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 June 25, 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 000-49602

SYNAPTICS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**77-0118518**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
1109 McKay Drive San Jose, California	**95131**
(Address of principal executive offices)	**(Zip Code)**

(408) 904-1100
Registrant's telephone number, including area code

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $.001 per share	**SYNA**	**The Nasdaq Global Select Market**

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

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

If an emerging growth company, indicate by checkmark 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 Common Stock held by nonaffiliates of the registrant (25,832,800 shares), based on the closing price of the registrant’s Common Stock as reported on the Nasdaq Global Select Market on December 23, 2021 of $278.28, was $7,188,751,584. For purposes of this computation, all officers, directors, and 10% beneficial owners of the registrant are deemed to be affiliates. Such determination should not be deemed to be an admission that such officers, directors, or 10% beneficial owners are, in fact, affiliates of the registrant.

As of August 12, 2022, there were 39,634,112 shares of the registrant's common stock outstanding.

Documents Incorporated by Reference

Portions of the registrant's definitive Proxy Statement for the 2022 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

SYNAPTICS INCORPORATED
ANNUAL REPORT ON FORM 10-K
FISCAL 2022

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Statement Regarding Forward-Looking Statements

This report on Form 10-K for the year ended June 25, 2022 contains forward-looking statements that are subject to the safe harbors created under the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Act of 1934, as amended (the "Exchange Act"). Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business, including our expectations regarding the potential impacts on our business of the COVID-19 pandemic, and can be identified by the fact that they do not relate strictly to historical or current facts. Such forward-looking statements may include words such as "expect," "anticipate," "intend," "believe," "estimate," "plan," "target," "strategy," "continue," "may," "will," "should," variations of such words, or other words and terms of similar meaning. All forward-looking statements reflect our best judgment and are based on several factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. Such factors include, but are not limited to, the risks as identified in the "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business" sections in this report on Form 10-K, and other risks as identified from time to time in our Securities and Exchange Commission reports. Forward-looking statements are based on information available to us on the date hereof, and we do not have, and expressly disclaim, any obligation to publicly release any updates or any changes in our expectations, or any change in events, conditions, or circumstances on which any forward-looking statement is based. Our actual results and the timing of certain events could differ materially from the forward-looking statements. These forward-looking statements do not reflect the potential impact of any mergers, acquisitions, or other business combinations that had not been completed as of the date of this filing.

Statements made in this report, unless the context otherwise requires, include the use of the terms "us," "we," "our," the "company" and "Synaptics" to refer to Synaptics Incorporated and its consolidated subsidiaries.

PART I

ITEM 1. BUSINESS

Overview

We are a leading worldwide developer and fabless supplier of premium mixed signal semiconductor solutions changing the way humans engage with connected devices and data, engineering exceptional experiences throughout the home, at work, in the car and on the go. Our original equipment manufacturer, or OEM, customers include many of the world's largest OEMs for smart home devices, automotive solutions, notebook computers and peripherals, smartphones and tablets, and many large OEMs for audio and video products. Our current served markets include Internet of Things, or IoT, personal computer, or PC, and Mobile. We deliver complete chip, firmware and software semiconductor solutions that allow our customers to seamlessly integrate advanced functions into their end products.

Our website is located at www.synaptics.com. Through our website, we make available, free of charge, all our Securities and Exchange Commission, or SEC, filings, including our annual reports on Form 10-K, our proxy statements, our quarterly reports on Form 10-Q, and our current reports on Form 8-K, as well as Form 3, Form 4, and Form 5 Reports for our directors, officers, and principal stockholders, together with amendments to those reports filed or furnished pursuant to Sections 13(a), 15(d), or 16 under the Securities Exchange Act of 1934, as amended, or the Exchange Act. These reports are available on our website promptly after their electronic filing with the SEC. You can also read these SEC filings and reports over the Internet at the SEC's website at www.sec.gov. Our website also includes corporate governance information, including our Code of Conduct, our Code of Ethics for the Chief Executive Officer and Senior Financial Officers, and our Board Committee Charters. The contents of our website are not incorporated into or deemed to be a part of this report.

We were initially incorporated in California in 1986 and were re-incorporated in Delaware in 2002. Our fiscal year is the 52- or 53-week period ending on the last Saturday in June. The fiscal years presented in this report were the 52-week periods ended June 25, 2022, June 26, 2021, and June 27, 2020.

IoT Applications Market

Our IoT, market solutions broadly consist of wireless connectivity (Wi-Fi, Bluetooth and global positioning system, or GPS) products, System-on-Chip, or SoC, products, display and touch integrated circuits for use in automobiles, and a wide range of audio and video products and solutions. Our SoC products are used in human experience solutions for enabling smart devices at the edge of a network. We enable products that power smart assistant speakers, over-the-top multimedia devices, wireless speakers, voice driven intelligent devices including those integrating far-field technology, personal voice and audio products, set top boxes, video interface solutions for docking stations, high-speed connectivity for virtual reality devices, video surveillance, voice over IP SoCs, image processing solutions for use in printers, and fax modems. In addition, our automotive solutions include over a decade of mass production experience in mature touch solutions and display drivers adapted from our mobile consumer business to meet automotive-grade quality standards. Net revenue for our IoT product solutions accounted for approximately 63%, 46%, and 25% of our net revenue for fiscal 2022, 2021, and 2020, respectively.

Within the fast-growing consumer IoT market, we continue to expand our footprint in various devices by bringing converged video, vision, audio, and voice technologies coupled with artificial intelligence and wireless connectivity capabilities. Our deep investment in far-field voice technology, our intellectual property portfolio for video, vision, audio and security, and our significant experience enabling Android-based platforms for service providers, coupled with our focus on enabling high performance, low power, and highly secure SoC solutions enable us to effectively serve our existing customers and position us to grow within the addressable market of consumer IoT devices.

PC Product Applications Market

We provide custom and semi-custom product solutions for navigation, cursor control, and access to devices or applications through fingerprint authentication, for many of the world's premier PC OEMs. These functions are offered as both stand-alone and integrated touch pads plus fingerprint biometric solutions. In addition to notebook applications, other PC product applications for our technology include peripherals, such as high-end keyboards and accessory touchpads. Net revenue for our product solutions for PC product applications accounted for approximately 20%, 26%, and 24% of our net revenue for fiscal 2022, 2021, and 2020, respectively.

We continue to expand our available product offerings through technology development enabling us to increase our product content within each notebook unit. We are also applying our technologies to enable adoption of fingerprint recognition solutions to broaden our market opportunities. Based on the strength of our technology and engineering know-how, we believe we are well positioned to continue to take advantage of opportunities in the PC product applications market.

Mobile Product Applications Markets

We believe our intellectual property portfolio, engineering know-how, systems engineering experience, technological expertise, and experience in providing human experience product solutions to major OEMs position us to be a key technological enabler for multiple consumer electronic devices targeted to meet the mobile product applications markets. Mobile product applications include smartphones, tablets, large touchscreen applications, as well as a variety of mobile, handheld, and entertainment devices. Net revenue for our mobile product applications accounted for approximately 17%, 28%, and 51% of our net revenue for fiscal 2022, 2021, and 2020, respectively.

We believe our existing technologies, our range of product solutions, and our emphasis on ease of use, advanced functionality, small size, low power consumption, durability, and reliability enable us to serve multiple aspects of the markets for mobile product applications and other electronic devices.

Acquisitions

DSP Group, Inc.

On August 30, 2021, we entered into an agreement and plan of merger with DSP Group, Inc, or DSPG, to acquire all of the equity of DSPG for $22.00 per share of common stock. The transaction closed on December 2, 2021, for an aggregate purchase consideration of $543.3 million.

In December 2021, we entered into a lender joinder agreement and an amendment to our credit agreement, to among other things, establish a new $600.0 million incremental term loan facility, or the Term Loan Facility. We financed the transaction through a combination of cash on hand and the Term Loan Facility.

The results of DSPG are included in our consolidated financial statements for the period from December 3, 2021 through June 25, 2022. For further discussion of the DSPG acquisition, see Note 4 Acquisitions, Divestiture and Investment included in the consolidated financial statements contained elsewhere in this report.

DisplayLink

On July 17, 2020, we entered into a definitive agreement to acquire all of the equity interests in DisplayLink Corporation, or DisplayLink, a leader in high-performance video compression technology. The acquisition closed on July 31, 2020 for an aggregate purchase consideration of $444.0 million. For further discussion of the DisplayLink acquisition, see Note 4 Acquisitions, Divestiture and Investment included in the consolidated financial statements contained elsewhere in this report.

Broadcom

On July 2, 2020, we entered into definitive agreements with Broadcom to acquire certain assets and assume certain liabilities of, and obtain non-exclusive licenses relating to, Broadcom's existing Wi-Fi, Bluetooth and GPS/global navigation satellite system, or GNSS, products and business in the IoT market, or the Broadcom Business Acquisition, for an aggregate purchase consideration of $250.0 million in cash that closed on July 23, 2020. We also entered into certain transition agreements with Broadcom for a period of three years. For further discussion of the Broadcom Business Acquisition, see Note 4 Acquisitions, Divestiture and Investment included in the consolidated financial statements contained elsewhere in this report.

Divestitures

In December 2020, we completed the sale of limited audio technology intangible assets, received a fully-paid up perpetual license back from the buyer and, as an element of the transaction, licensed other audio technology intangible assets to the buyer under a fully-paid up perpetual license arrangement. Under the asset purchase agreement and the intellectual property license agreement, we received $35.0 million in cash. The gain on the sale of the audio technology assets was $34.2 million.

In December 2019, we entered into an asset purchase agreement with a third-party to sell the assets of our liquid-crystal display, or LCD, Touch Controller and Display Driver Integration, or TDDI, product line for LCD mobile displays. We retained our automotive TDDI product line and our discrete touch and discrete display driver product lines supporting LCD and organic light-emitting diode, or OLED, for the mobile market. The assets sold under the asset purchase agreement for cash consideration of $138.7 million and had a carrying value of approximately $33.6 million as of the closing date of the transaction in April 2020. The gain on sale of this portion of a product line was $105.1 million.

Investment

In December 2020, we invested $5.0 million in Eta Compute in exchange for preferred stock. This investment provides us with a partnership that enables us to better address expanded industry opportunities for artificial intelligence applications. The investment is accounted for under the cost method.

Our Strategy

Our objective is to continue to enhance our position as a leading supplier of premium semiconductor product solutions for each of the target markets in which we operate, including the IoT applications market, the PC product applications market, and the mobile product applications markets, with a key focus on expanding our market share. Key aspects of our strategy to achieve this objective include those set forth below.

Extend Our Technological Leadership

We plan to utilize our extensive intellectual property portfolio, engineering know-how, and technological expertise to extend the functionality of our current product solutions and offer new and innovative product solutions to customers across multiple markets. We intend to continue utilizing our technological expertise to reduce the overall size, cost, and power consumption of our product solutions while increasing their applications, capabilities, and performance. We plan to continue enhancing the ease of use and functionality of our solutions. We plan to invest in our research and development efforts through our engineering activities, including advancement of existing technologies, the hiring of key engineering personnel, and strategic acquisitions and alliances. We believe that these efforts will enable us to meet customer expectations and achieve our goal of supplying, on a timely and cost-effective basis, easy to use, functional human experience semiconductor product solutions to our target markets.

Focus on and Grow in the IoT Market

We intend to capitalize on the growth of the IoT market including solutions for smart home and home automation, video delivery over wired and wireless, voice enabled assistants, virtual reality, video interface docking, and wearables. We intend to build upon our existing innovative and intuitive and intelligent semiconductor product solutions portfolio and continue to address the evolving portability, connectivity, security, and functionality requirements of these new markets. We will offer our solutions to existing and potential customers to enable increased functionality, reduced size, lower cost, simplified security, enhanced industrial design features, and to enhance the user experience of our OEMs' products. We plan to utilize our existing technologies as well as aggressively pursue new technologies as new markets evolve that demand new solutions.

Pursue Strategic Relationships and Acquisitions

We intend to develop and expand our strategic relationships to enhance our ability to offer value-added semiconductor product solutions to our customers, penetrate new markets, and strengthen the technological leadership of our product solutions. We also intend to evaluate the potential acquisitions of companies and assets in order to expand our technological expertise and to establish or strengthen our presence in selected target markets.

Fabless Semiconductor Manufacturing

We plan to selectively partner with foundries and backend processors to solidify our longstanding key supply chain relationships. This strategy results in a scalable business model, enables us to concentrate on our core competencies of research and development and product design and engineering, and reduces our capital expenditures and working capital requirements. Our fabless semiconductor manufacturing strategy allows us to maintain a variable cost model, in which we do not incur most of our manufacturing costs until our product solutions have been shipped and invoiced to our customers.

Products

Our family of product solutions allows our customers to solve their interface needs and differentiate their products from those of their competitors.

Voice Over IP

Our Digital Voice Family, or DVF, of SoC products is a comprehensive solution for developing affordable, scalable and green Voice over IP, or VoIP, home and office products. DVF facilitates rapid introduction of embedded features into residential devices such as cordless IP and instant messaging phones. DVF enables development of low-power enterprise IP, analog terminal adapters, or ATAs, and home VoIP phones that offer superb acoustic echo cancellation, high-quality HD voice, multi-line capabilities, and an enhanced user interface. Built on an open platform with multi-ARM processors running on Linux OS, DVF includes IPfonePro™, an extensive software development kit for IP phones and ATAs.

DECT Cordless

Our Digital Enhanced Cordless Telecommunications, or DECT, SoC solutions provide integrated digital solutions and include all relevant digital baseband, analog interface and RF functionality. Enhanced with our hardware and software technologies, these chipsets are highly versatile and enable the development of an array of cordless telephony solutions that allow for faster time to market than alternative custom silicon and software offerings. This portfolio supports cordless phones, cordless headsets, remote controls, home DECT-enabled gateways, fixed-mobile convergence solutions and home automation devices.

Ultra-Low Power Edge AI

Our ultra-low power edge AI platform includes a highly integrated edge AI SOC designed for battery powered wireless devices equipped with audio or camera capabilities for consumer and industrial IoT applications. These solutions are designed for a wide range of power constrained IoT applications used in office buildings, retail, factories, warehouses, robotics, and smart homes and cities.

Wireless Connectivity

Our wireless connectivity solutions include state-of-the-art Wi-Fi, Bluetooth, GPS, GNSS, and ULE to address broad IoT market applications including home automation, multimedia streamers, security sensors, surveillance cameras, wireless speakers, games, drones, printers, wearable and fitness devices, in addition to numerous other applications which require a wireless connection.

AudioSmart®

AudioSmart products bring forward optimum analog, mixed-signal and digital signal processor, or DSP, technologies for high-fidelity voice and audio processing. Our AudioSmart products include far-field voice technologies that enable accurate voice command recognition from a distance while disregarding other sounds, such as music, in order to activate smart devices such as smart speakers. AudioSmart also includes personal voice and audio solutions for high-performance headsets that enable active noise cancellation.

ConnectSmart™

Our ConnectSmart video interface IC portfolio offers a full range of high-speed video/audio/data connectivity solutions that are designed for linking CPUs/GPUs and various endpoints for applications including PC docking stations, travel docks, dongles, protocol converters and virtual reality head mounted displays.

DisplayLink®

Our DisplayLink products utilize highly efficient video encode/decode algorithms to deliver a semiconductor-based solution which transmits compressed video frames across low bandwidth connections. These solutions are used in PC docking applications, conference room video display systems, and video casting applications.

VideoSmart™

Our VideoSmart series SoCs include CPUs running at up to 40K Dhrystone Million Instructions per Second, gaming-grade Graphics Processing Unit, or GPUs, voice, and neural network processing units, or NPU. These powerful solutions combine a central processing unit, or CPU, NPU, and GPU, into a single software-enriched SoC. They enable smart multimedia devices including set-top boxes, or STB, over-the-top, or OTT, streaming devices, soundbars, surveillance cameras and smart displays.

ImagingSmart™

Our ImagingSmart solutions include a product portfolio that spans four distinct product areas including document and photo imaging controllers, digital video, fax, and modem solutions. ImagingSmart products leverage image processing IP, JPEG encoders and DSP technology to deliver a wide range of fax, modem, digital video and printer solutions for home, mobile and imaging applications.

Natural ID®

Our Natural ID family of capacitive-based fingerprint ID products is designed for use in notebook PCs, PC peripherals, automobiles, and other applications. Thin form factors provide industrial design flexibility, while robust matching algorithms and anti-spoofing technology provide strong security. Our Natural ID family of products spans a range of form factors, colors, and materials suitable for design on the front, back or side of a device.

Natural ID products are designed to be compatible with Fast IDentity Online, or FIDO, protocols, enhancing security and interoperability with a broad range of solutions. FIDO was formed to enhance online authentication by developing open, scalable technical standards to help facilitate the adoption of robust, easy to use authentication that reduces the reliance on passwords. Natural ID products increase the security of automobile and PC products while maintaining ease of use for the customer.

TouchPad™

Our TouchPad family of products, which can take the place of, and exceed the functionality of a mouse, consists of a touch-sensitive pad that senses the position and movement of one or more fingers on its surface through the measurement of capacitance. Our TouchPad provides an accurate, comfortable, and reliable method for screen navigation, cursor movement, and gestures, and provides a platform for interactive input for both the consumer and corporate markets. Our TouchPad solutions allow our OEMs to provide stylish, simple, user-friendly, and intuitive solutions to consumers. Our TouchPad solutions also offer various advanced features, including scrolling, customizable tap zones, tapping and dragging of icons, and device interaction.

SecurePad™

Our SecurePad integrates our Natural ID fingerprint sensor directly into the TouchPad area, improving usability and simplifying the supply chain for notebook PC manufacturers.

ClickPad™

Our ClickPad introduces a clickable mechanical design to the TouchPad solution, eliminating the need for physical buttons. The button-less design of our ClickPad allows for unique, intuitive industrial design and makes an excellent alternative to conventional input and navigation devices. Our ClickPad is activated by pressing down on the internal tact switch to perform left-button or right-button clicks and provides tactile feedback similar to pressing a physical button. The latest version of ClickPad features ClickEQ™, a mechanical solution that provides uniform click depth to maximize the surface area available for gestures and improves click performance over hinged designs.

ForcePad®

Our ForcePad is a thinner version of our ClickPad, which introduces a new dimension in control through the addition of variable force sensitivity. ForcePad is designed to provide consistent performance across OEM models through its design intelligence and self-calibration features. By detecting the amount of force applied, ForcePad is engineered to enable more intuitive and precise user interactions in operating system controls and applications. Designed with thin and light notebooks in mind, ForcePad is 40% thinner than a conventional touch pad.

ClearPad®

Our ClearPad family of products enables the user to interact directly with the display on electronic devices, such as mobile smartphones, tablets, and automobiles. Our ClearPad has distinct advantages, including low-profile form factor; high reliability, durability, and accuracy; and low power consumption. We typically sell our ClearPad solution as a chip, together with customer-specific firmware, to sensor manufacturers, OLED manufacturers or LCD manufacturers, to integrate into their touch-enabled products.

ClearView™

Our ClearView display driver products offer advanced image processing and low power technology for displays on electronic devices, including smartphones and tablets. ClearView products include adaptive image processing that works in concert with proprietary customization options to enable development of efficient and cost-effective high-performance solutions and faster time to market. Our display driver products offer automatic regional control of color balance that optimizes light and dark areas of an image simultaneously, and sunlight readability enhancement capabilities that optimize image quality under various lighting conditions. Our virtual reality bridge and virtual reality display driver integrated circuit, or DDIC, chips enable our customers to move to higher resolution and faster response displays.

TouchView™

Our TouchView solutions include our TDDI products that combine two functions, a touch controller, and a display driver, into a single chip that incorporates all the features of our ClearView and ClearPad products. TouchView products enable thinner form factors to help customers minimize component count and add flexibility to their industrial designs. These products are used in large screen devices, including notebooks and tablets, and are also certified for automotive display applications.

