 January 1, 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 weaknesses, 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 January 1, 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 January 1, 2022 and January 2, 2021, the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for each of the three years in the period ended January 1, 2022, and the related notes and the schedule listed in the Index at Item 15 (collectively, "the consolidated financial statements"), and our report dated March 1, 2022 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 weaknesses have been identified an 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. Additionally, the Company (i) did not have an effective risk assessment process as it did not sufficiently identify and assess risks, including financial reporting risks, that may limit the achievement of Company objectives, and (ii) did not have effective monitoring as it did not implement effective monitoring controls that were responsive to changes in the business or the timely remediation of identified control deficiencies.

- The Company has ineffective design and maintenance of controls over user access and program change management related to certain information technology (IT) systems that support the Company's financial reporting processes. User and privileged access were not appropriately provisioned, and program changes were not adequately reviewed prior to being placed in production. As a result, process level automated controls and manual controls that are dependent on the completeness and accuracy of information derived from the affected IT systems were also ineffective because they could have been adversely impacted. This material weakness was due to the Company having an insufficient number of IT personnel to identify and assess risks associated with changes in the IT environment resulting in inappropriate assignment of user and privileged access as well as insufficient documentation for control operations.

The material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the fiscal year 2021 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
March 1, 2022

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 January 1, 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. Based on this evaluation, due to (i) the lack of an independent board and audit committee and ineffective risk assessment and monitoring controls and (ii) ineffective design and maintenance of controls over user access and program change management related to certain information technology (IT) systems that support our financial reporting processes, our principal executive officer and our principal financial officer concluded that our internal control over financial reporting was not effective as of January 1, 2022.

Notwithstanding the material weaknesses 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 accounting principles generally accepted in the United States of America ("U.S. GAAP").

The effectiveness of our internal control over financial reporting as of January 1, 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 remediate the identified material weaknesses 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. In an effort to remediate the identified material weakness related to our ineffective design and maintenance of controls over user access and program change management related to certain IT systems, we have hired a full-time Senior Director of IT in the fourth quarter of 2021 with a primary mandate to focus on SOX compliance and mitigation plans for 2022. Our Chief Executive Officer 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 Chief Executive Officer, 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, 2022; 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	61	President, Chief Executive Officer and Sole Director
Gail Sasaki	65	Executive Vice President, Chief Financial Officer and Secretary

Chun K. Hong is one of the founders of Netlist and has been our President and Chief Executive Officer and a director since our inception in June 2000. Mr. Hong assumed the title of Chairman of the Board of Directors in January 2004. 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 has been our Executive Vice President and Chief Financial Officer since July 2021 and our Secretary since August 2007. From January 2008 to July 2021, Ms. Sasaki served as our Vice President and Chief Financial Officer, and from 2006 to January 2008, Ms. Sasaki served as our Vice President of Finance. Prior to her tenure at Netlist, Ms. Sasaki served in various senior financial roles, including Chief Financial Officer of eMaiMai, Inc., a commercial technology company based in Hong Kong and mainland China; Chief Financial Officer, 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 Chief Financial Officer 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 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 2021 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 2021 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 January 1, 2022 (our "named executive officers"). We had no other executive officers serving at the end of our fiscal year ended January 1, 2022. Our named executive officers for fiscal year 2021 were:

Name	Age	Position(s)
Chun K. Hong	61	President, Chief Executive Officer and Sole Director
Gail Sasaki	65	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, Chief Executive Officer 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 2021.

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. Most recently the Company engaged Mercer to provide guidelines for executive compensation programs for 2022.

Role of Executive Officers in Compensation Decisions

Our sole Director has overall responsibility for the compensation of our Chief Executive Officer and Chief Financial Officer. 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 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 2019, 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 2019 annual meeting, our stockholders overwhelmingly approved the compensation of our named executive officers, with over 78% 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 2019 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 2021 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 2021, our full-year accomplishments under our executive leadership included the following:

- Total revenues of $142.4 million, representing an increase of $95.1 million compared to the prior year;
- Net income of $4.8 million and gross margin of 34%, representing favorable changes of $12.1 million and 20.1%, respectively, compared to the prior year;
- Year-end cash and cash equivalent balance of $47.7 million, representing an increase of $34.4 million from the end of prior year; and
- Favorable settlement of SK hynix litigation and signing of SK hynix $40 million licensing and $600 million supply agreement

Base Salary

The following table sets forth information regarding the annualized base salary rates at the end of 2021 for our named executive officers:

Name	Fiscal Year 2021 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 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 formula-based and weighted towards our financial growth and closely aligning the achievement of bonuses with our financial performance.