Other Products

Other product solutions we offer include Dual Pointing Solutions, and TouchStyk™. Our dual pointing solutions offer TouchPad with a pointing stick in a single notebook computer, enabling users to select their interface of choice. TouchStyk is a self-contained pointing stick module that uses capacitive technology similar to that used in our TouchPad.

Technologies

We have developed and own an extensive array of technologies, encompassing ASICs, firmware, software, mechanical and electrical designs, display systems, pattern recognition, touch-sensing technologies, fingerprint sensing, voice, audio, imaging, modem, and multimedia technologies. We continue to develop technology in these areas. We believe these technologies and the related intellectual property rights create barriers for competitors and allow us to provide high-value human experience semiconductor product solutions in a variety of high-growth markets.

Our broad line of semiconductor product solutions is currently based upon the following key technologies:

- Proprietary microcontroller technology;
- Proprietary vector co-processor technology;
- Multimedia processing technology;
- Voice and audio technology;
- Pattern recognition technology;
- Deep learning and neural network inferencing technology.
- Mixed-signal integrated circuit technology;
- Wireless connectivity technology;
- Video interface and compression technology;
- Imaging and modem technology;
- Capacitive position and force sensing technology;
- Capacitive active pen technology;

- Multi-touch technology; and
- Display systems and circuit technology.

In addition to these technologies, we develop firmware and device driver software that we incorporate into our products, which provide unique and advanced features. In addition, our ability to integrate all our products to interface with major operating systems provides us with a competitive advantage.

Proprietary Microcontroller Technology. One example of our microcontroller technology is our proprietary 16-bit microcontroller core that is embedded in the digital portion of our capacitive touch mixed signal ASICs, which is allowing us to optimize our ASICs for position sensing tasks. Our embedded microcontroller provides great flexibility in customizing our products via firmware, which eliminates the need to design new circuitry for each new application.

Proprietary Vector Co-Processor Technology. Our vector co-processor technology is designed for use in our ASICs, accompanying either one of our own proprietary microcontroller cores or a commercially available one. The co-processor boosts an ASIC's computational performance by efficiently processing vectors of data for a range of mathematical operations. This allows us to implement more computationally intensive algorithms within our firmware.

Multimedia Processing Technology. This technology allows us to create multimedia SoC products for set-top boxes, soundbars, digital personal assistants, smart displays, virtual reality, OTT, audio, and video. Our video processing technology includes hardware and algorithms to reduce analog and digital noise, convert to different video formats, and enhance color and contrast. Our products include security and secure encrypt/decrypt technology, including secure boot and hardware root of trust.

Voice and Audio Technology. This technology allows us to develop human experience and communication products based on voice and audio interaction. The technology embodies a broad range of analog and mixed signal circuits expertise and audio signal processing algorithms, including:

- Noise suppression;
- Acoustic echo cancellation;
- Active noise cancellation;
- Trigger word detection;
- Mid-field and far-field voice processing;
- Audio digital signal processor architecture;
- Audio codecs;
- Audio post processing;
- High performance audio analog-to-digital converters, or ADCs, and digital-to-analog converters, or DACs;
- Audio amplifiers;
- Low power audio processing;
- Speaker protection; and
- Product acoustic design.

Pattern Recognition Technology. This technology is a set of software algorithms and techniques for converting real world data, such as gestures and handwriting, into a digital form that can be recognized and manipulated within a computer. Our technology provides reliable gesture decoding and handwriting recognition and can be used in other applications such as signature verification for a richer user experience.

Deep Learning and Neural Network Inferencing Technology. This technology allows us to create and train deep neural networks for audio, image processing, video processing and computer vision functions. Some of our products contain hardware designed to evaluate deep neural networks securely and with low latency. We also have technology that allows us to compress our trained neural networks for more efficient AI-at-the-edge on our hardware. These neural network algorithms improve the quality of the sensed data (for example, reduce the noise, or increase the resolution) as well as interpret the sensed data.

Mixed-Signal Integrated Circuit Technology. This hybrid analog-digital integrated circuit technology combines the power of digital computation with the ability to interface with non-digital, real-world signals, such as the position of a finger or stylus on a surface. Our patented design techniques permit us to utilize this technology to optimize our core ASIC engine for all our products. Our mixed-signal technology consists of a broad portfolio of circuit expertise in areas such as the following:

- High-speed serial interfaces;
- Analog-to-digital and digital-to-analog converters;
- Electromagnetic emissions suppression and susceptibility hardening;
- Very Large Scale Integrated, or VLSI, digital circuits with multiple clock and power domains;
- Communications and signal processing circuits;
- Power management (switching converters, charge pumps, and LDOs);
- Precision capacitance measurement;
- Display timing controllers, or TCONs.

Wireless Technology. Our wireless connectivity solutions include discrete and integrated Wi-Fi and Bluetooth solutions, and satellite-based GPS/GNSS mobile navigation receivers. Wi-Fi allows devices on a local area network to communicate wirelessly, adding the convenience of mobility to the utility of high-speed data networks. We offer a family of high performance, low power Wi-Fi chipsets. We offer products which incorporate the latest Wi-Fi standards such as 802.11AX, which is known as Wifi-6. Bluetooth is a low power technology that enables direct connectivity between devices. We offer a family of Bluetooth silicon and software solutions that enable customers to easily and cost-effectively add Bluetooth functionality to virtually any device. These solutions include combination chips that offer integrated Wi-Fi and Bluetooth functionality, which provides significant performance advantages over discrete solutions.

We also offer a family of GPS and GNSS semiconductor products, software, and location data services. These products are part of a broad location platform that enable customer devices to wirelessly communicate and receive precise location and navigational data from satellite constellations for use in various location services applications.

As part of our wireless technology, DECT based devices provide worldwide coverage for telephony applications, supporting most RF bands and cordless protocols standardized around the world. This includes 1.7GHz -1.9GHz used in Europe, U.S., Korea, Japan and Latin America; and 2.4GHz – used in Japan, China, India and the U.S., along with other proprietary protocols for specific use cases.

Video Compression Technology. Our video interface solutions include our ConnectSmart and DisplayLink portfolios, offering a full range of interface solutions that connect devices to external displays and support the latest versions of the most widely used protocols, connectors, and operating systems. Our flexible product lines for connecting devices combine high-performance interface with low power consumption and are designed for both commercial and consumer end-products. Our solutions have been broadly adopted by the top OEMs and original device manufacturers, or ODMs, to enable video expansion and protocol conversion, leverage high-end features, and deliver the bandwidth needed to drive multiple high-resolution external displays simultaneously.

Imaging and Modem Technology. This technology allows us to create a family of SoC integrated circuits and software for printers, video cameras, fax machines and modems. Key functional blocks include:

- Image processing hardware accelerators;
- Printer imaging pipeline;
- Inkjet, laser, and thermal print engine and motor control;
- Scan/camera and peripheral control; and
- Data and fax modem hardware and firmware.

Capacitive Fingerprint Sensing Technology. Our fingerprint sensing technology simplifies the system or application authentication process by substituting the user’s fingerprint for the login name and password. Our capacitive fingerprint sensing technology provides for fingerprint authentication by scanning and matching an image of a user’s fingerprint, as well as initial fingerprint enrollment. Our sensing technology also incorporates spoof detection and includes many implementation choices including the back of the phone or PC, button integration, touchpad integration, and under glass.

Capacitive Position and Force Sensing Technology. Our Position Sensing technology provides a method for sensing the presence, position, and contact area of one or more fingers or a stylus on a flat or curved surface. Our technology works with very light touch, supports full multi-touch capabilities, and provides highly responsive cursor navigation, scrolling, and selection. It uses no moving parts, can be implemented under plastic or glass, and is extremely durable. Our technology can also track one or more fingers in proximity to the touch surface. Our Force Sensing technology senses the direction and magnitude of a force applied to an object. Our electronic circuitry determines the magnitude and direction of an applied force, permits very accurate sensing of tiny changes in capacitance, and minimizes electrical interference from other sources. Our capacitive force sensing technology can be integrated with our position sensing technology.

Capacitive Active Pen Technology. This technology allows us to develop a pen that can be used for input on a capacitive touchscreen. As well as generating a signal that allows the touchscreen to track the pen, additional data, such as the pen applied force and pen button states, are also communicated to the touchscreen device. Information can also be communicated from the touchscreen to the pen.

Multi-touch Technology. This technology allows us to create capacitive touch products that simultaneously track the presence, position, and other characteristics of multiple objects in contact with or in close proximity to a flat or curved touch surface. It enables, for example, the recognition of multi-finger gestures, the tracking of a stylus position while the user’s palm is also in contact with the touch surface, and the simultaneous interaction of multiple users with the same touch surface.

Display Systems and Circuit Technology. This technology enables us to develop optimized human experience semiconductor product solutions with improved compatibility with their application environments. This technology consists of mobile and large format display semiconductor expertise, including the following functional blocks:

- TCONs;
- Thin-Film-Transistor, or TFT, gamma references;
- Smooth dimming and content adaptive brightness control;
- Contrast enhancement;
- Color enhancement;
- Gamma curve control;
- Force, touch, and display synchronization;
- Local area active contrast optimization;
- Adaptive image compression and decompression;
- Sub-pixel rendering;
- Demura compensation;
- Rounded corner processing;
- Frame rate control;
- High-speed serial interfaces such as mobile industry processor interface display serial interface, or MIPI DSI, and Qualcomm mobile display digital interface, or MDDI; and
- Display power circuits such as inductive switchers, charge pumps, and LDOs.

This technology also enables us to develop advanced products that combine the functions of the display and touch sensing systems to enable highly integrated display and touch functionality with improved performance, thinner form factors, and lower system cost.

Our latest addition to our automotive portfolio is an automotive-grade TDDI for indium gallium zinc oxide and amorphous silicon gate-in-panel displays and low-temperature polycrystalline panels up to 4K resolution.

Research and Development

We conduct ongoing research and development programs that focus on advancing our existing technologies, improving our current product solutions, developing new products, improving design and manufacturing processes, enhancing the quality and performance of our product solutions, and expanding our technologies to serve new markets. Our goal is to provide our customers with innovative solutions that address their needs and improve their competitive positions.

Our research and development programs focus on the development of accurate, easy to use, reliable, and intuitive human experiences for electronic devices. We believe our innovative interface technologies can be applied to many diverse products, and we believe the interface is a key factor in the differentiation of many products. AI-at-the-edge is a focus area for us in enabling better performance and enhancing user experience in many of these products. We believe that our technologies enable us to provide customers with product solutions that have significant advantages over alternative technologies in terms of functionality, size, power consumption, durability, and reliability. We also intend to pursue strategic relationships and acquisitions to enhance our research and development capabilities, leverage our technology, and shorten our time to market with new technological applications.

Our research, design, and engineering teams frequently work directly with our customers to design custom solutions for specific applications. We focus on enabling our customers to overcome their technical barriers and enhance the performance of their products. We believe our engineering know-how and electronic systems expertise provide significant benefits to our customers by enabling them to concentrate on their core competencies of production and marketing.

As of the end of fiscal 2022, we employed 1,314 people in our technology, engineering, and product design functions in the United States, China, Taiwan, Japan, Germany, Israel, the United Kingdom, India, Israel, Poland, and Korea. Our research and development expenses were $367.3 million, $313.4 million, and $302.5 million for fiscal 2022, 2021, and 2020, respectively.

Intellectual Property Rights

Our success and ability to compete depend in part on our ability to maintain the proprietary aspects of our technologies and products. We rely on a combination of patents, trademarks, trade secrets, copyrights, confidentiality agreements, and other statutory and contractual provisions to protect our intellectual property, but these measures may provide only limited protection.

As of June 25, 2022, we held 1,584 active patents and 192 pending patent applications worldwide that expire between 2022 and 2042. Collectively, these patents and patent applications cover various aspects of our key technologies, including those for touch sensing, voice processing, secure biometrics, display drivers, touch and display integration, docks and adapters, video interfaces, wired and wireless connectivity, audio processing, video processing, edge computing, open AI tools, and computer vision. Our proprietary firmware and software, including source code, are also protected by copyright laws and applicable trade secret laws.

Our extensive array of technologies includes those related to ICs, firmware, software, and mechanical hardware. Our products rely on a combination of these technologies, making it difficult to use any single technology as the basis for replicating our products. Furthermore, the lengths of our customers' design cycles and the customizations required within the products we provide to our customers also serve to protect our intellectual property rights.

Customers

Our customers include many of the world's largest mobile and PC OEMs, based on unit shipments, as well as many large IoT OEMs, automotive manufacturers and a variety of consumer electronics manufacturers. Our demonstrated track record of technological leadership, design innovation, product performance, cost-effectiveness, and on-time deliveries have resulted in our leadership position in providing human experience semiconductor product solutions. We believe our strong relationship with our OEM customers, many of which are also currently developing product solutions which are focused in several of our target markets, will continue to position us as a source of supply for their product offerings.

Our leading OEM customers in fiscal 2022 included the following:

•Acer	**•Microsoft**
•Ampak	**•Oculus**
•Bouygues Telecom	**•Oppo Mobile**
•Dell	**•Poly**
•Ford	**•Samsung**
•Fujitsu	**•Sony**
•Google	**•Targus**
•Goodway	**•Technicolor**
•Hewlett-Packard	**•Toshiba**
•Honor	**•Toyota Motor**
•Huawei	**•Vivo**
•Lenovo	**•Winstar**
•Logitech	**•Xiaomi**

We generally supply our products to OEMs through their **co**ntract manufacturers, supply chain or distributors.

We consider both the OEMs and their contract manufacturers or supply chain partners to be our customers, as well as in some cases, our distributors. Both the OEMs and their partners may determine the design and pricing requirements and make the overall decision regarding the use of our human experience semiconductor product solutions in their products. The contract manufacturers and distributors place orders with us for the purchase of our products, take title to the products purchased upon delivery by us, and pay us directly for those purchases. The majority of these customers do not have return rights except for warranty provisions.

Sales and Marketing

We sell our product solutions for incorporation into the products of our OEM customers. We generate sales through direct sales employees as well as outside sales representatives, distributors and value-added resellers. Our sales personnel receive substantial technical assistance and support from our internal technical marketing and engineering resources because of the highly technical nature of our product solutions. Sales frequently result from multi-level sales efforts that involve senior management, design engineers, and our sales personnel interacting with our customers' decision makers throughout the product development and order process.

As of the end of fiscal 2022, we employed 228 sales and marketing professionals. We maintain customer support offices domestically and internationally, which are located in the U.S., Taiwan, China, India, Korea, and Japan. In addition, we utilize value-added resellers and sales distributors that are primarily located in the U.S., China, Korea, Japan, Taiwan and Germany.

International sales constituted over 98% of our revenue for each of fiscal 2022, 2021, and 2020. Approximately 66%, 68%, and 78% of our sales in fiscal 2022, 2021, and 2020, respectively, were made to companies located in China, Japan, and South Korea that provide design and manufacturing services for major IoT, notebook computer, and mobile product applications OEMs. Our sales are almost exclusively denominated in U.S. dollars. This information should be read in conjunction with Note 14 Segment, Customers, and Geographic Information to the consolidated financial statements contained elsewhere in this report.

Manufacturing

We employ a fabless semiconductor manufacturing platform through third-party relationships. We currently utilize third-party semiconductor wafer manufacturers to supply us with silicon wafers integrating our proprietary design specifications. The completed silicon wafers are forwarded to third-party package and test processors for further processing into die and packaged ASICs, as applicable, which are then utilized in our custom module products or processed as our ASIC-based solution.

After processing and testing, the die and ASICs are consigned to various contract manufacturers for assembly or are shipped directly to our customers. During the assembly process, our die or ASIC is either combined with other components to complete the module for our custom product solutions or the ASIC is maintained as a standalone finished good. The finished assembled product is subsequently shipped directly to our customers or by our contract manufacturers directly to our customers for integration into their products.

We believe our third-party manufacturing strategy provides a scalable business model, enables us to concentrate on our core competencies of research and development, technological advances, and product design and engineering, and reduces our capital investment.

Our third-party contract manufacturers and semiconductor fabricators are predominately Asia-based organizations. We generally provide our contract manufacturers with six-month rolling forecasts of our production requirements. As a result of recent supply constraints and capacity shortages affecting the global semiconductor industry, we have entered into long-term capacity and pricing agreements with some suppliers. Our reliance on these parties exposes us to vulnerability owing to our dependence on a few sources of supply. We believe, however, that other sources of supply are available. In some cases, we have alternative sources of suppliers to mitigate supplier risk; however, in the current environment, all of them could be constrained. We may establish relationships with other contract manufacturers in order to reduce our dependence on any single source of supply.

Periodically, we purchase inventory from our contract manufacturers when a customer delays its delivery schedule or cancels its order. In those circumstances in which our customer has cancelled its order and we purchase inventory from our contract manufacturers, we consider a write-down to reduce the carrying value of the inventory purchased to its net realizable value. We charge write-downs to reduce the carrying value of obsolete, slow moving, and non-usable inventory to its net realizable value and charge such write-downs to cost of revenue. We also record a liability and charge to cost of revenue for estimated losses on inventory we are obligated to purchase from our contract manufacturers when such losses become probable from customer delays or order cancellations. In addition, the impact of entering into long-term capacity agreements could create significant inventory write-down if the end customer demand declines.

Competition

IoT

Our SoC solutions enable new forms of media consumption and integrate video processing, far-field voice and linguistics processing products are sold into market segments that offer significant potential growth, ranging from home automation applications, smart assistant platforms, surveillance cameras, to set-to-box/over-the-top, or STB/OTT, platforms. The markets for STB/OTT products, surveillance cameras, home automation, and smart assistant solutions require strong technology innovation and deep systems and systems engineering expertise. Our principal competition in these markets include Broadcom, MediaTek, AmLogic, and Ambarella, among others.

We provide voice processing silicon and software solutions for voice-enabled devices, consumer and commercial imaging, and next-generation audio applications. In addition to our voice solutions, we support the audio headphone and virtual reality head mounted display industry with universal serial bus-c, or USB-C, audio codec solutions for next generation wireless audio devices and wearables. Our competitors in the sale of audio products include Cirrus Logic, BES Technic, Realtek, and Qualcomm.

Our wireless products for use in IoT application markets include our technologies such as Wi-Fi, Bluetooth, Wi-Fi-Bluetooth combinations, and GPS/GNSS support our customers' need to develop products which can wirelessly communicate to networks, remote control of edge-devices, machine-to-machine communication, among other purposes. Our principal competition includes Infineon, Qualcomm, MediaTek, NXP, and Silicon Labs, among others.

Our automotive products include touch, display driver, and TDDI solutions for major automotive OEMs. Our principal competitors for these products include Focaltech, Himax, Novatek Microelectronics, and Microchip. Our IoT video interface products are sold into PC and smartphone docks and wireless adapter market applications. Our principal competitors in the sale of IoT interface products are Parade, Megachips, and Realtek.

We also provide fax, modem and image processors and software solutions for printers, fax machines, point of sale terminals, and medical applications. Our principal competitors in these markets are Skyworks, Marvell, and Qbit.

PC and Mobile

Our touch, display and fingerprint-based semiconductor products are sold into markets for PC product applications, mobile product applications, and other electronic devices. The markets for touchscreen products are characterized by rapidly changing technology and intense competition. Our principal competition in the sale of touchscreen products includes Samsung LSI, Broadcom, ST Micro, Goodix, and various other companies involved in human experience semiconductor product solutions. Our principal competitors in the sale of notebook touch pads are Cirque Corporation, Elan Microelectronics and Goodix. Our principal competitors in the sale of display driver products for the PC and mobile product applications markets include Focaltech, Novatek Microelectronics, Samsung LSI, and SiliconWorks. Our principal competitors in the sale of fingerprint authentication solutions for PC product applications markets are Egis Technology, Elan Microelectronics, and Goodix.