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 – Chief Executive Officer

In September 2006, we entered into an employment agreement with our President and Chief Executive Officer, Mr. Hong. This agreement provides for an initial base salary of $323,000 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 Chief Executive Officer 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 2021, 2020 and 2019, Ms. Sasaki received an annualized base salary of $275,000, $285,577 and $200,000. 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.

Name and Principal Position	Year	Base Salary($)	Bonus($)	Stock Awards($) (1)	Option Awards($) (2)	All Other Compensation($) (3)	Total($)
Chun K. Hong(4)	2021	450,000	665,000	—	627,060	58,215	1,800,275
President, Chief Executive Officer and Sole Director	2020	467,308	180,000	94,290	—	62,092	803,690
	2019	323,000	—	408,004	—	51,486	782,490
Gail Sasaki	2021	275,000	205,000	72,400	—	22,007	574,407
Executive Vice President, Chief Financial Officer and Secretary	2020	285,577	103,125	23,573	—	22,254	434,529
	2019	200,000	—	223,992	—	—	423,992

(1) Represents the grant date fair value of the restricted stock units (“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 2021 are described below under “Outstanding Equity Awards at Fiscal Year End.

(3) 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.
For 2019, the amount consists of $10,936 for automobile rental payments, $8,694 for other vehicle-related costs, $22,052 for a country club membership, $4,532 for a health club membership, and $5,272 for income tax and estate planning costs incurred on Mr. Hong’s behalf.

(4) Mr. Hong received no additional compensation for his service as a director.

CEO Pay Ratio – 2021

The 2021 annual total compensation of our CEO was $1,800,275, the 2021 annual total compensation of our median compensated employee was $56,160, and the ratio of these amounts is 32 to 1.

We determined our median compensated employee by using base salary, bonuses, and grant date fair value of equity awards granted to employees in 2021 as our consistently applied compensation measure. We applied this measure to our employee population as of January 1, 2022, the last day of our 2021 fiscal year, and annualized base salaries for permanent full-time and part-time employees that did not work the full year. Once we determined our median compensated employee using these measures, we calculated the employee’s 2021 annual total compensation using the same methodology that is used to calculate our CEO’s annual total compensation in the table entitled “Summary Compensation Table.”

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 2021, we made matching contributions of $105,161. In 2020 and 2019, we did not make matching contributions.

Grants of Plan-Based Awards – 2021

The following table shows information regarding the incentive awards granted to the named executive officers for 2021:

Name	Award Type	Grant Date	Estimated future payouts under non-equity incentive plan awards			All other stock awards: number of shares of stock or units (#)(4)	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)	—	—	665,000	—	—	—	—	—
	Stock Options(2)	1/13/2021	—	—	—	—	1,000,000	0.72	627,060
Gail Sasaki	Cash Incentive(1)	—	—	205,000	—	—	—	—	—
	Time-Based RSUs(3)	1/13/2021	—	—	—	100,000	—	—	72,400

(1) Relates to the cash bonus granted as a result of a favorable settlement of SK hynix lawsuit during 2021.
(2) The material terms of each stock option award granted in 2021 are described below under "Outstanding Equity Awards at Fiscal Year End."
(3) The material terms of each RSU award granted in 2021 are described below under "Outstanding Equity Awards at Fiscal Year End."
(4) During the first quarter of 2022, Mr. Hong and Ms. Sasaki were granted 800,000 and 200,000 RSUs with aggregated fair values of $2,696,000 and $674,000, respectively, due to the significant increase in net sales and gross profit and net income recorded for the first time since 2006. The awards granted were within the reasonable range as provided in the 2021 third party compensation consultants' report from Mercer LLC.

Outstanding Equity Awards at Fiscal Year End

The following table shows information about the equity awards held by our named executive officers as of January 1, 2022:

Name	Grant Date	Option Awards				Stock Awards	
		Number of Securities Underlying Unexercised Options Exercisable(#)(1)	Number of Securities Underlying Unexercised Options Unexercisable(#)(1)	Option Exercise Price($)	Option Expiration Date	Number of Shares That Have Not Vested(#)(2)	Market Value of Shares That Have Not Vested($)(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	187,500	812,500	0.72	1/13/2031		
	3/7/2019	—	—	—	—	278,436	1,795,912
	3/6/2020	—	—	—	—	187,500	1,209,375
Gail Sasaki	3/18/2019	—	—	—	—	154,405	995,912
	3/6/2020	—	—	—	—	46,875	302,344
	1/13/2021	—	—	—	—	87,500	564,375

(1) Represents stock option awards granted under the Netlist, Inc. Amended and Restated 2006 Equity Incentive Plan (the "Equity 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.

2021 Option Exercised and Stock Vested

The following table show information regarding the vesting during 2021 of stock options and RSUs previously granted to the named executive offers.