Corporate Social Responsibility

Synaptics strives to be a leading corporate citizen. We uphold the most ethical standards in our business practices and policies, and we believe that sustainable corporate practices and consistent attention to social and governance priorities will help enhance long-term value for our stockholders. Our Board of Directors is responsible for overseeing our environmental, social, and governance policies and practices. With guidance from the Board of Directors, our management team applies an integrated methodology to financial matters, corporate governance, and corporate responsibility, leading to increased accountability, better decision making and ultimately creating better long-term value. This focus on the environment, society, and governance influences everything we do.

Environmental

We have implemented internal green programs and initiatives to reinforce our commitment to minimizing natural resource consumption, improving sustainability, disposing of end-of-life products in an environmentally safe manner, reducing waste, and increasing reuse and recycling programs company-wide. For example, our headquarters uses 100% renewable energy sources, and we follow the European Union's rules regarding the Restriction of Hazardous Substances in Electrical and Electronic Equipment in the design and manufacture of all our products.

Social

Our employees and communities are the heart of our company, and we take pride in our social responsibility to them as well becoming better global citizens. We support our local communities through charitable causes and events, and we have numerous programs in place around the world that promote our commitments to diversity, equality of opportunity, non-discrimination, and the highest standards of human rights. We are committed to the use of a socially responsible supply chain. Our efforts include maintaining a supplier policy that bars the use of forced or child labor and governs the use and distribution of conflict minerals.

Governance

We are dedicated to supporting leading corporate governance and board practices to ensure oversight accountability and transparency in our business practices. We place a high value on ethical actions, individual integrity, and fair dealing in every aspect of what we do.

Accountability

Our Board of Directors and management are strongly committed to our corporate responsibility policies and will continue to regularly evaluate these policies to ensure an effective outcome and strict adherence by our employees, suppliers, vendors, and partners. We actively monitor and audit our internal compliance with our Code of Conduct and other corporate social responsibility policies and programs.

Human Capital

Our company has been built on the collective contributions from people of many countries, religions, and ethnic backgrounds. People are our most critical asset, and our success depends on them. We want to attract, develop, and retain the world's best talent.

Competition for talent in our industry is extremely intense. Our human resource strategy and programs are focused on attracting, engaging, and retaining this talent.

Our Board of Directors and Board committees provide oversight on certain human capital matters. The Audit Committee provides oversight of business risks and our company's Code of Business Conduct and Ethics, both of which have relevance for human capital. The Nominations and Corporate Governance Committee has oversight for environment, social, and governance strategy, which includes talent attraction and retention and inclusion and diversity. The Compensation Committee provides oversight of our overall compensation philosophy, policies, and programs, and assesses whether our compensation establishes appropriate incentives for executive officers and employees

As of June 25, 2022, we employed 1,775 employees. We have employees in North America, Asia/Pacific and Europe which represent approximately 23%, 66% and 11%, respectively, of our employee population as of June 25, 2022.

Competitive Compensation and Benefits

We provide competitive compensation, benefits, and wellness offerings to our employees. We have a strong pay for performance philosophy. We align executive compensation with our corporate strategies, business objectives and the creation of long-term value for our stockholders without encouraging unnecessary or excessive risk-taking.

Engagement and Development

We strive to create exceptional employee experiences. Our focus is on creating a space for employees to do their best work and feel valued and engaged. We also provide opportunities for employees to connect and use their time, talent, and resources to enhance the communities where we live and work. We have created multiple channels of communication between our Chief Executive Officer, or CEO, and our employees. We gather insights into successes, challenges, solutions to problems and what is top of mind for employees across the business through formal and informal channels.

Employees have various opportunities to learn though technical, compliance and other professional trainings. We offer career advancement opportunities to employees at Synaptics and are focused on leadership development.

Inclusion & Diversity

We believe that diverse teams are more innovative and productive. Our goal is to cultivate an environment that not only allows for, but also encourages, everyone to collaborate and participate equally to foster individual and company growth.

Information about our Executive Officers

The following table sets forth certain information regarding our executive officers as of August 12, 2022:

Name	Age	Position
Michael Hurlston	55	President and Chief Executive Officer
Dean Butler	40	Chief Financial Officer
Saleel Awsare	57	Senior Vice President and General Manager, PC & Peripherals Division
John McFarland	55	Senior Vice President, General Counsel and Secretary
Craig Stein	55	Senior Vice President and General Manager, Mobile and IoT Divisions

Michael Hurlston has been the President and Chief Executive Officer of our company since August 19, 2019. Prior to joining our company, Mr. Hurlston served as the Chief Executive Officer and a member of the Board of Directors of Finisar Corporation ("Finisar") from January 2018 to August 2019. Prior to joining Finisar, he served as Senior Vice President and General Manager of the Mobile Connectivity Products/Wireless Communications and Connectivity Division and held senior leadership positions in sales, marketing, and general management at Broadcom Limited ("Broadcom") and its predecessor corporation from November 2001 through October 2017. Prior to joining Broadcom in 2001, Mr. Hurlston held senior marketing and engineering positions at Oren Semiconductor, Inc., Avasem, Integrated Circuit Systems, Micro Power Systems, Exar and IC Works from 1991 until 2001. Mr. Hurlston is a member of the board of directors of Flex Ltd. Mr. Hurlston serves on the Board of Executive Trustees of the UC Davis Foundation and on the Dean's Executive Committee for the College of Engineering and the Dean's Advisory Counsel for the Graduate School of Management at the University of California, Davis. Mr. Hurlston holds Bachelor of Science and Master of Science degrees in Electrical Engineering and a Master of Business Administration degree from the University of California, Davis.

Dean Butler has been the Chief Financial Officer of our company since October 21, 2019. Prior to joining our company, Mr. Butler served as Vice President of Finance at Marvell Technology Group Ltd. (“Marvell”) from July 2016 to October 2019. Prior to joining Marvell, he served as Controller of the Ethernet Switching Division at Broadcom from January 2015 through July 2016. Prior to joining Broadcom, Mr. Butler held senior finance positions at Maxim Integrated from May 2007 to December 2014. Mr. Butler holds a Bachelor of Business Administration degree in Finance from the University of Minnesota Duluth.

Saleel Awsare has been the Senior Vice President and General Manager of our PC and Peripherals unit since July 2020. Previously, Saleel was the Senior Vice President and General Manager of our IoT Division from April 2019 to July 2020 and the Senior Vice President of Corporate Marketing & Investor Relations from December 2018 until April 2019. Prior to joining our company as Corporate Vice President and General Manager of Audio & Imaging Products in July 2017, he was President of Conexant Systems, LLC (“Conexant”) from March 2016 to July 2017, and Senior Vice President & General Manager of Audio & Imaging from April 2012 to March 2016. Synaptics acquired Conexant in July 2017. Prior to joining Conexant, Mr. Awsare served as President of Nuvoton Technology Corporation's (“Nuvoton”) U.S. operations and General Manager of Nuvoton’s audio and voice divisions from December 2008 to March 2012. Prior to joining Nuvoton, Mr. Awsare was the Executive Vice President and General Manager of mixed signal products for Winbond Electronics Corporation America (“Winbond”). Prior to joining Winbond, Mr. Awsare was a director of engineering for Information Storage Devices. Mr. Awsare is a member of the Board of Trustees of Stevens Institute of Technology. Mr. Awsare holds a Bachelor of Science degree in Electrical Engineering from Stevens Institute of Technology and a Master of Science degree in Engineering Management from Santa Clara University.

John McFarland has been the Senior Vice President, General Counsel and Secretary of our company since November 2013. Prior to joining our company, Mr. McFarland served for nine years as the Executive Vice President, General Counsel and Secretary of Magnachip Semiconductor. Mr. McFarland spent his early career at law firms in Palo Alto, California, and Seoul, Korea. Mr. McFarland holds a Bachelor of Arts degree in Asian Studies, conferred with highest distinction from the University of Michigan, and a Juris Doctor degree from the University of California, Los Angeles, School of Law.

Craig Stein has been the Senior Vice President and General Manager, Mobile & IoT Division since March 2021. Previously, Mr. Stein was the Senior Vice President of Product Development from September 2020 to March 2021. Prior to joining our company, Mr. Stein was Vice President & General Manager in the Data Center Products Group at Intel Corporation (“Intel”) and Head of Engineering & General Manager, Data Center Group from May 2016 to August 2018. Prior to joining Intel, Mr. Stein held key leadership positions at other semiconductor, technology, and transportation companies, including Chief Operating Officer and General Manager at Polara Engineering, Vice President of Research & Development at Knowles Corp., Director of Engineering at Broadcom, and Research & Development Manager at Hewlett Packard. Mr. Stein has five issued patents and five others pending. Mr. Stein holds a Bachelor of Science degree in Electrical Engineering from the University of California, Berkeley, and a Master of Science degree in Electrical Engineering from San Jose State University.

ITEM 1A. RISK FACTORS

You should carefully consider the following factors, together with all the other information included in this report, in evaluating our company and our business.

<u>Risks Related to Our Markets and Customers</u>

We currently depend on our solutions for the IoT, PC, and mobile product applications markets for a substantial portion of our revenue, and any downturn in sales of these products would adversely affect our business, revenue, operating results, and financial condition.

We currently depend on our solutions for the IoT, PC, and mobile product applications markets for a substantial portion of our revenue. Any downturn in sales of our products into any of these markets would adversely affect our business, revenue, operating results, and financial condition. Similarly, a softening of demand in any of these markets, or a slowdown of growth in any of these markets because of changes in customer preferences, the emergence of applications not including our solutions, or other factors would cause our business, operating results, and financial position to suffer.

A significant portion of our sales comes from one or more large customers, the loss of which could harm our business, financial condition, and operating results.

Historically, we have relied on a limited number of customers for a substantial portion of our total revenue. If we lost key customers, or if key customers reduced or stopped placing orders for our high-volume products, our financial results could be adversely affected. Sales to two direct customers each accounted for 10% or more of our net revenue in fiscal 2022. During fiscal 2022, we had four OEM customers that integrated our products into their products representing approximately 34% of our revenue; we sold to these customers primarily indirectly through multiple distributors. Significant reductions in sales to our largest customers, the loss of other major customers, or a general decrease in demand for our products within a short period of time could adversely affect our revenue, financial condition, and business.

We sell to contract manufacturers that serve our OEM customers. Any material delay, cancellation, or reduction of orders from any one or more of these contract manufacturers or the OEMs they serve could harm our business, financial condition, and operating results. The adverse effect could be more substantial if our other customers do not increase their orders or if we are unsuccessful in generating orders for our solutions with new customers. Many of these contract manufacturers sell to the same OEMs, and therefore our concentration with certain OEMs may be higher than with any individual contract manufacturer. Concentration in our customer base may make fluctuations in revenue and earnings more severe and make business planning more difficult.

We are exposed to industry downturns and cyclicality in our target markets that may result in fluctuations in our operating results.

The consumer electronics industry has experienced significant economic downturns at various times. These downturns are characterized by diminished product demand, accelerated erosion of average selling prices, production overcapacity, and increased inventory and credit risk. In addition, the consumer electronics industry is cyclical in nature. We seek to reduce our exposure to industry downturns and cyclicality by providing design and production services for leading companies in rapidly expanding industry segments. We may, however, experience substantial period-to-period fluctuations in future operating results because of general industry conditions or events occurring in the general economy.

We cannot assure you that our product solutions for new markets will be successful or that we will be able to continue to generate significant revenue from these markets.

Our product solutions may not be successful in new markets. Various target markets for our product solutions, such as IoT, may develop slower than anticipated or could utilize competing technologies. The markets for certain of these products depend in part upon the continued development and deployment of wireless and other technologies, which may or may not address the needs of the users of these products.

Our ability to generate significant revenue from new markets will depend on various factors, including the following:

- the development and growth of these markets;
- the ability of our technologies and product solutions to address the needs of these markets, the price and performance requirements of OEMs, and the preferences of end users; and
- our ability to provide OEMs with solutions that provide advantages in terms of size, power consumption, reliability, durability, performance, and value-added features compared with alternative solutions.

Many manufacturers of these products have well-established relationships with competitive suppliers. Our ongoing success in these markets will require us to offer better performance alternatives to other solutions at competitive costs. The failure of any of these target markets to develop as we expect, or our failure to serve these markets to a significant extent, will impede our sales growth and could result in substantially reduced earnings and a restructuring of our operations. We cannot predict the size or growth rate of these markets or the market share we will achieve or maintain in these markets in the future.

If we fail to maintain and build relationships with our customers, or our customers' products that utilize our solutions do not gain widespread market acceptance, our revenue may stagnate or decline.

We do not sell any products to end users and we do not control or influence the manufacture, promotion, distribution, or pricing of the products that incorporate our solutions. Instead, we design various solutions that our OEM customers incorporate into their products, and we depend on such OEM customers to successfully manufacture and distribute products incorporating our solutions and to generate consumer demand through marketing and promotional activities. As a result of this, our success depends almost entirely upon the widespread market acceptance of our OEM customers' products that incorporate our solutions. Even if our technologies successfully meet our customers' price and performance goals, our sales could decline or fail to develop if our customers do not achieve commercial success in selling their products that incorporate our solutions.

We must maintain our relationships with our existing customers and expand our relationships with OEMs in new markets. Our customers generally do not provide us with firm, long-term volume purchase commitments, opting instead to issue purchase orders that they can cancel, reduce, or delay, subject to certain limitations. In order to meet the expectations of our customers, we must provide innovative solutions on a timely and cost-effective basis. This requires us to match our design and production capacity with customer demand, maintain satisfactory delivery schedules, and meet performance goals. If we are unable to achieve these goals for any reason, our sales may decline or fail to develop, which would result in decreasing revenue.

In addition to maintaining and expanding our customer relationships, we must also identify areas of significant growth potential in other markets, establish relationships with OEMs in those markets, and assist those OEMs in developing products that incorporate our solutions. Our failure to identify potential growth opportunities in the markets in which we operate, particularly in the IoT market, or our failure to establish and maintain relationships with OEMs in those markets, would prevent our business from growing in those markets.

Risks Related to Our Supply Chain

We depend on third parties to maintain satisfactory manufacturing yields and delivery schedules, and their inability to do so could increase our costs, disrupt our supply chain, and result in our inability to deliver our products, which would adversely affect our operating results.

We depend on our contract manufacturers and semiconductor fabricators to maintain high levels of productivity and satisfactory delivery schedules at manufacturing and assembly facilities located primarily in Asia. We provide our contract manufacturers with six-month rolling forecasts of our production requirements. We generally do not, however, have long-term agreements with our contract manufacturers that guarantee production capacity, prices, lead times, or delivery schedules. In our fiscal 2022, we faced manufacturing capacity constraints as a result of the supply constraints and capacity shortages affecting the global semiconductor industry that materially limited our ability to meet our customers' demand forecasts, thereby limiting our potential revenue growth during the fiscal year. As a result of the supply shortages, we have entered into long-term capacity and pricing agreements with certain of our suppliers. If end customer demand declines, these long-term capacity agreements could result in significant write-downs of inventory. On occasion, customers require rapid increases in production, which can strain our resources and reduce our margins. Although we have been able to obtain increased production capacity from our third-party contract manufacturers in the past, there is no guarantee that our contract manufacturers will be able to increase production capacity to enable us to meet our customer demands in the future. Our contract manufacturers also serve other customers, a number of which have greater production requirements than we do. As a result, our contract manufacturers could determine to prioritize production capacity for other customers or reduce or eliminate deliveries to us on short notice.

Qualifying new contract manufacturers, and specifically semiconductor foundries, is time consuming and might result in unforeseen manufacturing and operations problems. We may also encounter lower manufacturing yields and longer delivery schedules in commencing volume production of new products that we introduce, which could increase our costs or disrupt our supply of such products. The loss of relationships with our contract manufacturers or assemblers, or their inability to conduct their manufacturing and assembly services for us as anticipated in terms of capacity, cost, quality, and timeliness could adversely affect our ability to fill customer orders in accordance with required delivery, quality, and performance requirements, and adversely affect our operating results.

Shortages of components and materials may delay or reduce our sales and increase our costs, thereby harming our operating results.

The inability to obtain sufficient quantities of components and other materials necessary for the production of our products could result in reduced or delayed sales or lost orders. Many of the materials used in the production of our products are available only from a limited number of foreign suppliers, particularly suppliers located in Asia. In most cases, neither we nor our contract manufacturers have long-term supply contracts with these suppliers. As a result, we are subject to increased costs, supply interruptions, and difficulties in obtaining materials. Our customers also may encounter difficulties or increased costs in obtaining the materials necessary to produce their products into which our product solutions are incorporated. Supply shortages in our fiscal 2022 have resulted in increased product costs, not all of which we passed on to our customers. Future shortages of materials and components, including potential supply constraints of silicon, could cause delayed shipments and customer dissatisfaction, which may result in lower revenue.

<u>Risks Related to Product Development</u>

We are subject to lengthy development periods and product acceptance cycles, which can result in development and engineering costs without any future revenue.

We provide solutions that are incorporated by OEMs into the products they sell. OEMs make the determination during their product development programs whether to incorporate our solutions or pursue other alternatives. This process requires us to make significant investments of time and resources in the design of solutions for our OEMs' products well before our customers introduce their products incorporating our interface solutions into the market, and before we can be sure that we will generate any significant sales to our customers or even recover our investment. During a customer's entire product development process, we face the risk that our interfaces will fail to meet our customer's technical, performance, or cost requirements, or that our products will be replaced by competitive products or alternative technological solutions. Even if we complete our design process in a manner satisfactory to our customer, the customer may delay or terminate its product development efforts. The occurrence of any of these events could cause sales to not materialize, be deferred, or be cancelled, which could adversely affect our operating results.

We face intense competition that could result in our losing or failing to gain market share and suffering reduced revenue.

We serve intensely competitive markets that are characterized by price erosion, rapid technological change, and competition from major domestic and international companies. This intense competition could result in pricing pressures, lower sales, reduced margins, and lower market share. Depressed economic conditions, a slowdown in the markets in which we operate, the emergence of new products not including our product solutions, rapid changes in the markets in which we operate, and competitive pressures may result in lower demand for our product solutions and reduced unit margins.

Some of our competitors have greater market recognition, larger customer bases, and substantially greater financial, technical, marketing, distribution, and other resources than we possess and that afford them greater competitive advantages. As a result, they may be able to devote greater resources to the promotion and sale of products, negotiate lower prices for raw materials and components, deliver competitive products at lower prices, and introduce new product solutions and respond to customer requirements more quickly than we can. Our competitive position could suffer if one or more of our customers determine not to utilize our custom engineered, total solutions approach and instead, decide to design and manufacture their own interfaces, contract with our competitors, or use alternative technologies.

If we do not keep pace with technological innovations, our products may not remain competitive and our revenue and operating results may suffer.

We operate in rapidly changing, highly competitive markets. Technological advances, the introduction of new products and new design techniques could adversely affect our business unless we are able to adapt to changing conditions. Technological advances could render our solutions less competitive or obsolete, and we may not be able to respond effectively to the technological requirements of evolving markets. Therefore, we may be required to expend substantial funds for and commit significant resources to enhancing and developing new technology, which may include purchasing advanced design tools and test equipment, hiring additional highly qualified engineering and other technical personnel, and continuing and expanding research and development activities on existing and potential solutions.

Our research and development efforts with respect to new technologies may not result in customer or market acceptance. Some or all of those technologies may not successfully make the transition from the research and development stage to cost-effective production as a result of technology problems, competitive cost issues, yield problems, and other factors. Even if we successfully complete a research and development effort with respect to a particular technology, our customers may decide not to introduce or may terminate products utilizing the technology for a variety of reasons, including difficulties with other suppliers of components for the products, superior technologies developed by our competitors and unfavorable comparisons of our solutions with these technologies, price considerations and lack of anticipated or actual market demand for the products.

Our business could be harmed if we are unable to develop and utilize new technologies that address the needs of our customers, or our competitors or customers develop and utilize new technologies more effectively or more quickly than we can. Any investments made to enhance or develop new technologies that are not successful could have an adverse effect on our net revenue and operating results.

We may not be able to enhance our existing product solutions and develop new product solutions in a timely manner.

Our future operating results will depend to a significant extent on our ability to continue to provide new solutions that compare favorably with alternative solutions on the basis of time to introduction, cost, performance, and end user preferences. Our success in maintaining existing customers, attracting new customers, and developing new business depends on various factors, including the following:

- innovative development of new solutions for customer products;
- utilization of advances in technology;
- maintenance of quality standards;
- performance advantages;
- efficient and cost-effective solutions; and
- timely completion of the design and introduction of new solutions.

Our inability to enhance our existing product solutions and develop new product solutions on a timely basis could harm our operating results and impede our growth.

If we become subject to product returns or claims resulting from defects in our products, we may incur significant costs resulting in a decrease in revenue.

We develop complex products in an evolving marketplace and generally warrant our products for a period of 12 months from the date of delivery. Despite testing by us and our customers, defects may be found in existing or new products. Synaptics handles product quality matters sustainably by working on a one-on-one basis with our customers. We have never formally recalled a product or had a mass defect that affected an entire product line. Nevertheless, manufacturing errors or product defects could result in a delay in recognition or loss of revenue, loss of market share, or failure to achieve market acceptance. Additionally, defects could result in financial or other damages to our customers, causing us to incur significant warranty, support, and repair costs, and diverting the attention of our engineering personnel from key product development efforts.

We must finance the growth of our business and the development of new products, which could have an adverse effect on our operating results.

To remain competitive, we must continue to make significant investments in research and development, marketing, and business development. Our failure to sufficiently increase our net revenue to offset these increased costs would adversely affect our operating results.

From time to time, we may seek additional equity or debt financing to provide for funds required to expand our business, including through acquisitions. We cannot predict the timing or amount of any such requirements at this time. If such financing is not available to us on satisfactory terms, we may be unable to expand our business or to develop new business at the rate desired and our operating results may suffer. If obtained, the financing itself carries risks including the following: (i) debt financing increases expenses and must be repaid regardless of operating results; and (ii) equity financing, including the issuance of convertible notes or additional shares in connection with acquisitions, could result in dilution to existing stockholders and could adversely affect the price of our common stock.

Risks Related to International Sales and Operations

Changes to import, export and economic sanction laws may expose us to liability, increase our costs and adversely affect our operating results.

As a global company headquartered in the U.S., we are subject to U.S. laws and regulations, including import, export, and economic sanction laws. These laws may include prohibitions on the sale or supply of certain products to embargoed or sanctioned countries, regions, governments, persons, and entities, may require an export license prior to the export of the controlled item, or may otherwise limit and restrict the export of certain products and technologies. Many of our customers, suppliers and contract manufacturers are foreign companies or have significant foreign operations. The imposition of new or additional economic and trade sanctions against our major customers, suppliers or contract manufacturers could result in our inability to sell to, and generate revenue from such customer, supplier, or contract manufacturer. As a result of restrictive export laws, our customers may also develop their own solutions to replace our products or seek to obtain a greater supply of similar or substitute products from our competitors that are not subject to these restrictions, which could material and adversely affect our business and operating results.

In addition, compliance with additional export regulations may result in increased costs to the company. Although we have an export compliance program, maintaining and adapting our export controls program to new and shifting regulations is expensive, time-consuming and requires significant management attention. Failure to comply with trade or economic sanctions could subject the company to legal liabilities and fines from the U.S. government. We must also comply with export restrictions and laws imposed by other countries affecting trade and investments. Although these restrictions and laws have not materially restricted our operations in the recent past, there is a significant risk that they could do so in the future, which would materially and adversely affect our business and operating results.

Changes to international trade policy and rising concerns of international tariffs, including tariffs applied to goods traded between the U.S. and China, could materially and adversely affect our business and results of operations.

Many of the materials used in the production of our products are available only from a limited number of foreign suppliers, particularly suppliers located in Asia. The imposition of tariffs against foreign imports of certain materials could make it more difficult or expensive for us or our OEMs to obtain sufficient quantities of components and other materials necessary for the production of our products or products which incorporate our product solutions. Any interruptions to supply could result in delay or cancellation of our products, which could adversely affect our business and operating results.

In addition, the institution of trade tariffs both globally and between the U.S. and China carry the risk that China's overall economic condition may be negatively affected, which could affect our China operations, including the manufacturing operations on which we rely in China. Further, imposition of tariffs could cause a decrease in the sales of our products to customers located in China or to our OEMs selling to customers in China, which could impact our business, revenue, and operating results.

International sales and manufacturing risks could adversely affect our operating results.

Our manufacturing and assembly operations are primarily conducted in Taiwan, China, and Korea by contract manufacturers and semiconductor fabricators. We have sales and logistics operations in Hong Kong, and sales and engineering design support operations in China, France, Germany, India, Israel, Japan, Korea, Poland, Switzerland, Taiwan, and the U.K. These international operations expose us to various economic, political, regulatory, and other risks that could adversely affect our operations and operating results, including the following:

- difficulties and costs of staffing and managing a multinational organization;
- unexpected changes in regulatory requirements;
- differing labor regulations;
- differing environmental laws and regulations, including in response to climate change;
- potentially adverse tax consequences;
- possible employee turnover or labor unrest;
- greater difficulty in collecting accounts receivable;
- the burdens and costs of compliance with a variety of foreign laws;
- the volatility of currency exchange rates;
- potentially reduced protection for intellectual property rights;
- political or economic instability in certain parts of the world; and
- natural disasters, including earthquakes or tsunamis.

If any of these risks associated with international operations materialize, our operations could significantly increase in cost or be disrupted, which would negatively affect our revenue and operating results.

Our operating results could be adversely affected by fluctuations in the value of the U.S. dollar against foreign currencies.

We transact business predominantly in U.S. dollars, and we invoice and collect our sales in U.S. dollars. A weakening of the U.S. dollar could cause our overseas vendors to require renegotiation of either the prices or currency we pay for their goods and services. In the future, customers may negotiate pricing and make payments in non-U.S. currencies. For fiscal 2022, approximately 13% of our costs were denominated in non-U.S. currencies, including British pounds, Canadian dollars, European Union euro, Hong Kong dollars, Indian rupee, New Taiwan dollars, Japanese yen, Korean won, Chinese yuan, Polish zloty, Israeli New Shekel, and Swiss francs.

If our overseas vendors or customers require us to transact business in non-U.S. currencies, fluctuations in foreign currency exchange rates could affect our cost of goods, operating expenses, and operating margins, and could result in exchange losses. In addition, currency devaluation could result in a loss to us if we hold deposits of that currency. Hedging foreign currencies can be difficult, especially if the currency is not freely traded. We cannot predict the impact of future exchange rate fluctuations on our operating results.

Risks Related to Our Employees

We depend on key personnel who would be difficult to replace, and our business will likely be harmed if we lose their services or cannot hire additional qualified personnel.

Our success depends substantially on the efforts and abilities of our senior management and other key personnel. The competition for qualified management and key personnel, especially engineers, is intense. Although we maintain nondisclosure covenants with most of our key personnel, and our key executives have change of control severance agreements, we do not have employment agreements with many of them. The loss of services of one or more of our key employees or the inability to hire, train, and retain key personnel, especially engineers and technical support personnel, and capable sales and customer-support employees outside the U.S., could delay the development and sale of our products, disrupt our business, and interfere with our ability to execute our business plan.

If we are unable to obtain stockholder approval of share-based compensation award programs or additional shares for such programs, we could be at a competitive disadvantage in the marketplace for qualified personnel or may be required to increase the cash element of our compensation program.

Competition for qualified personnel in our industry is extremely intense, particularly for engineering and other technical personnel. Our compensation program, which includes cash and share-based compensation award components, has been instrumental in attracting, hiring, motivating, and retaining qualified personnel. Our success depends on our continued ability to use our share-based compensation programs to effectively compete for engineering and other technical personnel and professional talent without significantly increasing cash compensation costs. In the future, if we are unable to obtain stockholder approval of our share-based compensation programs or additional shares for such programs, we could be at a competitive disadvantage in the marketplace for qualified personnel or we may be required to increase the cash elements of our compensation program to account for this disadvantage.

Risks Related to Our Intellectual Property

Our ability to compete successfully and continue growing as a company depends on our ability to adequately protect our proprietary technology and confidential information.

We protect our proprietary technology and confidential information through the use of patents, trade secrets, trademarks, copyrights, confidentiality agreements and other contractual provisions. The process of seeking patent protection is lengthy and expensive. Further, there can be no assurance that even if a patent is issued, that it will not be challenged, invalidated, or circumvented, or that the rights granted under the patents will provide us with meaningful protection or any commercial advantage. Failure to obtain trademark registrations could compromise our ability to fully protect our trademarks and brands and could increase the risk of challenge from third parties to our use of our trademarks and brands. Effective intellectual property protection may be unavailable or limited in some foreign countries in which we operate. In particular, the validity, enforceability and scope of protection of intellectual property in China, where we derive a significant portion of our net sales, and certain other countries where we derive net sales, are still evolving and historically, have not protected and may not protect in the future, intellectual property rights to the same extent as laws developed in the U.S.

We do not consistently rely on written agreements with our customers, suppliers, manufacturers, and other recipients of our technologies and products and therefore, some trade secret protection may be lost and our ability to enforce our intellectual property rights may be limited. Confidentiality and non-disclosure agreements that are in place may not be adequate to protect our proprietary technologies or may be breached by other parties. Additionally, our customers, suppliers, manufacturers, and other recipients of our technologies and products may seek to use our technologies and products without appropriate limitations. In the past, we did not consistently require our employees and consultants to enter into confidentiality, employment, or proprietary information and invention assignment agreements. Therefore, our former employees and consultants may try to claim some ownership interest in our technologies and products or may use our technologies and products competitively and without appropriate limitations. Unauthorized parties may attempt to copy or otherwise use aspects of our technologies and products that we regard as proprietary. Other companies, including our competitors, may independently develop technologies that are similar or superior to our technologies, duplicate our technologies, or design around our patents. If our intellectual property protection is insufficient to protect our intellectual property rights, we could face increased competition in the markets for our technologies and products.

We may pursue, and from time to time defend, litigation to enforce our intellectual property rights, to protect our trade secrets, and to determine the validity and scope of the proprietary rights of others. Litigation whether successful or unsuccessful, could result in substantial costs and diversion of resources, which could have a material adverse effect on our business, financial condition, and operating results.

Any claims that our technologies infringe the intellectual property rights of third parties could result in significant costs and have a material adverse effect on our business.

We cannot be certain that our technologies and products do not and will not infringe issued patents or other third-party proprietary rights. Any claims, with or without merit, could result in significant litigation costs and diversion of resources, including the attention of management, and could require us to enter into royalty or licensing agreements, any of which could have a material adverse effect on our business. There can be no assurance that such licenses could be obtained on commercially reasonable terms, if at all, or that the terms of any offered licenses would be acceptable to us. We may also have to pay substantial damages to third parties or indemnify customers or licensees for damages they suffer if the products they purchase from us or the technology they license from us violates any third-party intellectual property rights. An adverse determination in a judicial or administrative proceeding, or a failure to obtain necessary licenses to use such third-party technology could prevent us from manufacturing, using, or selling certain of our products, and there is no guarantee that we will be able to develop or acquire alternate non-infringing technology.

In addition, we license certain technology used in and for our products from third parties. These third-party licenses are granted with restrictions, and there can be no assurances that such third-party technology will remain available to us on commercially acceptable terms.

If third-party technology currently utilized in our products is no longer available to us on commercially acceptable terms, or if any third-party initiates litigation against us for alleged infringement of their proprietary rights, we may not be able to sell certain of our products and we could incur significant costs in defending against litigation or attempting to develop or acquire alternate non-infringing products, which would have an adverse effect on our operating results.

Risks Related to Acquisitions

Any acquisitions that we undertake could be difficult to integrate, disrupt our business, dilute stockholder value, and harm our operating results.

We expect to continue to pursue opportunities to acquire other businesses and technologies in order to complement our current solutions, expand the breadth of our markets, enhance our technical capabilities, or otherwise create growth opportunities. We cannot accurately predict the timing, size, and success of any currently planned or future acquisitions. We may be unable to identify suitable acquisition candidates or to complete the acquisitions of candidates that we identify. Increased competition for acquisition candidates or increased asking prices by acquisition candidates may increase purchase prices for acquisitions to levels beyond our financial capability or to levels that would not result in the returns required by our acquisition criteria. Acquisitions may also become more difficult in the future as we or others acquire the most attractive candidates. Unforeseen expenses, difficulties, and delays frequently encountered in connection with rapid expansion through acquisitions could inhibit our growth and negatively impact our operating results. If we make any future acquisitions, we could issue stock that would dilute existing stockholders' percentage ownership, incur substantial debt, assume contingent liabilities, or experience higher operating expenses.

We may be unable to effectively complete an integration of the management, operations, facilities, and accounting and information systems of acquired businesses with our own; efficiently manage, combine or restructure the operations of the acquired businesses with our operations; achieve our operating, growth, and performance goals for acquired businesses; achieve additional revenue as a result of our expanded operations; or achieve operating efficiencies or otherwise realize cost savings as a result of anticipated acquisition synergies. The integration of acquired businesses involves numerous risks, including the following:

- the potential disruption of our core business;
- the potential strain on our financial and managerial controls, reporting systems and procedures;
- potential unknown liabilities associated with the acquired business;
- costs relating to liabilities which we agree to assume;
- unanticipated costs associated with the acquisition;
- diversion of management’s attention from our core business;
- problems assimilating the purchased operations, technologies, or products;
- risks associated with entering markets and businesses in which we have little or no prior experience;
- failure of acquired businesses to achieve expected results;
- adverse effects on existing business relationships with suppliers and customers;
- failure to retain key customers, suppliers, or personnel of acquired businesses;
- the risk of impairment charges related to potential write-downs of acquired assets; and
- the potential inability to create uniform standards, controls, procedures, policies, and information systems.

We cannot assure you that we would be successful in overcoming problems encountered in connection with any acquisitions, and our inability to do so could disrupt our operations, result in goodwill or intangible asset impairment charges, and adversely affect our business.

Potential strategic alliances may not achieve their objectives, and the failure to do so could impede our growth.

We have entered, and we anticipate that we will continue to enter, into strategic alliances. We continually explore strategic alliances designed to enhance or complement our technology or to work in conjunction with our technology; to provide necessary know-how, components, or supplies; and to develop, introduce, and distribute products utilizing our technology. Certain strategic alliances may not achieve their intended objectives, and parties to our strategic alliances may not perform as contemplated. The failure of these alliances to achieve their objectives may impede our ability to introduce new products and enter new markets.

We may incur material environmental liabilities as a result of prior operations at an acquired company.

In connection with our acquisition in July 2017 of Conexant Systems, we agreed to assume certain environmental liabilities, including remediation of environmental impacts at a property formerly owned and operated by Conexant (the “Conexant Site”) and for potential future claims alleging personal injury or property damage related to the environmental impacts at and about the Conexant Site. We continue to incur costs to investigate and remediate the Conexant Site’s environmental impacts, and we are at risk for future personal injury and property damage claims related to the Conexant Site. Various federal, state, and local authorities regulate the release of hazardous substances into the environment and can impose substantial fines if our remediation efforts at or about the Conexant Site fail or are deemed inadequate. In addition, changes in laws, regulations and enforcement policies, the discovery of previously unknown contamination at the Conexant Site, the implementation of new technology at the Conexant Site, or the establishment or imposition of stricter federal, state, or local cleanup standards or requirements with respect to the Conexant Site could require us to incur additional costs in the future that could have a negative effect on our financial condition or results of operations.

Risks Factors Related to Our Indebtedness

Our indebtedness could adversely affect our financial condition or operating flexibility and prevent us from fulfilling our obligations outstanding under our credit agreement, our 4.000% senior notes due 2029, or the Senior Notes, and other indebtedness we may incur from time to time.

On March 11, 2021, we completed the offering of the Senior Notes in the aggregate principal amount of $400.0 million, with a corresponding amendment and restatement of our credit agreement, or as amended and supplemented, the Credit Agreement, with the lenders party thereto, or the Lenders, and Wells Fargo Bank, National Association, or the Administrative Agent, as administrative agent for the Lenders. The Senior Notes include a mandatory semi-annual payment of a 4.000% coupon. We are permitted under the indenture governing our Senior Notes and the Credit Agreement to incur additional debt under certain conditions, including additional secured debt. If new debt were to be incurred in the future, the related risks that we now face could intensify.

Our level of indebtedness could have important consequences on our future operations, including:

- making it more difficult for us to satisfy our payment and other obligations under the Notes, the Credit Agreement, or our other outstanding debt from time to time;
- risking an event of default if we fail to comply with the financial and other covenants contained in the Notes indenture or the Credit Agreement, which could result in the Senior Notes or any outstanding bank debt becoming immediately due and payable and could permit the lenders under the Credit Agreement to foreclose on the assets securing such bank debt;
- subjecting us to the risk of increased sensitivity to interest rate increases on our debt with variable interest rates, including the debt that we may incur under the Credit Agreement;
- the London interbank offered rate, or LIBOR, index is expected to be discontinued at the end of June 2023 and the replacement rate could be more volatile or more costly, resulting in a higher cost of borrowing under our Credit Agreement;
- reducing the availability of our cash flows to fund working capital, capital expenditures, acquisitions and other general corporate purposes, and limiting our ability to obtain additional financing for these purposes;
- limiting our flexibility in planning for, or reacting to, and increasing our vulnerability to, changes in our business, the industry in which we operate and the general economy; and
- placing us at a competitive disadvantage compared to our competitors that have less debt or are less leveraged.

Our business may not generate sufficient cash flow from operations and future borrowings may not be available to us under the Credit Agreement, the indenture governing the Senior Notes or otherwise in an amount sufficient to enable us to pay our debt or to fund our other liquidity needs.

The covenants in the Credit Agreement and Senior Notes impose restrictions that may limit our operating and financial flexibility.

The Credit Agreement includes certain covenants that limit (subject to certain exceptions) our ability to, among other things: (i) incur or guarantee additional indebtedness; (ii) incur or suffer to exist liens securing indebtedness; (iii) make investments; (iv) consolidate, merge or transfer all or substantially all of our assets; (v) sell assets; (vi) pay dividends or other distributions on, redeem or repurchase capital stock; (vii) enter into transactions with affiliates; (viii) amend, modify, prepay or redeem subordinated indebtedness; (ix) enter into certain restrictive agreements; and (x) engage in a new line of business. In addition, the Credit Agreement contains financial covenants that (i) require the ratio of the amount of our consolidated total indebtedness to consolidated EBITDA to be less than certain maximum ratio levels, and (ii) require the ratio of the amount of our consolidated EBITDA to consolidated interest expense to be greater than a certain minimum ratio level.

If we violate these covenants and are unable to obtain waivers, our debt under the Credit Agreement would be in default and could be accelerated, and could permit, in the case of secured debt, the lenders to foreclose on our assets securing the Credit Agreement. If the indebtedness is accelerated, we may not be able to repay our debt or borrow sufficient funds to refinance it. Even if we are able to obtain new financing, it may not be on commercially reasonable terms or on terms that are acceptable to us. If our debt is in default for any reason, our cash flows, results of operations or financial condition could be materially and adversely affected. In addition, complying with these covenants may also cause us to take actions that may make it more difficult for us to successfully execute our business strategy and compete against companies that are not subject to such restrictions.

General Risk Factors

Our business, results of operations and financial condition (including liquidity) and prospects may be materially and adversely affected by health epidemics, including the COVID-19 pandemic.

Public health threats, such as COVID-19, influenza and other highly communicable diseases or viruses, outbreaks of which have from time to time occurred in various parts of the world in which we operate could adversely impact our operations, as well as the operations of our suppliers and customers. Any of these public health threats and related consequences could adversely affect our operating results and financial condition.