	Option Awards		Stock Awards	
Name	**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	300,000	1,106,687	260,625	1,021,648
Gail Sasaki	450,000	2,099,092	134,188	513,070

(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, 2022 (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)	6,994,847	3.0%
Gail Sasaki (3)	198,452	*
All executive officers and directors as a group (2 persons) (4)	7,193,299	3.1%

* Represents beneficial ownership of less than 1%.

(1) All ownership percentages are based on 230,565,477 shares of our common stock outstanding as of the Table Date.

(2) Represents (i) 1,942,813 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) 5,052,034 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 Community Property Trust, and each disclaims beneficial ownership of such shares except to the extent of his or her pecuniary interest therein.

(3) Represents 60,844 shares of common stock from restricted stock that will vest within 60 days after the Table date and 137,608 shares of common stock outstanding.

(4) Represents (i) 2,003,657 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) 5,189,642 outstanding shares of common stock.

Securities Authorized for Issuance under Equity Compensation Plans

The following table provides information as of January 1, 2022 about compensation plans under which our equity securities are authorized for issuance:

	Equity Compensation Plan Information		
Plan Category	**Number of securities to be issued upon exercise of outstanding options, warrants and rights**	**Weighted-average exercise price of outstanding options, warrants and rights($) (1)**	**Number of securities remaining available for future equity compensation plans**
Equity compensation plans approved by security holders	8,126,728(2)	0.88	1,726,990(3)
Equity compensation plans not approved by security holders	450,000(4)	0.77	—
Total	8,576,728	0.88	1,726,990

(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: 5,898,926 shares subject to outstanding stock options and 2,227,802 shares subject to outstanding RSUs.

(3) Subject to certain adjustments, as of January 1, 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 450,000 stock option awards outstanding as of January 1, 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 2021, 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, Chief Executive Officer and Sole Director. 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 Chief Executive Officer, 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 2021 and 2020:

	2021($)	2020($)
Audit Fees (1)	202,650	118,550
Audit-Related Fees (2)	—	—
Tax Fees (2)	—	—
All Other Fees (2)	—	—
Total Fees	202,650	118,550

(1) Audit fees consist of fees billed to us for professional services rendered for the audit of our annual consolidated financial statements and the review of our interim condensed consolidated financial statements included in our quarterly reports. 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 2021 or 2020.

Pre-Approval Policies and Procedures

Prior to its dissolution in August 2020, our Audit Committee's charter required our Audit Committee to pre-approve 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 the Audit Committee in accordance with applicable SEC rules. Our Audit Committee pre-approved all services performed by KMJ in 2020. All services performed by KMJ in 2021 were pre-approved by our Sole Director.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Documents filed as part of this report

(1) All financial statements

(3) 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
December 28, 2019	$ 39	$ (289)	$ 311	$ 61
January 2, 2021	$ 61	$ (541)	$ 637	$ 157
January 1, 2022	$ 157	$ (104)	$ 230	$ 283

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

			Incorporated by Reference			
Exhibit No.	**Description**	**Filed Herewith**	**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	Form of Warrant issued pursuant to the Securities Purchase Agreement, dated July 17, 2013		8-K	001-33170	4.1	July 18, 2013
4.3	Senior Secured Convertible Promissory Note, dated November 18, 2015, issued by Netlist, Inc. to SVIC No. 28 New Technology Business Investment LLP		8-K	001-33170	4.1	November 19, 2015

Exhibit No.	Description	Filed Herewith	Incorporated by Reference Form	File No.	Exhibit	Filing Date
4.4	Stock Purchase Warrant, dated November 18, 2015, issued by Netlist, Inc. to SVIC No. 28 New Technology Business Investment LLP		8-K	001-33170	4.2	November 19, 2015
4.5	Stock Purchase Warrant, dated November 18, 2015, issued by Netlist, Inc.		10-K	001-33170	4.4	March 31, 2017
4.6	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
4.7	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
4.8	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
4.9	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
4.10	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

			Incorporated by Reference			
Exhibit No.	**Description**	**Filed Herewith**	**Form**	**File No.**	**Exhibit**	**Filing Date**
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
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