COVID-19 has spread rapidly and enveloped most of the world, causing a global public health crisis. In March 2020, the World Health Organization characterized the COVID-19 outbreak as a pandemic. Governments in affected countries continue to periodically impose travel bans, quarantines, and other emergency public health measures. In response to the virus, national and local governments in numerous countries around the world have implemented substantial lockdown measures. These restrictions, and prevention and mitigation measures, have had an adverse impact on global economic conditions, which could materially adversely affect our future operations. Uncertainties regarding the economic impact of the COVID-19 outbreak have resulted in market turmoil, which could also negatively impact our business, financial condition, and cash flows.

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 disruptions to our operations caused by the COVID-19 outbreak may result in inefficiencies, delays and additional costs in our product development, sales, marketing, and customer service efforts that we cannot fully mitigate through remote or other alternative work arrangements. Also, some suppliers of materials used in the production of our products may be located in areas more severely or repeatedly impacted by COVID-19 and its variants, which could limit our ability to obtain sufficient materials for our products. In addition, the severe global economic disruption caused by COVID-19 may cause our customers and end-users of our products to suffer significant economic hardship, which could result in decreased demand for our products in the future and materially adversely affect our business, operating results, financial condition (including liquidity) and prospects.

If we fail to manage our growth effectively, our infrastructure, management, and resources could be strained, our ability to effectively manage our business could be diminished, and our operating results could suffer.

The failure to manage our planned growth effectively could strain our resources, which would impede our ability to increase revenue. We have increased the number of our solutions in the past and may plan to further expand the number and diversity of our solutions and their use in the future. Our ability to manage our planned diversification and growth effectively will require us to:

- successfully hire, train, retain, and motivate additional employees, including employees outside the U.S.;
- efficiently plan, expand, or cost-effectively reduce our facilities to meet headcount requirements;
- enhance our global operational, financial, and management infrastructure; and
- expand our development and production capacity.

In connection with the expansion and diversification of our product and customer base, we may increase our personnel and make other expenditures to meet demand for our expanding product offerings, including offerings in the IoT market, the PC applications market, and the mobile product applications market. Any increase in expenses or investments in infrastructure and facilities in anticipation of future orders that do not materialize would adversely affect our profitability. Our customers also may require rapid increases in design and production services that place an excessive short-term burden on our resources and the resources of our contract manufacturers. An inability to quickly expand our development, design or production capacity or an inability of our third-party manufacturers to quickly expand development, design, or production capacity to meet this customer demand could result in a decrease to our revenue or operating results. If we cannot manage our growth effectively, our business and operating results could suffer.

We face risks associated with security breaches or cyberattacks.

We face risks associated with security breaches or cyberattacks of our computer systems or those of our third-party representatives, vendors, and service providers. Although we have implemented security procedures and controls to address these threats, our systems may still be vulnerable to data theft, computer viruses, programming errors, ransomware, and other attacks by third parties, or similar disruptive problems. If our systems, or systems owned by third parties affiliated with our company, were breached or attacked, the proprietary and confidential information of our company, our employees and our customers could be disclosed and we may be required to incur substantial costs and liabilities, including the following: liability for stolen assets or information; fines imposed on us by governmental authorities for failure to comply with privacy laws or for disclosure of any personally identifiable information as a part of such attack; costs of repairing damage to our systems; lost revenue and income resulting from any system downtime caused by such breach or attack; loss of competitive advantage if our proprietary information is obtained by competitors as a result of such breach or attack; increased costs of cyber security protection; costs of incentives we may be required to offer to our customers or business partners to retain their business; damage to our reputation; and expenses to rectify the consequences of the security breach or cyberattack. In addition, any compromise of security from a security breach or cyberattack could deter customers or business partners from entering into transactions that involve providing confidential information to us. As a result, any compromise to the security of our systems could have a material adverse effect on our business, reputation, financial condition, and operating results.

If tax laws change in the jurisdictions in which we do business or if we receive a material tax assessment in connection with an examination of our income tax returns, our consolidated financial position, results of operations and cash flows could be adversely affected.

We are subject to U.S. federal, state, and foreign income taxes in the various jurisdictions in which we do business. In addition, we are required to pay U.S. federal taxes on the operating earnings of certain of our foreign subsidiaries. Our future effective tax rates and the value of our deferred tax assets could be adversely affected by changes in tax laws in the U.S. or in the foreign jurisdictions in which we operate. In addition, we are subject to the examination of our income tax returns by the tax authorities in the jurisdictions in which we do business. The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of highly complex tax laws. Our results have in the past, and could in the future, include favorable and unfavorable adjustments to our estimated tax liabilities in the period a determination of such estimated tax liability is made or resolved, upon the filing of an amended return, upon a change in facts, circumstances, or interpretation, or upon the expiration of a statute of limitation. While we believe we have adequately provided for reasonably foreseeable outcomes in connection with the resolution of income tax uncertainties, the resolution of these uncertainties in a manner inconsistent with our expectations could have a material impact on our consolidated financial position, result of operations, or cash flows.

We are subject to governmental laws, regulations and other legal obligations related to privacy and data protection.

We collect, use, and store personally identifiable information, or PII, as part of our business and operations. We are subject to federal, state, and international laws relating to the collection, use, retention, security, and transfer of PII. The legislative and regulatory framework for privacy and data protection issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. The cost of complying with and implementing these privacy-related and data governance measures could be significant as they may create additional burdensome security, business process, business record or data localization requirements. The theft, loss or misuse of PII collected, used, stored or transferred by us, our any inability, or perceived inability, to adequately address privacy and data protection concerns, even if unfounded, or our failure to comply with applicable laws, regulations, policies, industry standards, contractual obligations or other legal obligations, could result in additional cost and liability to us, including litigation, which could have an adverse effect on our business, operating results, cash flows, and financial condition.

Our charter documents and Delaware law could make it more difficult for a third-party to acquire us and discourage a takeover.

Our certificate of incorporation and the Delaware General Corporation Law contain provisions that may have the effect of making more difficult or delaying attempts by others to obtain control of our company, even when such attempts may be in the best interests of our stockholders. Our certificate of incorporation also authorizes our Board of Directors, without stockholder approval, to issue one or more series of preferred stock, which could have voting and conversion rights that adversely affect or dilute the voting power of the holders of our common stock. Delaware law also imposes conditions on certain business combination transactions with “interested stockholders.” Our certificate of incorporation divides our Board of Directors into three classes, with one class to stand for election each year for a three-year term after the election. The classification of directors tends to discourage a third-party from initiating a proxy solicitation or otherwise attempting to obtain control of our company and may maintain the incumbency of our Board of Directors, as this structure generally increases the difficulty of, or may delay, replacing a majority of directors. Our certificate of incorporation authorizes our Board of Directors to fill vacancies or newly created directorships. A majority of the directors then in office may elect a successor to fill any vacancies or newly created directorships, thereby increasing the difficulty of, or delaying a third-party’s efforts in, replacing a majority of directors.

The market price of our common stock has been and may continue to be volatile.

The trading price of our common stock has been and may continue to be subject to wide fluctuations in response to various factors, including the following:

- variations in our quarterly results;
- the financial guidance we may provide to the public, any changes in such guidance, or our failure to meet such guidance;
- changes in financial estimates by industry or securities analysts or our failure to meet such estimates;
- various market factors or perceived market factors, including rumors, whether or not correct, involving us, our customers, our suppliers, our competitors, or a potential acquisition of our company;
- announcements of technological innovations by us, our competitors, or our customers;
- introductions of new products or new pricing policies by us, our competitors, or our customers;
- acquisitions or strategic alliances by us, our competitors, or our customers;
- recruitment or departure of key personnel;
- the gain or loss of significant orders;
- the gain or loss of significant customers;
- market conditions in our industry, the industries of our customers, and the economy as a whole;
- short positions held by investors;
- new federal and state laws and regulations affecting our industry; and
- general financial market conditions or occurrences, including market volatility resulting from geopolitical risks, and rivalries, acts of war, terrorist attacks, cybersecurity attacks, health pandemics, financial market technological glitches and interruptions of trading activity.

In addition, stocks of technology companies have experienced extreme price and volume fluctuations that often have been unrelated or disproportionate to these companies’ operating performance. Public announcements by technology companies concerning, among other things, their performance, accounting practices, or legal problems could cause the market price of our common stock to decline regardless of our actual operating performance.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

Our principal executive offices, as well as our principal research and development, sales, marketing, and administrative functions, are located in San Jose, California, where we lease approximately 111,000 square feet of facilities. We also have research and development functions in leased offices in California, Georgia, and Massachusetts. Our two Asia/Pacific principal offices are located in leased offices in Hong Kong and Japan, where we have sales, operations, and research and development functions. We have leased facilities with logistics operations in Hong Kong and Taiwan, leased facilities with sales and support operations in China, Hong Kong, Japan, Korea, Switzerland, and Taiwan, and leased facilities with engineering design support operations in China, France, Germany, India, Israel, Japan, Korea, Poland, Switzerland, Taiwan, the U.K. and California, U.S.

ITEM 3. LEGAL PROCEEDINGS

We are party to various litigation matters and claims arising from time to time in the ordinary course of business. While the results of such matters cannot be predicted with certainty, we believe that the final outcome of such matters will not have a material adverse effect on our business, financial condition, results of operations or cash flows.

For further information regarding current legal proceedings, see Note 9 Leases, Commitments and Contingencies to the consolidated financial statements contained elsewhere in this report.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED ST OCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information on Common Stock

Our common stock has been listed on the Nasdaq Global Select Market (formerly the Nasdaq National Market) under the symbol "SYNA" since January 29, 2002. Prior to that time, there was no public market for our common stock.

Stockholders

As of August 12, 2022, there were approximately 120 holders of record of our common stock. The closing price of our common stock as quoted on the Nasdaq Global Select Market as of August 12, 2022 was $146.75.

Dividends

We have never declared or paid cash dividends on our common stock. We currently plan to retain all earnings to finance the growth of our business, make our debt payments, or purchase shares under our common stock repurchase program. Payments of any cash dividends in the future will depend on our financial condition, operating results, and capital requirements, as well as other factors deemed relevant by our Board of Directors.

Our Credit Agreement and the indenture governing our Senior Notes also place restrictions on the payment of any dividends. For a further description of the terms of the Credit Agreement and our Senior Notes indenture, see Note 8 Debt to the consolidated financial statements contained elsewhere in this report.

Stock-Based Compensation

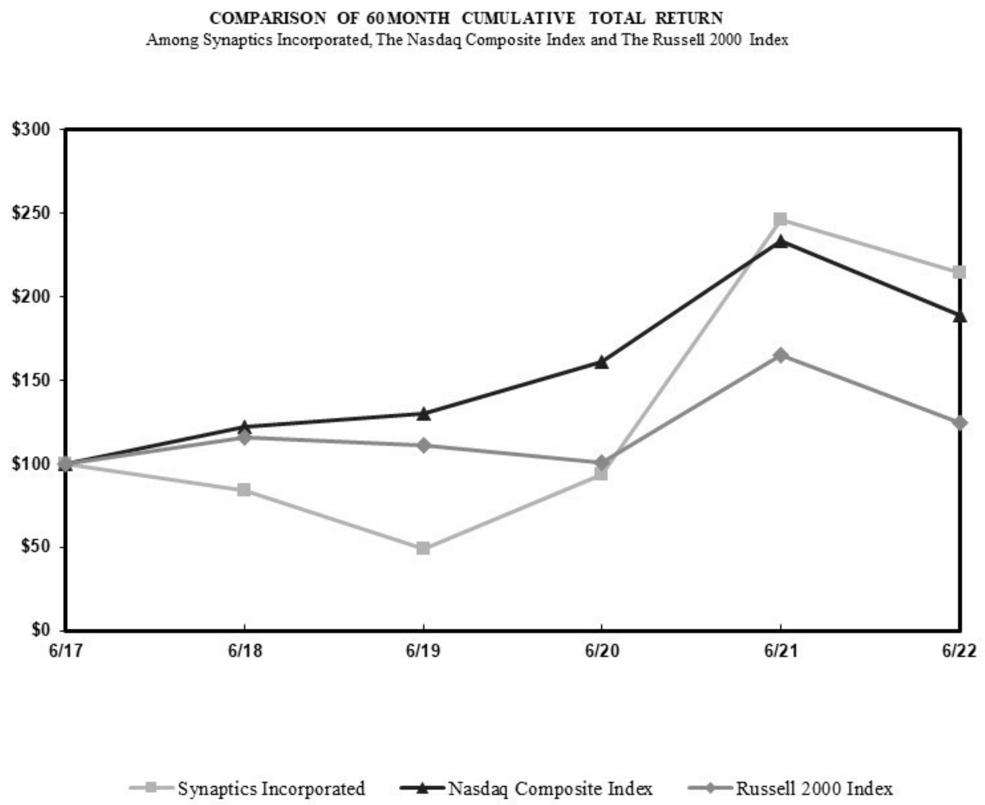
For information on securities authorized for issuance under our equity compensation plans, see Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Issuer Purchases of Equity Securities

From April 2005 through July 2021, our Board of Directors cumulatively authorized the repurchase of up to $1.8 billion for our common stock under our stock repurchase program, which expires in July 2025. As of the end of fiscal 2022, the remaining amount authorized for repurchase under our stock repurchase program was $577.4 million. During fiscal 2022, there were no repurchases under our stock repurchase program.

Performance Graph

The following line graph compares cumulative total stockholder returns for the five years ended June 25, 2022 for (i) our common stock, (ii) the Nasdaq Composite Index and (iii) the Russell 2000 Index. The graph assumes an investment of $100 on June 30, 2017. The calculations of cumulative stockholder return on the Nasdaq Composite Index and the Russell 2000 Index include reinvestment of dividends. The calculation of cumulative stockholder return on our common stock does not include reinvestment of dividends because we did not pay any dividends during the measurement period. The historical performance shown is not necessarily indicative of future performance.



The performance graph above shall not be deemed “filed” for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section. The performance graph above will not be deemed incorporated by reference into any filing of our company under the Exchange Act or the Securities Act.

ITEM 6. RESERVED

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements and Factors That May Affect Results

You should read the following discussion and analysis in conjunction with our financial statements and related notes contained elsewhere in this report. This discussion contains forward-looking statements that involve risks, uncertainties, and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of a variety of factors, including those set forth elsewhere in this report and under Item 1A. Risk Factors.

Impact of COVID-19

Although many of these restrictions and other containment measures implemented by governmental authorities in response to the COVID-19 pandemic have since been lifted or scaled back, ongoing surges of COVID-19 and its variants have resulted in a variety of responses in the many geographic locations in which we do business, from no actions taken to and up to and including the re-imposition of lockdowns and containment measures designed to mitigate or reduce the rapid spread of COVID-19 and its variants.

The health and wellbeing of our workforce is our highest priority, and a large number of our workforce has been vaccinated. Many of our employees that worked from home at the onset of COVID-19, or during subsequent lockdowns, have returned full-time or on a hybrid basis to our office environment. For those employees that have returned to the office, we continue to adhere to return to work protocols, based on guidance from local and global health organizations and applicable laws and regulations.

To date, we have not incurred significant disruptions to our business or a materially negative impact on our consolidated results of operations and financial condition from the COVID-19 outbreak and continue to believe our business will not be severely impacted as steps continue to be taken globally to mitigate the spread and vaccinate large portions of the population. However, if more infectious COVID-19 variants become resistant to the existing vaccines, we, our customer, and our suppliers could experience renewed and sustained business disruption.

We will continue to evaluate the impact to our business, consolidated results of operations, and financial condition and may take actions that we deem necessary or appropriate to respond to the ongoing pandemic.

Overview

We are a leading worldwide developer and fabless supplier of premium mixed signal semiconductor solutions changing the way humans engage with connected devices and data, engineering exceptional experiences throughout the home, at work, in the car and on the go. We believe our results to date reflect the combination of our customer focus and the strength of our intellectual property and our engineering know-how, which allow us to develop or engineer products that meet the demanding design specifications of our OEMs.

We recognize revenue when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to receive in exchange for those goods or services. All of our revenue, except an inconsequential amount, is recognized at a point in time, either on shipment or delivery of the product, depending on customer terms and conditions. For fiscal 2022, revenue from the IoT product applications market accounted for 63.3% of our net revenue, revenue from the PC product applications market accounted for 19.7% of our net revenue, and revenue from the mobile product applications market accounted for 17.0% of our net revenue.

Many of our customers have manufacturing operations in China, and many of our OEM customers have established design centers in Asia. With our expanding global presence, including offices in China, France, Germany, Hong Kong, India, Israel, Japan, Korea, Poland, Switzerland, Taiwan, the U.K., and the U.S., we are well positioned to provide local sales, operational, and engineering support services to our existing customers, as well as potential new customers, on a global basis.

Our manufacturing operations are based on a variable cost model in which we outsource all of our production requirements and generally drop ship our products directly to our customers from our contract manufacturers' facilities, eliminating the need for significant capital expenditures and allowing us to minimize our investment in inventories. This approach requires us to work closely with our contract manufacturers and semiconductor fabricators to ensure adequate production capacity to meet our forecasted volume requirements. As a result of recent supply constraints and capacity shortages affecting the global semiconductor industry, we have entered into long-term capacity and pricing agreements with some suppliers. We use third-party wafer manufacturers to supply wafers and third-party packaging manufacturers to package our proprietary ASICs. In certain cases, we rely on a single source or a limited number of suppliers to provide other key components of our products. Our cost of revenue includes all costs associated with the production of our products, including materials; logistics; amortization of intangibles related to acquired developed technology; backlog; supplier arrangements; manufacturing, assembly, royalties paid to third-party intellectual property providers and test costs paid to third-party manufacturers; and related overhead costs associated with our indirect manufacturing operations personnel. Additionally, we charge all warranty costs, losses on inventory purchase obligations, and write-downs to reduce the carrying value of obsolete, slow moving, and non-usable inventory to net realizable value, to cost of revenue.

Our gross margin generally reflects the combination of the added value we bring to our OEM customers' products by meeting their custom design requirements and the impact of our ongoing cost-improvement programs. These cost-improvement programs include reducing materials and component costs and implementing design and process improvements. Our newly introduced products may have lower margins than our more mature products, which have realized greater benefits associated with our ongoing cost-improvement programs. As a result, new product introductions may initially negatively impact our gross margin.

Our research and development expenses include costs for supplies and materials related to product development, as well as the engineering costs incurred to design ASICs and human experience solutions for OEM customers prior to and after our OEMs' commitment to incorporate those solutions into their products. In addition, we expense in-process research and development projects acquired as part of a business acquisition, which have not yet reached technological feasibility, and which have no foreseeable alternative future use. We continue to commit to the technological and design innovation required to maintain our position in our existing markets, and to adapt our existing technologies or develop new technologies for new markets.

Selling, general, and administrative expenses include expenses related to sales, marketing, and administrative personnel; internal sales and outside sales representatives' commissions; market and usability research; outside legal, accounting, and consulting costs; and other marketing and sales activities.

Acquired intangibles amortization, included in operating expenses, consists primarily of amortization of customer relationship and tradenames intangible assets recognized under the purchase method for business combinations.

Restructuring costs primarily reflect severance costs related to the restructuring of our operations to reduce operating expenses and gain efficiencies from our recent acquisitions. These headcount related costs were in cost of revenue, research and development, and selling, general and administrative expenses. See Note 15 Restructuring Activities to the consolidated financial statements contained elsewhere in this report.

Gain on sale of audio technology assets includes the sale of limited audio technology intangible assets. See below under "Divestiture".

Interest and other expense, net, primarily reflects interest expense on our Senior Notes, Term Loan Facility and revolving line of credit as well as the amortization of debt issuance costs and discount on our debt, partially offset by interest income earned on our cash, cash equivalents and short-term investments.

Gain from sale of equity investment relates to our sale of our equity method investment in OXi Technology Ltd. See Note 1 Organization and Summary of Significant Accounting Policies to the consolidated financial statements contained elsewhere in this report.

Acquisitions

DSP Group, Inc.

On August 30, 2021, we entered into an agreement and plan of merger with DSPG to acquire all of the equity of DSPG for $22.00 per share of common stock. The transaction closed on December 2, 2021, for an aggregate purchase consideration of $543.3 million. We financed the transaction through a combination of cash on hand and the Term Loan Facility. The results of DSPG are included in our consolidated financial statements for the period from December 3, 2021 through June 25, 2022. For further discussion of the DSPG acquisition, see Note 4 Acquisitions, Divestiture and Investment included in the consolidated financial statements contained elsewhere in this report.

DisplayLink

On July 17, 2020, we entered into a definitive agreement to acquire all of the equity interests in DisplayLink Corporation, or DisplayLink, a leader in high-performance video compression technology. The acquisition closed on July 31, 2020 for an aggregate purchase consideration of $444.0 million. For further discussion of the DisplayLink acquisition, see Note 4 Acquisitions, Divestiture and Investment included in the consolidated financial statements contained elsewhere in this report.

Broadcom

On July 2, 2020, we entered into definitive agreements with Broadcom to acquire certain assets and assume certain liabilities of, and obtain non-exclusive licenses relating to, Broadcom's existing Wi-Fi, Bluetooth and GPS/global navigation satellite system, or GNSS, products and business in the IoT market, or the Broadcom Business Acquisition, for an aggregate purchase consideration of $250.0 million in cash that closed on July 23, 2020. We also entered into certain transition agreements with Broadcom for a period of three years. For further discussion of the Broadcom Business Acquisition, see Note 4 Acquisitions, Divestiture and Investment included in the consolidated financial statements contained elsewhere in this report.

Divestitures

In December 2020, we completed the sale of limited audio technology intangible assets, received a fully-paid up perpetual license back from the buyer and, as an element of the transaction, licensed other audio technology intangible assets to the buyer under a fully-paid up perpetual license arrangement. Under the asset purchase agreement and the intellectual property license agreement, we received $35.0 million in cash. The gain on the sale of the audio technology assets was $34.2 million.

In December 2019, we entered into an asset purchase agreement with a third-party to sell the assets of our LCD, Touch Controller and Display Driver Integration, or TDDI, product line for LCD mobile displays. We retained our automotive TDDI product line and our discrete touch and discrete display driver product lines supporting LCD and organic light-emitting diode, or OLED, for the mobile market. The assets sold under the asset purchase agreement for cash consideration of $138.7 million and had a carrying value of approximately $33.6 million as of the closing date of the transaction in April 2020. The gain on sale of this portion of a product line was $105.1 million.

Critical Accounting Policies and Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles, or GAAP, requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, allowance for doubtful accounts, cost of revenue, inventories, product warranty, share-based compensation costs, provision for income taxes, deferred income tax asset, valuation allowances, uncertain tax positions, tax contingencies, goodwill, intangible assets, investments, and contingencies. We base our estimates on historical experience, applicable laws and regulations, and various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The methods, estimates, interpretations, and judgments we use in applying our most critical accounting policies can have a significant impact on the results that we report in our consolidated financial statements. The SEC considers an entity's most critical accounting policies to be those policies that are both most important to the portrayal of the entity's financial condition and results of operations and those that require the entity's most difficult, subjective, or complex judgments, often as a result of the need to make assumptions and estimates about matters that are inherently uncertain. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

Our revenue is primarily generated from the sale of ASIC chips, either directly to a customer or to a distributor. Revenue is recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to receive in exchange for those goods or services. All of our revenue, except an inconsequential amount, is recognized at a point in time, either on shipment or delivery of the product, depending on customer terms and conditions. We generally warrant our products for a period of 12 months from the date of sale and estimate probable product warranty costs at the time we recognize revenue as the warranty is considered an assurance warranty and not a performance obligation. Non-product revenue is recognized over the same period of time such performance obligations are satisfied. We then select an appropriate method for measuring satisfaction of the performance obligations.

Revenue from sales to distributors is recognized upon shipment of the product to the distributors (sell-in basis). Master sales agreements are in place with certain customers, and these agreements typically contain terms and conditions with respect to payment, delivery, warranty, and supply. In the absence of a master sales agreement, we consider a customer's purchase order or our standard terms and conditions to be the contract with the customer.

Our pricing terms are negotiated independently, on a stand-alone basis. In determining the transaction price, we evaluate whether the price is subject to refund or adjustment to determine the net consideration which we expect to receive for the sale of such products. In limited situations, we make sales to certain customers under arrangements where we grant stock rotation rights, price protection and price allowances; variable consideration associated with these rights is expected to be inconsequential. These adjustments and incentives are accounted for as variable consideration, classified as other current liabilities under the new revenue standard and are shown as customer obligations within Other Accrued Liabilities as disclosed in Note 1 Organization and Summary of Significant Accounting Policies to the consolidated financial statements contained elsewhere in this report. We estimate the amount of variable consideration for such arrangements based on the expected value to be provided to customers, and we do not believe that there will be significant changes to our estimates of variable consideration. When incentives, stock rotation rights, price protection, volume discounts, or price allowances are applicable, they are estimated and recorded in the period the related revenue is recognized. Stock rotation reserves are based on historical return rates applied to distributor inventory subject to stock rotation rights and recorded as a reduction to revenue with a corresponding reduction to cost of goods sold for the estimated cost of inventory that is expected to be returned and recorded as prepaid expenses and other current assets. In limited circumstances, we enter into volume-based tiered pricing arrangements and we estimate total unit volumes under such arrangement to determine the expected transaction price for the units expected to be transferred. Such arrangements are accounted for as contract liabilities within other accrued liabilities. Sales returns liabilities are recorded as refund liabilities within other accrued liabilities.

Our accounts receivable balance is from contracts with customers and represents our unconditional right to receive consideration from customers. Payments are generally due within three months of completion of the performance obligation and subsequent invoicing and, therefore, do not include significant financing components. To date, there have been no material impairment losses on accounts receivable.

We invoice customers and recognize all of our revenue, except an inconsequential amount, at a point in time, either on shipment or delivery of the product, depending on customer terms and conditions. We account for shipping and handling costs as fulfillment costs before the customer obtains control of the goods. We continue to account for collection of all taxes on a net basis.

We incur commission expense that is incremental to obtaining contracts with customers. Sales commissions (which are recorded in the selling, general and administrative expense line item in the consolidated statements of operations) are expensed when the product is shipped because such commissions are owed after shipment.

Inventory

We state our inventories at the lower of cost or net realizable value. We base our assessment of the ultimate realization of inventories on our projections of future demand and market conditions. Sudden declines in demand, rapid product improvements, or technological changes, or any combination of these factors can cause us to have excess or obsolete inventories. On an ongoing basis, we review for estimated excess, obsolete, or unmarketable inventories and write down our inventories to their net realizable value based on our forecasts of future demand and market conditions. If actual market conditions are less favorable than our forecasts, additional inventory write-downs may be required. The following factors influence our estimates: changes to or cancellations of customer orders, unexpected or sudden decline in demand, rapid product improvements, technological advances, and termination or changes by our OEM customers of any product offerings incorporating our product solutions.

Periodically, we purchase inventory from our contract manufacturers when a customer delays its delivery schedule or cancels its order. In those circumstances, we record a write-down, if necessary, to reduce the carrying value of the inventory purchased to its net realizable value. The effect of these write-downs is to establish a new cost basis in the related inventory, which we do not subsequently write up. We also record a liability and charge to cost of revenue for estimated losses on inventory we are obligated to purchase from our contract manufacturers when such losses become probable from customer delays, order cancellations, or other factors.

Business Combinations

We allocate the fair value of the purchase consideration of a business acquisition to the tangible assets, liabilities, and intangible assets acquired, including in-process research and development (“IPR&D”), based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. IPR&D is initially recorded at fair value as an intangible asset with an indefinite life and assessed for impairment thereafter. When an IPR&D project is completed, IPR&D is reclassified as an amortizable intangible asset and amortized over the asset’s estimated useful life. Our valuation of acquired assets and assumed liabilities requires significant estimates, especially with respect to intangible assets. The valuation of intangible assets requires that we use valuation techniques such as the income approach that includes the use of a discounted cash flow model, which includes discounted cash flow scenarios and requires the following significant estimates: future expected revenue, expenses, capital expenditures and other costs, and discount rates. We estimate the fair value based upon assumptions we believe to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. Estimates associated with the accounting for acquisitions may change as additional information becomes available regarding the assets acquired and liabilities assumed. Acquisition-related expenses and related restructuring costs are recognized separately from the business combination and are expensed as incurred.

Results of Operations

The following sets forth certain of our consolidated statements of income data for fiscal 2022 and 2021 along with comparative information regarding the absolute and percentage changes in these amounts (in millions, except percentages):

	2022	2021	$ Change	% Change
IoT product applications	$ 1,100.9	$ 612.9	$ 488.0	79.6 %
PC product applications	343.0	354.7	(11.7)	(3.3 %)
Mobile product applications	295.8	372.0	(76.2)	(20.5 %)
Net revenue	1,739.7	1,339.6	400.1	29.9 %
Gross margin	943.1	611.2	331.9	54.3 %
Operating expenses:				
Research and development	367.3	313.4	53.9	17.2 %
Selling, general, and administrative	168.4	144.9	23.5	16.2 %
Acquired intangibles amortization	38.7	32.7	6	18.3 %
Restructuring costs	18.3	7.4	10.9	147.3 %
Gain on sale of audio technology assets	-	(34.2)	34.2	(100.0 %)
Operating income	350.4	147.0	203.4	138.4 %
Interest and other income, net	3.0	2.9	0.1	3.4 %
Interest expense	(30.2)	(29.5)	(0.7)	2.4 %
Loss on extinguishment of debt	(8.1)	(0.3)	(7.8)	2600.0 %
Gain from sale and leaseback transaction	5.4	-	5.4	(100.0 %)
Income before provision for income taxes	320.5	120.1	200.4	166.9 %
Provision for income taxes	64.6	31.4	33.2	105.7 %
Equity investment loss	1.6	(9.1)	10.7	(117.6 %)
Net income	$ 257.5	$ 79.6	$ 177.9	223.5 %

The following sets forth certain of our consolidated statements of operations data as a percentage of net revenues for fiscal 2022 and 2021:

	2022	2021	Percentage Point Increase (Decrease)
IoT product applications	63.3 %	45.7 %	17.6 %
PC product applications	19.7 %	26.5 %	(6.8 %)
Mobile product applications	17.0 %	27.8 %	(10.8 %)
Net revenue	100.0 %	100.0 %	
Gross margin	54.2 %	45.6 %	8.6 %
Operating expenses:			
Research and development	21.1 %	23.4 %	(2.3 %)
Selling, general, and administrative	9.7 %	10.8 %	(1.1 %)
Acquired intangibles amortization	2.2 %	2.4 %	(0.2 %)
Restructuring costs	1.1 %	0.6 %	0.5 %
Gain on sale of audio technology assets	0.0 %	(2.6 %)	2.6 %
Operating income	20.1 %	11.0 %	9.1 %
Interest and other income, net	0.2 %	0.2 %	0.0 %
Interest expense	(1.7 %)	(2.2 %)	0.5 %
Loss on extinguishment of debt	(0.5 %)	0.0 %	(0.5 %)
Gain from sale and leaseback transaction	0.3 %	0.0 %	0.3 %
Income before provision for income taxes	18.4 %	9.0 %	9.4 %
Provision for income taxes	3.7 %	2.3 %	1.4 %
Equity investment loss	0.1 %	(0.7 %)	0.8 %
Net income	14.8 %	5.9 %	8.9 %

Fiscal 2022 Compared with Fiscal 2021

Net Revenue.

Net revenue was $1,739.7 million for fiscal 2022 compared with $1,339.6 million for fiscal 2021, an increase of $400.1 million, or 29.9%. Of our fiscal 2022 net revenue, $1,100.9 million, or 63.3% of net revenue was from the IoT product applications market, $343.0 million, or 19.7%, of net revenue was from the PC product applications market, and $295.8 million, or 17.0%, of net revenue was from the mobile product applications market. The overall increase in net revenue for fiscal 2022 was attributable to an increase of $488.0 million, or 79.6%, in net revenue from IoT product applications partially offset by a decrease of $11.7 million, or 3.3%, in net revenue from PC product applications and a decrease of $76.2 million, or 20.5%, in net revenue from mobile product applications. The increase in net revenue from IoT product applications was primarily driven by a 45% increase in the units sold as well as a 23.9% increase in average selling prices. The decrease in net revenue from PC product applications was driven by a 17.0% decrease in the units sold, partially offset by a 16.4% increase in average selling prices. The decrease in mobile product applications was driven by a 21.4% decrease in the units sold, partially offset by a 1.2% increase in average selling prices.

Gross Margin.

Gross margin as a percentage of net revenue was 54.2%, or $943.1 million, for fiscal 2022 compared with 45.6%, or $611.2 million, for fiscal 2021. The 860 basis point increase in gross margin was primarily due to a favorable product mix, product cost reductions, and a decrease in inventory fair value adjustments of $13.8 million, partially offset by a $7.5 million increase in acquired intangibles amortization charged to cost of revenue largely related to the acquisition of DSPG.

Because we sell our technology solutions in designs that are generally unique or specific to an OEM customer's application, gross margin varies on a product-by-product basis, making our cumulative gross margin a blend of our product specific designs. As a fabless manufacturer, our gross margin percentage is generally not materially impacted by our shipment volume. We charge losses on inventory purchase obligations and write-downs to reduce the carrying value of obsolete, slow moving, and non-usable inventory to net realizable value (including warranty costs) to cost of revenue.

Operating Expenses.

Research and Development Expenses. Research and development expenses increased $53.9 million, to $367.3 million, for fiscal 2022 compared with fiscal 2021. The increase in research and development expenses primarily reflected a $24.3 million increase in share-based compensation primarily due to a substantial increase in our stock price during the first three quarters of fiscal 2022, which also increased the share-based compensation associated with our phantom stock plan. Payroll and variable compensation costs increased by $22.6 million, which includes costs associated with research and development headcount from our DSPG acquisition, which closed on December 2, 2021.

Selling, General, and Administrative Expenses. Selling, general, and administrative expenses increased $23.5 million, to $168.4 million, for fiscal 2022 compared with fiscal 2021. The increase in selling, general and administrative expenses primarily reflected a $14.7 million increase in share-based compensation primarily due to a substantial increase in our stock price during the first three quarters of fiscal 2022, which also increased the share-based compensation associated with our phantom stock plan. Payroll and variable compensation costs increased by $11.1 million, which includes costs associated with selling, general and administrative headcount from our DSPG acquisition, which closed on December 2, 2021.

Acquired Intangibles Amortization. Acquired intangibles amortization reflects the amortization of intangibles acquired through recent acquisitions. See Note 7 Goodwill and Acquired Intangible Assets to the consolidated financial statements contained elsewhere in this report.

Restructuring Costs. Restructuring costs primarily reflect employee severance costs and facilities consolidation costs related to the restructuring of operations, improve efficiencies in our operational activities and gain synergies from acquisitions. These headcount-related costs included personnel in operations, research and development, and selling, general and administrative functions. Restructuring costs incurred in fiscal 2022 and 2021 were $18.3 million and $7.4 million, respectively. See Note 15 Restructuring Activities to the consolidated financial statements contained elsewhere in this report.

Gain on Sale of Audio Technology Assets. Gain on sale of audio technology assets includes the sale of certain intangible assets related to our audio products. See Note 1 Organization and Summary of Significant Accounting Policies to the consolidated financial statements contained elsewhere in this report.

Non-Operating Income.

Interest and Other Income, Net. Interest and other income, net was $3.0 million for fiscal 2022 compared with $2.9 million for fiscal 2021.

Interest Expense. Interest expense was $30.2 million and $29.5 million, in fiscal 2022 and 2021, respectively, which represents interest and amortization of debt issuance costs and discount on the $600 million Term Loan Facility issued in December 2021, interest and amortization of debt issuance costs on the $400.0 million principal amount of the Senior Notes issued in March 2021, as well as interest and amortization of debt issuance costs and discount on our $525 million principal amount convertible notes issued in June 2017 and settled in August 2021. See Note 8 Debt to the consolidated financial statements contained elsewhere in this report.

Loss on redemption of convertible notes. Loss on redemption of convertible notes represents the difference between fair value and the carrying value as of the redemption date of the convertible notes. The loss on redemption of convertible notes for fiscal years 2022 and 2021 was $8.1 million and $0.3 million, respectively.

Gain from sale and leaseback transaction. Gain from sale and leaseback transaction represents the gain from the sale of our headquarters buildings and properties located at 1109-1251 McKay Drive and 1140-1150 Ringwood Court, San Jose, California in the third quarter of fiscal 2022. The gain from the sale and leaseback transaction for fiscal 2022 was $5.4 million.

Provision for Income Taxes.

Our income tax provision was $64.6 million in fiscal 2022 and $31.4 million in fiscal 2021. The increase in our income tax provision in fiscal 2022 was primarily due to an increase in foreign profits and associated taxes, offset by the increase in tax benefits associated with stock-based compensation deductions and research and development credits. See “Note 13 Income Taxes” to the consolidated financial statements contained elsewhere in this report for the table reconciling the provision for income taxes from the federal statutory rate for fiscal 2022, 2021, and 2020.

It is reasonably possible that the amount of liability for unrecognized tax benefits may change within the next 12 months; an estimate of the range of possible changes could result in a decrease of $0.9 million to an increase of $6.9 million.

Fiscal 2021 Compared with Fiscal 2020.

For discussion related to the results of operations and changes in financial condition for fiscal 2021 compared to fiscal 2020, please refer to “Part II, Item 7. Management’s Discussion and Analysis of Financial Conditions and Results of Operations” in our fiscal 2021 Form 10-K, which was filed with the SEC on August 23, 2021.

Liquidity and Capital Resources

Our cash and cash equivalents were $824.0 million as of the end of fiscal 2022 compared with $836.3 million as of the end of fiscal 2021, a decrease of $12.3 million. This decrease reflected cash flows provided by operating activities of $462.7 million and $14.3 million of cash provided by financing activities, offset by $482.7 million of cash used in investing activities.

We consider almost all earnings of our foreign subsidiaries as not indefinitely reinvested overseas and have made appropriate provisions for income or withholding taxes, that may result from a future repatriation of those earnings. As of the end of fiscal 2022, $624.0 million of cash and cash equivalents was held by our foreign subsidiaries. If these funds are needed for our operations in the U.S., we will be able to repatriate these funds without any further impact on our tax provision.

Cash Flows from Operating Activities. For fiscal 2022, the $462.7 million in net cash provided by operating activities was primarily attributable to net income of $257.5 million plus adjustments for non-cash charges, including acquired intangibles amortization of $123.5 million, share-based compensation costs of $100.8 million, depreciation and amortization of $24.0 million, as well as other non-cash adjustments of $24.1 million, and a net change in operating assets and liabilities of $19.0 million. The net change in operating assets and liabilities related primarily to an $81.1 million increase in accounts receivable, an increase of $65.1 million in inventories, an increase of $23.2 million in accounts payable, an increase of $48.6 million in income taxes payable and an increase of $17.4 million in other accrued liabilities. Our days sales outstanding was 61 days in fiscal 2022 as compared to 63 days in fiscal 2021. Our inventory turns decreased to four times in fiscal 2022 from seven times from fiscal 2021.

For fiscal 2021, the $319.2 million in net cash provided by operating activities was primarily attributable to net income of $79.6 million plus adjustments for non-cash charges, including acquired intangibles amortization of $110.1 million, share-based compensation costs of $66.1 million, depreciation and amortization of $21.6 million, and a reduction of $34.2 million for gain on sale of audio technology assets, as well as other non-cash adjustments of $30.4 million, and a net change in operating assets and liabilities of $45.6 million. The net change in operating assets and liabilities related primarily to a $53.1 million decrease in inventories, a $32.2 million increase in accounts payable, and a $14.9 million increase in accrued compensation; partially offset by a $25.9 million increase in accounts receivable, a $17.2 million decrease in other accrued liabilities, and a $9.4 million increase in prepaid expenses and other current assets.