Exhibit No.	Description	Filed Herewith	Incorporated by Reference Form	File No.	Exhibit	Filing Date
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
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	Investment Agreement, dated May 3, 2017, by and between Netlist, Inc. and TR Global Funding V, LLC		10-Q	001-33170	10.2	August 15, 2017
10.29	Security Agreement, dated May 3, 2017, by and between Netlist, Inc. and TR Global Funding V, LLC		10-Q	001-33170	10.3	August 15, 2017
10.30	Intercreditor Agreement, dated May 3, 2017, by and between SVIC No. 28 New Technology Business Investment L.L.P. and TR Global Funding V, LLC and consented and agreed to by Netlist, Inc.		10-Q	001-33170	10.4	August 15, 2017
10.31	Intercreditor Agreement, dated May 3, 2017, by and between Silicon Valley Bank and TR Global Funding V, LLC and consented and agreed to by Netlist, Inc.		10-Q	001-33170	10.5	August 15, 2017
10.32	Amended and Restated Intercreditor Agreement, dated April 20, 2017, by and between SVIC No. 28 New Technology Business Investment L.L.P and Silicon Valley Bank and consented and agreed to by Netlist, Inc.		10-Q	001-33170	10.6	August 15, 2017
10.33	Purchase Agreement, dated June 24, 2019, between Netlist, Inc. and Lincoln Park Capital Fund, LLC		8-K	001-33170	1.1	June 24, 2019
10.34	Purchase Agreement, dated March 5, 2020, between Netlist, Inc. and Lincoln Park Capital Fund, LLC		10-K	001-33170	10.37	March 10, 2020
10.35	Purchase Agreement dated July 12, 2021, between Netlist, Inc. and Lincoln Park Capital Fund, LLC		8-K	001-33170	1.1	July 12, 2021
10.36	Registration Rights Agreement, dated July 12, 2021 between Netlist, Inc. and Lincoln Park Capital Fund, LLC		8-K	001-33170	1.2	July 12, 2021

Exhibit No.	Description	Filed Herewith	Incorporated by Reference Form	File No.	Exhibit	Filing Date
10.37	Purchase Agreement, dated September 28, 2021 between Netlist, Inc. and Lincoln Park Capital, LLC		8-K	001-33170	1.1	September 28, 2021
10.38	Registration Rights Agreement, dated September 28, 2021, between Netlist, Inc. and Lincoln Park Capital Fund, LLC.		8-K	001-33170	1.2	September 28, 2021
10.39	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.	X				
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	XBRL Instance Document	X				
101.SCH	XBRL Taxonomy Extension Schema Document	X				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	X				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	X				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X				
101.DEF	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 January 1, 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.

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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: March 1, 2022

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:

Signature	Title	Date
/s/ Chun K. Hong Chun K. Hong	President, Chief Executive Officer and Sole Director (Principal Executive Officer)	March 1, 2022
/s/ Gail Sasaki Gail Sasaki	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 1, 2022

EXHIBIT 21.1

SUBSIDIARIES OF NETLIST, INC.

The following is a list of wholly owned subsidiaries of Netlist, Inc. as of the end of the year covered by this report:

Entity Name	Jurisdiction of Organization
Netlist Electronics (Suzhou) Co., Ltd	People's Republic of China
Naixu Information Technology (Suzhou) Co., Ltd.	People's Republic of China
Netlist Luxembourg S.a r.l.	Luxembourg

EXHIBIT 23

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, and 333-254776 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 March 1, 2022, relating to the consolidated financial statements of Netlist, Inc. and subsidiaries (the "Company") as of January 1, 2022 and January 2, 2021, the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for each of the three years in the period ended January 1, 2022, and the related notes and financial statement schedule II, and the effectiveness of internal control over financial reporting as of January 1, 2022, which reports are included in the Annual Report on Form 10-K of Netlist, Inc. for the year ended January 1, 2022.

Our report dated March 1, 2022, on the effectiveness of internal control over financial reporting as of January 1, 2022, expresses our opinion that Netlist, Inc. and subsidiaries did not maintain effective internal control over financial reporting as of January 1, 2022 because of the effect of material weaknesses on the achievement of the objectives of the control criteria and contains an explanatory paragraph that states the following material weaknesses have 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. Additionally, the Company (i) did not have an effective risk assessment process as it did not sufficiently identify and assess risks, including financial reporting risks, that may limit the achievement of Company objectives, and (ii) did not have effective monitoring as it did not implement effective monitoring controls that were responsive to changes in the business or the timely remediation of identified control deficiencies.

- The Company has ineffective design and maintenance of controls over user access and program change management related to certain information technology (IT) systems that support the Company's financial reporting processes. User and privileged access were not appropriately provisioned, and program changes were not adequately reviewed prior to being placed in production. As a result, process level automated controls and manual controls that are dependent on the completeness and accuracy of information derived from the affected IT systems were also ineffective because they could have been adversely impacted. This material weakness was due to the Company having an insufficient number of IT personnel to identify and assess risks associated with changes in the IT environment resulting in inappropriate assignment of user and privileged access as well as insufficient documentation for control operations.

/s/ KMJ Corbin & Company LLP

Irvine, California
March 1, 2022

EXHIBIT 31.1

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: March 1, 2022

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

EXHIBIT 31.2

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: March 1, 2022

/s/ Gail Sasaki
Gail Sasaki
Vice President and Chief Financial Officer

EXHIBIT 32

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 January 1, 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: March 1, 2022

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

Date: March 1, 2022

/s/ Gail Sasaki
Gail Sasaki
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.