Cash Flows from Investing Activities. Net cash used in investing activities for fiscal 2022 was $482.7 million and net cash provided by investing activities in 2021 was $522.6 million. Net cash used in investing activities for fiscal 2022 consisted primarily of $501.1 million used for the acquisition of businesses, net of cash and cash equivalents acquired, and $31.1 million used for the purchases of property and equipment; partially offset by proceeds from sale and leaseback transaction of $55.9 million and $24.4 million in proceeds from sales of investments.

Net cash used in investing activities for fiscal 2021 consisted primarily of $626.5 million used for the acquisition of businesses, net of cash and cash equivalents acquired, and $21.1 million used for the purchases of capital assets; partially offset by $95.8 million in proceeds from sales of investments and $34.2 million in proceeds from sale of audio technology assets. Net cash provided by investing activities for fiscal 2020 consisted primarily of $138.7 million of proceeds from the sale of assets, partially offset by $16.3 million used for the purchases of capital assets.

Cash Flows from Financing Activities. Net cash provided by financing activities for fiscal 2022 was $14.3 million and for fiscal 2021 was $274.1 million. Our net cash provided by financing activities for fiscal 2022 was primarily attributable to $600.0 million in proceeds from issuance of debt and $15.2 million in proceeds from issuance of shares, partially offset by $3.0 million of payment on debt, $67.3 million used for payroll taxes for restricted stock units, or RSUs, market stock units, or MSUs, and performance stock units, or PSUs, and $505.6 million used for payment for redemption of convertible notes.

Our net cash provided by financing activities for fiscal 2021 was primarily attributable to $400.0 million in proceeds from issuance of debt and $27.8 million in proceeds from issuance of shares, partially offset by $100.0 million of payment on the line-of-credit borrowings, $28.2 million used for payroll taxes for restricted stock units, or RSUs, market stock units, or MSUs, and performance stock units, or PSUs, and $19.4 million used for payment for redemption of convertible notes. Our net cash provided by financing activities for fiscal 2020 was primarily attributable to $100.0 million proceeds from borrowing under the line-of-credit and $34.5 million of proceeds from issuance of shares, partially offset by $30.2 million used to repurchase shares of our common stock in the open market and $9.7 million used for payroll taxes for RSUs, MSUs and PSUs.

For discussion related to the statement of cash flows for fiscal 2020, please refer to “Part II, Item 7. Management’s Discussion and Analysis of Financial Conditions and Results of Operations” in our fiscal 2020 Form 10-K, which was filed with the SEC on August 21, 2020.

Common Stock Repurchase Program. As of the end of fiscal 2022, our Board of Directors had cumulatively authorized the purchase of up to an aggregate of $1.8 billion of our common stock pursuant to our common stock repurchase program through July 2025. The program authorizes us to purchase our common stock in the open market or in privately negotiated transactions, depending upon market conditions and other factors. The number of shares purchased, and the timing of purchases is based on the level of our cash balances, general business and market conditions, and other factors, including alternative investment opportunities. Common stock purchased under this program is held as treasury stock. From April 2005 through the end of fiscal 2022, we purchased 31,749,195 shares of our common stock in the open market for an aggregate cost of $1.2 billion. As of the end of fiscal 2022, we had $577.4 million, respectively, remaining under our common stock repurchase program.

Senior Debt. On March 11, 2021, we completed an offering of $400.0 million aggregate principal amount of 4.0% senior notes due 2029, or the Senior Notes, in a private offering. The Senior Notes were issued pursuant to an Indenture, dated as of March 11, 2021, or the Indenture, by and among our company, the guarantors named therein and Wells Fargo Bank, National Association, as trustee.

The Indenture provides that the Senior Notes will bear interest at a rate of 4.000% per annum, payable in cash semi-annually in arrears on December 15 and June 15 of each year, commencing on June 15, 2021. The Senior Notes will mature on June 15, 2029 and are fully and unconditionally guaranteed, jointly and severally, on a senior unsecured basis by each of our current and future domestic restricted subsidiaries that guarantee our obligations under our senior secured credit facilities.

Prior to June 15, 2024, we may redeem the Senior Notes, in whole or in part, at a redemption price of 100% of the principal amount thereof, plus a make-whole premium set forth in the Indenture, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

We may redeem some or all of the Senior Notes on or after June 15, 2024 at the redemption prices specified below, plus accrued and unpaid interest, if any, to, but excluding, the redemption date:

Year	Price
2024	102 %
2025	101 %
2026 and thereafter	100 %

In addition, at any time prior to June 15, 2024, we may redeem up to 40% of the aggregate principal amount of the Senior Notes at a redemption price equal to 104% of the principal amount thereof, plus accrued and unpaid interest, if any, to, but excluding, the applicable redemption date with the net cash proceeds from one or more equity offerings by us.

The Senior Notes are the general unsecured obligations of our company. The Senior Note guarantees are the senior unsecured obligations of each guarantor. Under certain circumstances, the guarantors may be released from their Senior Note guarantees without consent of the holders of Senior Notes. Under the terms of the Indenture, the Senior Notes rank equally in right of payment with all of our and the guarantors' existing and future senior indebtedness, and rank contractually senior in right of payment to our and the guarantors' future indebtedness and other obligations that are, by their terms, expressly subordinated in right of payment to the Senior Notes. The Senior Notes are effectively subordinated to our and the guarantors' existing and future secured indebtedness, including secured indebtedness under our senior secured credit facilities, to the extent of the value of the assets securing such indebtedness. The Senior Notes and guarantees are structurally subordinated to all existing and future indebtedness and liabilities (including trade payables) of our subsidiaries that do not guarantee the Senior Notes.

The Indenture contains covenants that, subject to exceptions and qualifications, among other things, limit our ability and the ability of our Restricted Subsidiaries (as defined in the Indenture) to (i) incur additional indebtedness and guarantee indebtedness; (ii) pay dividends or make other distributions or repurchase or redeem our company's or any parent's capital stock; (iii) prepay, redeem or repurchase certain indebtedness; (iv) issue certain preferred stock or similar equity securities; (v) make loans and investments; (vi) dispose of assets; (vii) incur liens; (viii) enter into transactions with affiliates; (ix) enter into agreements restricting its subsidiaries' ability to pay dividends; and (x) consolidate, merge or sell all or substantially all of its assets.

The Indenture contains customary events of default including, without limitation, failure to make required payments, failure to comply with certain agreements or covenants, cross-acceleration to certain other indebtedness in excess of specified amounts, certain events of bankruptcy and insolvency, and failure to pay certain judgments. An event of default under the Indenture will allow either the trustee or the holders of at least 25% in aggregate principal amount of the then outstanding Senior Notes to accelerate, or in certain cases, will automatically cause the acceleration of, the maturity of the principal, and accrued and unpaid interest, if any, on all outstanding Senior Notes.

Revolving Credit Facility. On March 11, 2021, we entered into a Second Amended and Restated Credit Agreement, or the Credit Agreement, with the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent to, among other changes, extend the maturity date of our senior secured revolving credit facility, to five years from the closing date of the amendment, increase the facility size from $200.0 million to $250.0 million, and replace the requirement to maintain a total debt to Consolidated EBITDA ratio (as defined in the Credit Agreement) of not more than 4.75 to 1.00 with a requirement to maintain a net total debt to Consolidated EBITDA ratio of not more than 3.75 to 1.00 provided that for the four fiscal quarters ending after the date of a material acquisition, such maximum leverage ratio shall be adjusted to 4.25 to 1.00, and thereafter 3.75 to 1.00, provided further, that such deemed increase pursuant to the foregoing shall not apply to more than two material acquisitions consummated during the term of the Credit Agreement.

The Credit Agreement provides for a revolving credit facility in a principal amount of up to $250 million, which includes a $20 million sublimit for letters of credit and a $25 million sublimit for swingline loans. Under the terms of the Credit Agreement, we may, subject to the satisfaction of certain conditions, request increases in the revolving credit facility commitments in an aggregate principal amount of up to $150 million to the extent existing or new lenders agree to provide such increased or additional commitments, as applicable. Future proceeds under the revolving credit facility are available for working capital and general corporate purposes. In March 2021 we used a portion of the proceeds from the Senior Notes described above to repay the $100.0 million outstanding borrowings on this revolving credit facility. As of the end of fiscal 2022, there was no balance outstanding under the revolving credit facility.

Borrowings under the revolving credit facility are required to be repaid in full by March 11, 2026. Debt issuance costs relating to the revolving credit facility of $1.6 million, included in non-current other assets on our consolidated balance sheet, are being amortized over 60 months.

Our obligations under the Credit Agreement are guaranteed by the material domestic subsidiaries of our company, subject to certain exceptions, who collectively with our company are referred to as the Credit Parties. The obligations of the Credit Parties under the Credit Agreement and the other loan documents delivered in connection therewith are secured by a first priority security interest in substantially all of the existing and future personal property of the Credit Parties, including, without limitation, 65% of the voting capital stock and 100% of the non-voting capital stock of certain of the Credit Parties' direct foreign subsidiaries, subject to certain exceptions.

The revolving credit facility bears interest at our election of a Base Rate plus an Applicable Margin or LIBOR plus an Applicable Margin. Swingline loans bear interest at a Base Rate plus an Applicable Margin. The Base Rate is a floating rate that is the greater of the Prime Rate, the Federal Funds Rate plus 50 basis points, or LIBOR plus 100 basis points. The Applicable Margin is based on a sliding scale that ranges from 0.25 to 100 basis points for Base Rate loans and 100 basis points to 175 basis points for LIBOR loans. We are required to pay a commitment fee on any unused commitments under the Credit Agreement which is determined on a leverage-based sliding scale ranging from 0.175% to 0.25% per annum. Interest and fees are payable on a quarterly basis. The LIBOR index is expected to be discontinued at the end of June 2023. Under our credit facility, when the LIBOR index is discontinued, we will switch to a comparable or successor rate as selected by us and the administrative agent, which may include the Secured Overnight Financing Rate, or SOFR.

Under the Credit Agreement, there are various restrictive covenants, including two financial covenants that limit the consolidated total leverage ratio, or leverage ratio, the consolidated interest coverage ratio, or interest coverage ratio, a restriction that permits accounts receivable financings provided that the aggregate unpaid amount of permitted accounts receivable financings are no more than the greater of $100 million and 50% of the amount of all accounts receivable of the company and specified subsidiaries, and other specific items. The leverage ratio is the ratio of debt as of the measurement date to Consolidated EBITDA, for the four consecutive quarters ending with the quarter of measurement. The current leverage ratio shall not exceed 3.75 to 1.00 provided that for the four fiscal quarters ending after the date of a material acquisition, such maximum leverage ratio shall be adjusted to 4.25 to 1.00, and thereafter 3.75 to 1.0. The interest coverage ratio is Consolidated EBITDA to interest expense for the four consecutive quarters ending with the quarter of measurement. The interest coverage ratio must not be less than 3.50 to 1.0 during the term of the Credit Agreement. As of the end of fiscal 2022, we remain in compliance with the restrictive covenants.

Term Loan Facility. In December 2021, we entered into that certain First Amendment and Lender Joinder Agreement to the Credit Agreement, to, among other things, establish a new $600.0 million incremental term loan facility, or the Term Loan Facility. The Term Loan Facility was advanced by certain existing and new lenders under the Credit Agreement to finance our DSPG acquisition and general corporate purposes. The Term Loan Facility matures on December 2, 2028. Principal on the Term Loan Facility is payable in equal quarterly installments on the last day of each March, June, September and December of each year, beginning December 31, 2021, at a rate of 1.00% per annum.

Borrowings under the Term Loan Facility will accrue interest at the London Interbank Offered Rate, or LIBOR, plus 2.25% or at the base rate plus 1.50%, subject to a 25 basis point step-down based on total gross leverage, and subject to a LIBOR floor of 50 basis points. The base rate is the highest of (i) the Federal Funds Rate plus 0.50%, (ii) the Wells Fargo Bank, National Association prime rate and (iii) the one-month LIBOR plus 1.00%. The Term Loan Facility contains customary representations and warranties, affirmative and negative covenants and events of default, in each case consistent with the Credit Agreement. The Term Loan Facility does not contain any financial covenant.

The Term Loan Facility is subject to a 1.00% prepayment premium in the event all or any portion of the Term Loan Facility is prepaid within the first 6 months in connection with a repricing transaction only. The Term Loan Facility is subject to customary mandatory prepayments, including, commencing June 30, 2023, an excess cash flow sweep, subject to customary step-downs and thresholds.

$100 Million Shelf Registration. We have registered an aggregate of $100.0 million of common stock and preferred stock for issuance in connection with acquisitions, which shares generally will be freely tradeable after their issuance under Rule 145 of the Securities Act unless held by an affiliate of the acquired company, in which case such shares will be subject to the volume and manner of sale restrictions of Rule 144 of the Securities Act.

Working Capital Needs. We believe our existing cash and cash equivalents, anticipated cash flows from operating activities, and available credit under our revolving credit facility will be sufficient to meet our working capital and other cash requirements and our debt service obligations, for at least the next 12 months. Our future capital requirements will depend on many factors, including our revenue, the effectiveness of vaccines on COVID-19 variants, including the deployment of those vaccines to help reduce the length, duration and severity of the COVID-19 pandemic, the timing and extent of spending to support product development efforts, costs associated with restructuring activities net of projected savings from those activities, costs related to protecting our intellectual property, the expansion of sales and marketing activities, timing of introduction of new products and enhancements to existing products, costs to ensure access to adequate manufacturing, costs of maintaining sufficient space for our workforce, the continuing market acceptance of our product solutions, our common stock repurchase program, and the amount and timing of our investments in, or acquisitions of, other technologies or companies. Further equity or debt financing may not be available to us on acceptable terms or at all. If sufficient funds are not available or are not available on acceptable terms, our ability to fund our future long-term working capital needs, take advantage of business opportunities or to respond to competitive pressures could be limited or severely constrained.

Based on our ability to access our cash and cash equivalents, our expected operating cash flows, and our other sources of cash, we do not currently anticipate the need to remit undistributed earnings of our foreign subsidiaries to meet our working capital and other cash requirements. While we have accrued taxes on almost all of our undistributed earnings of our foreign subsidiaries, if we did remit such earnings, we may be required to pay certain state and foreign taxes to repatriate these funds, which would impact our operating cash flows.

Contractual Obligations and Commercial Commitments. The following table sets forth a summary of our material contractual obligations and commercial commitments as of the end of fiscal 2022 (in millions):

	Payments due by period				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 Years**	**3-5 Years**	**Thereafter**
Long-term debt [(1)]	$ 1,282.5	$ 45.5	$ 95.0	$ 94.0	$ 1,048.0
Leases	71.6	6.3	19.5	17.3	28.5
Purchase obligations and other commitments [(2)]	247.3	121.4	106.9	19.0	—
Total	$ 1,601.4	$ 173.2	$ 221.4	$ 130.3	$ 1,076.5

(1) Represents the principal and interest payable through the maturity date of the underlying contractual obligation.
(2) Purchase obligations and other commitments include payments due for inventory purchase obligations with contract manufacturers, long-term software tool licenses, and other licenses.

The amounts in the table above exclude gross unrecognized tax benefits related to uncertain tax positions of $29.8 million. As of the end of fiscal 2022, we were unable to make a reasonably reliable estimate of when cash settlement with a taxing authority may occur in connection with our gross unrecognized tax benefit.

Off-Balance Sheet Arrangements

We do not have any transactions, arrangements, or other relationships with unconsolidated entities that are reasonably likely to materially affect our financial condition, revenues or expenses, results of operations, liquidity, or capital resources. We have no special purpose or limited purpose entities that provide off-balance sheet financing, liquidity, or market or credit risk support; engage in leasing, hedging, or research and development services; or have other relationships that expose us to liability that is not reflected in our financial statements.

Recently Issued Accounting Pronouncements Not Yet Effective

In October 2021, the FASB issued ASU No. 2021-08 "Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers." This ASU clarifies that an acquirer of a business should recognize and measure contract assets and contract liabilities in a business combination in accordance with Accounting Standards Codification Topic 606, Revenue from Contracts with Customers. ASU No. 2021-08 is effective for public business entities for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2022, with early application permitted. This ASU is applicable to the Company's fiscal year beginning June 25, 2023, and the impact of its adoption on the Company’s consolidated financial statements will depend on the contract assets and liabilities acquired in business combinations after that date.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to certain market risks in the ordinary course of our business. These risks primarily include:

Foreign Currency Exchange Risk

Our total net revenue for fiscal 2022 and 2021 was denominated in U.S. dollars. Costs denominated in foreign currencies were approximately 13% of our total costs in each of fiscal 2022 and 2021.

We face the risk that our accounts payable and acquisition-related liabilities denominated in foreign currencies will increase if such foreign currencies strengthen quickly and significantly against the U.S. dollar. Approximately 2% of our accounts payable were denominated in foreign currencies at June 25, 2022 and June 26, 2021.

To provide an assessment of the foreign currency exchange risk associated with our foreign currency exposures within revenue, cost, and operating expenses, we performed a sensitivity analysis to determine the impact that an adverse change in exchange rates would have on our financial statements. A hypothetical weighted-average change of 10% in currency exchange rates would have changed our operating income before taxes by approximately $17.4 million and our net income by approximately $24.3 million for fiscal 2022, assuming no offsetting hedge positions. However, this quantitative measure has inherent limitations. The sensitivity analysis disregards the possibility that U.S. dollar and other exchange rates can move in opposite directions and that gains from one currency may or may not be offset by losses from another currency.

Interest Rate Risk on Cash, Cash Equivalents

Our exposure to market risk for changes in interest rates relates primarily to our cash and cash equivalents and short-term investments. We do not use our investment portfolio for trading or other speculative purposes. There have been no significant changes in the maturity dates and average interest rates for our cash equivalents subsequent to fiscal 2022.

Interest Rate Risk on Debt

With our outstanding debt, we are exposed to various forms of market risk, including the potential losses arising from adverse changes in interest rates on our outstanding Term Loan, including changes that may result from implementation of new benchmark rates that replace LIBOR. See “Note 8. Debt” for further information. A hypothetical increase in the interest rate by 1% would result in an increase in annual interest expense by approximately $1.6 million.

We currently carry debt that relies on the six-month LIBOR as the benchmark rate. The six-month LIBOR is expected to cease publication after June 30, 2023. To the extent the six-month LIBOR ceases to exist, the Term Loan agreement contemplates an alternative benchmark rate without the need for any amendment thereto.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Reference is made to the financial statements, the report of our independent registered public accounting firm, and the notes thereto commencing at page F-1 of this report, which financial statements, report, and notes are incorporated herein by reference. Reference is also made to the quarterly results of operations included elsewhere in this report, which are incorporated herein by reference.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Conclusions Regarding Disclosure Controls and Procedures

Although many of the restrictions and containment measures implemented by governmental authorities in response to the COVID-19 pandemic have since been lifted or scaled back, some of our employees continue to work from home, or on a hybrid basis. Established business continuity plans were initiated in order to mitigate the impact to our control environment, operating procedures, data, and internal controls. The design of our processes and controls allow for remote execution with accessibility to secure data.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based on this evaluation, our Chief Executive Officer and Chief Financial Officer, as of June 25, 2022, concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) were effective to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

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

Based on our evaluation under the COSO 2013 framework, our management concluded that our internal control over financial reporting was effective, at the reasonable assurance level, as of June 25, 2022. The effectiveness of our internal control over financial reporting as of June 25, 2022 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report included herein on page F-2.

Changes in Internal Control Over Financial Reporting

Except as noted above, there were no changes in our internal control over financial reporting that occurred during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

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

ITEM 9B. OTHER INFORMATION

There were no items requiring reporting on Form 8-K that were not reported on Form 8-K during the fourth quarter of the year covered by this Form 10-K.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item relating to directors of our company and corporate governance is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2022 Annual Meeting of Stockholders. The information required by this Item relating to our executive officers is included in Item 1. Business – Information about our Executive Officers.

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

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

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement (particularly under the caption "Executive Compensation") to be filed pursuant to Regulation 14A of the Exchange Act for our 2022 Annual Meeting of Stockholders.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OW NERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement (particularly under the captions "Security Ownership of Principal Stockholders, Directors, and Officers" and "Executive Compensation—Stock-Based Compensation Plan Information") to be filed pursuant to Regulation 14A of the Exchange Act for our 2022 Annual Meeting of Stockholders.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement (particularly under the caption "Certain Relationships and Related Transactions") to be filed pursuant to Regulation 14A of the Exchange Act for our 2022 Annual Meeting of Stockholders.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement (particularly under the caption "Ratification of Appointment of Independent Auditor") to be filed pursuant to Regulation 14A of the Exchange Act for our 2022 Annual Meeting of Stockholders.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Financial Statements and Financial Statement Schedules

(1) Financial Statements are listed in the Index to Financial Statements on page F-1 of this report.

(b) Exhibits

Exhibit Number	Exhibit	Incorporated by Reference	
		To	Date Filed
2.1(a)[#]	Asset Purchase Agreement, dated December 18, 2019, by and among Synaptics Incorporated and Creative Legend Investments Ltd.	Quarterly Report on Form 10-Q	February 6, 2020
2.1(b)[#]	First Amendment to Asset Purchase Agreement, dated March 3, 2020, by and among Synaptics Incorporated and Creative Legend Investments Ltd.	Quarterly Report on Form 10-Q	May 7, 2020
2.1(c)	Second Amendment to Asset Purchase Agreement, dated April 15, 2020, by and among Synaptics Incorporated and Beijing OmniVision Technologies Co. Ltd.	Annual Report on Form 10-K	August 21, 2020
2.2[#]	Agreement and Plan of Merger, dated July 17, 2020, by and among Synaptics Incorporated, DisplayLink Corp., Falcon Merger Sub, Inc., the sellers who became parties thereto and Shareholder Representative Services LLC	Quarterly Report on Form 10-Q	November 5, 2020
2.3	Agreement and Plan of Merger by and among DSP Group, Inc., Synaptics Incorporated and Osprey Merger Sub, Inc., dated as of August 30, 2021.	Quarterly Report on Form 10-Q	November 4, 2021
3.1	Certificate of Incorporation	Quarterly Report on Form 10-Q	February 21, 2002
3.2	Certificate of Designation of Series A Junior Participating Preferred Stock	Registration Statement on Form 8-A	August 16, 2002
3.3	Third Amended and Restated Bylaws (amended and restated as of July 27, 2010)	Current Report on Form 8-K	August 2, 2010
3.4	Certificate of Amendment of Certificate of Incorporation of the registrant	Current Report on Form 8-K	December 7, 2004
3.5	Certificate of Amendment of Certificate of Incorporation of the registrant	Current Report on Form 8-K	October 22, 2010
4.1	Form of Common Stock Certificate	Annual Report on Form 10-K	September 12, 2002
4.2	Indenture, dated as of June 26, 2017, by and between the Company and Wells Fargo, National Association, as trustee	Current Report on Form 8-K	June 26, 2017
4.3	Form of 0.50% Convertible Senior Note due 2022	Current Report on Form 8-K	June 26, 2017
4.2	Description of Registrant's Securities	Annual Report on Form 10-K	August 23, 2019
4.3	Indenture, dated as of March 11, 2021, by and among the Company, the guarantors named therein and Wells Fargo Bank, National Association, as trustee	Current Report on Form 8-K	March 11, 2021
4.6	Form of 4.000% Senior Notes due 2029 (included in Exhibit 4.3).		

10.1(a)	Second Amended and Restated Credit Agreement, dated March 11, 2021, by and among Synaptics Incorporated, as borrower, the lenders from time to time party thereto, Wells Fargo Bank, National Association, as administrative agent, swingline lender and issuing lender, Wells Fargo Securities, LLC, as joint lead arranger and joint bookrunner, MUFG Union Bank, N.A. and BMO Capital Markets Corp., as joint lead arrangers, joint bookrunners and co-syndication agents	Current Report on Form 8-K	March 11, 2021
10.1(b)	First Amendment and Lender Joinder Agreement, dated as of December 2, 2021, by and among Synaptics Incorporated, the Lenders party thereto, and Wells Fargo Bank, National Association, as Administrative Agent	Current Report on Form 8-K	December 2, 2021
10.2(a)*	Synaptics Incorporated 2019 Inducement Equity Plan	Registration Statement on Form S-8	August 16, 2019
10.2(b)*	Form of Restricted Stock Unit Inducement Award Agreement for 2019 Inducement Equity Plan	Registration Statement on Form S-8	August 16, 2019
10.2(c)*	Form of Market Stock Unit Inducement Award Agreement for 2019 Inducement Equity Plan	Registration Statement on Form S-8	August 16, 2019
10.2(d)*	Form of Performance Stock Unit Inducement Award Agreement for 2019 Inducement Equity Plan	Registration Statement on Form S-8	August 16, 2019
10.3(a)*	2019 Equity and Incentive Compensation Plan	Registration Statement on Form S-8	November 1, 2019
10.3(b)*	Amended and Restated 2019 Equity and Incentive Compensation Plan	Current Report on Form 8-K	October 29, 2020
10.3(c)*	Amended and Restated 2019 Equity and Incentive Compensation Plan	Current Report on Form 8-K	October 28, 2021
10.3(d)*	Form of Restricted Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan (for awards granted before July 27, 2021)	Registration Statement on Form S-8	November 1, 2019
10.3(e)*	Form of Performance Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan (for awards granted before July 27, 2021)	Registration Statement on Form S-8	November 1, 2019
10.3(f)*	Form of Market Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan	Registration Statement on Form S-8	November 1, 2019
10.3(g)*	Form of Restricted Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan (for awards granted after July 27, 2021)	Annual Report on Form 10-K	August 23, 2021
10.3(h)*	Form of Performance Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan (for awards granted after July 27, 2021)	Annual Report on Form 10-K	August 23, 2021
10.3(i)*	Form of Market Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan	Quarterly Report on Form 10-Q	November 5, 2020
10.3(j)*	Form of Performance Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan	Quarterly Report on Form 10-Q	November 5, 2020

10.3(k)*	Form of Market Stock Unit Award Agreement under the 2019 Equity and Incentive Compensation Plan	Filed herewith	
10.4*	2019 Employee Stock Purchase Plan	Registration Statement on Form S-8	November 1, 2019
10.5(a)*	Amended and Restated 2010 Incentive Compensation Plan, as amended effective on October 30, 2018	Current Report on Form 8-K	November 1, 2018
10.5(b)*	Form of Non-Qualified Stock Option Agreement for 2010 Incentive Compensation Plan	Annual Report on Form 10-K	August 18, 2017
10.5(c)*	Form of Incentive Stock Option Agreement for 2010 Incentive Compensation Plan	Current Report on Form 8-K	October 22, 2010
10.5(d)*	Form of Deferred Stock Award Agreement for 2010 Incentive Compensation Plan	Annual Report on Form 10-K	August 18, 2017
10.5(e)*	Form of Deferred Stock Award Agreement for Market Stock Units for Amended and Restated 2010 Incentive Compensation Plan	Quarterly Report on Form 10-Q	February 8, 2018
10.5(f)*	Form of Deferred Stock Award Agreement for Performance Stock Units for Amended and Restated 2010 Incentive Compensation Plan	Quarterly Report on Form 10-Q	February 8, 2018
10.6*	Change of Control Severance Policy for Principal Executive Officers	Annual Report on Form 10-K	August 23, 2019
10.7*	Severance Policy for Principal Executive Officers	Annual Report on Form 10-K	August 23, 2019
10.8*	Form of Director and Officer Indemnification Agreement	Current Report on Form 8-K	May 17, 2016
10.9*	Employment Offer Letter, dated February 7, 2019 between the registrant and Kermit Nolan	Quarterly Report on Form 10-Q	May 9, 2019
10.10*	Written Description of the Synaptics Incorporated Retention Program Adopted May 6, 2019	Annual Report on Form 10-K	August 23, 2019
10.11*	Employment Offer Letter, dated August 1, 2019 between the registrant and Michael Hurlston	Quarterly Report on Form 10-Q	November 17, 2019
10.12*	Employment Offer Letter, dated October 7, 2019 between the registrant and Dean Butler	Quarterly Report on Form 10-Q	February 6, 2020
10.13*	Employment Offer Letter, dated February 26, 2020 between the registrant and Phil Kumin	Annual Report on Form 10-K	August 21, 2020
10.14*	Employment Offer Letter, dated December 4, 2018 between the registrant and Saleel Awsare	Annual Report on Form 10-K	August 21, 2020
10.17(a)	Purchase and Sale Agreement with Escrow Instructions, dated November 24, 2021, by and between Synaptics Incorporated and SBC & D Co., Inc. d/b/a South Bay Development Company	Current Report on Form 8-K	December 1, 2021
10.17(b)	First Amendment to Purchase and Sale Agreement with Escrow Instructions, dated December 20, 2021, by and between Synaptics Incorporated and SBC & D Co., Inc. d/b/a South Bay Development Company	Quarterly Report on Form 10-Q	February 3, 2022
21	List of Subsidiaries	Filed herewith	

23.1	Consent of Independent Registered Public Accounting Firm	Filed herewith
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a)	Filed herewith
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a)	Filed herewith
32.1##	Section 1350 Certification of Chief Executive Officer	Furnished herewith
32.2##	Section 1350 Certification of Chief Financial Officer	Furnished herewith
101.INS Inline	XBRL Instance Document	Filed herewith
101.SCH Inline	XBRL Taxonomy Extension Schema Document	Filed herewith
101.CAL Inline	XBRL Taxonomy Extension Calculation Linkbase Document	Filed herewith
101.DEF Inline	XBRL Taxonomy Extension Definition Linkbase Document	Filed herewith
101.LAB Inline	XBRL Taxonomy Extension Label Linkbase Document	Filed herewith
101.PRE Inline	XBRL Taxonomy Extension Presentation Linkbase Document	Filed herewith
104	Cover Page Interactive Data File – The cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document	Filed herewith

* Indicates a contract with management or compensatory plan or arrangement.

\# Certain schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule will be furnished as a supplement to the Securities and Exchange Commission upon request.

\## This certification is being furnished solely pursuant to 18 U.S.C. § 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Exchange Act or incorporated by reference in any registration statement of the Company filed under the Securities Act.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

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

SYNAPTICS INCORPORATED

Date: August 19, 2022

By: /s/ Michael E. Hurlston
Michael E. Hurlston
President and Chief Executive Officer

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/ Michael E. Hurlston Michael E. Hurlston	President and Chief Executive Officer, and Director (Principal Executive Officer)	August 19, 2022
/s/ *Dean Butler* Dean Butler	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	August 19, 2022
/s/ Kermit Nolan Kermit Nolan	Corporate Vice President and Chief Accounting Officer (Principal Accounting Officer)	August 19, 2022
/s/ Nelson C. Chan Nelson C. Chan	Chairman of the Board	August 19, 2022
/s/ Kiva A. Allgood Kiva A. Allgood	Director	August 19, 2022
/s/ Jeffrey D. Buchanan Jeffrey D. Buchanan	Director	August 19, 2022
/s/ Keith B. Geeslin Keith B. Geeslin	Director	August 19, 2022
/s/ Susan Hardman Susan Hardman	Director	August 19, 2022
/s/ Patricia Kummrow Patricia Kummrow	Director	August 19, 2022
/s/ Vivie Lee Vivie Lee	Director	August 19, 2022
/s/ James L. Whims James L. Whims	Director	August 19, 2022

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SYNAPTICS INCORPORATED AND SUBSIDIARIES

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Synaptics Incorporated:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Synaptics Incorporated and subsidiaries (the Company) as of June 25, 2022 and June 26, 2021, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the fiscal years in the three fiscal year period ended June 25, 2022, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of June 25, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of June 25, 2022 and June 26, 2021, and the results of its operations and its cash flows for each of the fiscal years in the three fiscal year period ended June 25, 2022, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 25, 2022 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, 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 consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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.

Critical Audit Matters

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

Valuation of inventories and losses on inventory purchase obligations

As discussed in Note 1 to the consolidated financial statements, the Company held $169.7 million of inventories as of June 25, 2022 which are stated at the lower of cost or net realizable value. The Company records a write-down for excess, obsolete or unmarketable inventories based on forecasts of future demand and market conditions. Additionally, a liability and a charge are recorded to cost of sales for estimated losses on inventory the Company is obligated to purchase from contract manufacturers when a customer delays its delivery schedule, cancels its order, or for other factors.

We identified the valuation of inventories associated with excess, obsolete or unmarketable inventories and losses on inventory purchase obligations as a critical audit matter. A higher degree of auditor judgment was required to evaluate the Company’s estimate of net realizable value for these inventories and losses on inventory purchase obligations. Specifically, there is a high degree of subjectivity in evaluating the effect of any unexpected or sudden declines in market demand which may result from changes to or cancellations of customer orders, rapid product improvements or technological advances, due to the nature of the evidence available related to these factors.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company’s process to develop the estimated net realizable value of inventory and recognition of losses related to outstanding inventory purchase obligations. For a selection of inventory items, we assessed the Company’s assumptions by comparing them to historical activity and demand forecasts. We also considered customer communications, as well as end user and third-party publications. For a sample of inventory items, we recalculated the required write-downs and losses and compared this to the recorded amounts. We confirmed with the Company’s significant vendors regarding outstanding purchase obligations of the Company. Additionally, we tested a sample of returns which resulted from quality related issues of the Company's products during the year and subsequent to period-end to evaluate if additional write-downs or losses were warranted.

Evaluation of certain intangible assets acquired through business combinations

As discussed in Note 4 to the consolidated financial statements, during the year ended June 25, 2022, the Company consummated a business combination for total consideration of $543.3 million. In connection with this acquisition, the Company recorded various intangible assets, which included developed technologies and customer relationships with an acquisition-date fair value of $150.0 million and $45.0 million, respectively.

We identified the evaluation of the fair values allocated to acquired developed technologies and certain customer relationship intangible assets as a critical audit matter. We performed sensitivity analyses to determine the significant assumptions used to value these acquired intangible assets, individually and in the aggregate. The fair value of these acquired intangible assets were sensitive to possible changes to the following key assumptions, requiring a high degree of auditor judgment and the use of valuation professionals with specialized skills and knowledge:

Developed technologies:

- Projected revenue
- Technology obsolescence

Customer relationship:

- Estimated customer ramp up periods

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's acquisition-date valuation processes, including controls related to the development of the key assumptions, as listed above. We evaluated the reasonableness of the Company's projected revenue, technology obsolescence, and estimated customer ramp up periods by comparing them to historical actual results of the acquired entities and certain peer and market participant data. We involved valuation professionals with specialized skills and knowledge, who assisted in:

- evaluating certain peer group and market participant data used in the assessment of projected revenue by assessing the appropriateness of the guideline comparable companies identified by management's specialist and checking the accuracy of certain peer group and market participant data

- assessing the reasonableness of technology obsolescence based on the nature of the technology acquired.

/s/ KPMG LLP

We have served as the Company's auditor since 2003.

Santa Clara, California
August 19, 2022

SYNAPTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions, except par value and share amounts)

	June 2022	June 2021
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 824.0	$ 836.3
Short-term investments	52.0	-
Accounts receivable, net of allowances of $6.0 and $5.8 at June 2022 and 2021, respectively	322.1	228.3
Inventories	169.7	82.0
Prepaid expenses and other current assets	35.6	33.1
Total current assets	1,403.4	1,179.7
Property and equipment, net	62.9	91.2
Goodwill	806.6	570.0
Acquired intangibles, net	390.0	301.5
Right-of-use assets	61.2	31.7
Non-current other assets	134.0	52.7
	$ 2,858.1	$ 2,226.8
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 141.8	$ 97.6
Accrued compensation	90.6	76.4
Income taxes payable	79.7	29.4
Other accrued liabilities	145.3	96.2
Current portion of long-term debt	6.0	-
Convertible notes, net	-	487.1
Total current liabilities	463.4	786.7
Long-term debt	975.7	394.4
Other long-term liabilities	152.6	78.5
Total liabilities	1,591.7	1,259.6
Commitments and contingencies		
Stockholders' Equity:		
Preferred stock:		
$0.001 par value; 10,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock:		
$0.001 par value; 120,000,000 shares authorized, 67,745,800 and 66,963,006 shares issued, and 39,621,179 and 35,331,903 shares outstanding, at June 2022 and 2021, respectively	0.1	0.1
Additional paid-in capital	924.1	1,391.5
Treasury stock: 28,124,621 and 31,631,103 common shares at June 2022 and 2021, respectively, at cost	(694.5)	(1,205.4)
Accumulated other comprehensive loss	(1.8)	-
Retained earnings	1,038.5	781.0
Total stockholders' equity	1,266.4	967.2
	$ 2,858.1	$ 2,226.8

See accompanying notes to consolidated financial statements.

SYNAPTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions, except per share amounts)

	Fiscal Year		
	2022	2021	2020
Net revenue	$ 1,739.7	$ 1,339.6	$ 1,333.9
Cost of revenue	796.6	728.4	790.8
Gross margin	943.1	611.2	543.1
Operating expenses:			
Research and development	367.3	313.4	302.5
Selling, general, and administrative	168.4	144.9	127.0
Acquired intangibles amortization	38.7	32.7	11.7
Restructuring costs	18.3	7.4	33.0
Gain on sale of audio technology assets	-	(34.2)	—
Total operating expenses	592.7	464.2	474.2
Operating income	350.4	147.0	68.9
Interest and other income	3.0	2.9	7.9
Interest expense	(30.2)	(29.5)	(22.5)
Loss on redemption of convertible notes	(8.1)	(0.3)	—
Gain from sale and leaseback transaction	5.4	—	—
Gain on sale of assets	—	—	105.1
Income before provision for income taxes and equity investment income (loss)	320.5	120.1	159.4
Provision for income taxes	64.6	31.4	38.6
Equity investment gain (loss)	1.6	(9.1)	(2.0)
Net income	$ 257.5	$ 79.6	$ 118.8
Net income per share:			
Basic	$ 6.60	$ 2.29	$ 3.54
Diluted	$ 6.33	$ 2.08	$ 3.41
Shares used in computing net income per share:			
Basic	39.0	34.8	33.6
Diluted	40.7	38.3	34.8

See accompanying notes to consolidated financial statements.

SYNAPTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	Fiscal Year		
	2022	2021	2020
Net income	$ 257.5	$ 79.6	$ 118.8
Other comprehensive loss			
Unrealized loss on available-for-sale securities	(1.8)	—	—
Comprehensive income	$ 255.7	$ 79.6	$ 118.8

See accompanying notes to consolidated financial statements.

SYNAPTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions, except share amounts)

	Common Stock		Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount					
Balance at June 2019	64,283,948	$ 0.1	$ 1,266.1	$ (1,192.4)	$ -	$ 582.6	$ 656.4
Net income	—	—	—	—	—	118.8	118.8
Issuance of common stock for share-based award compensation plans	1,587,700	—	34.5	—	—	—	34.5
Payroll taxes for deferred stock units	—	—	(9.7)	—	—	—	(9.7)
Purchases of treasury stock	—	—	—	(30.2)	—	—	(30.2)
Share-based compensation	—	—	49.3	—	—	—	49.3
Balance at June 2020	65,871,648	0.1	1,340.2	(1,222.6)	—	701.4	819.1
Net income	—	—	—	—	—	79.6	79.6
Issuance of common stock for share-based award compensation plans	1,091,358	—	27.8	—	—	—	27.8
Payroll taxes for deferred stock units	—	—	(17.5)	17.2	—	—	(0.3)
Purchases of treasury stock	—	—	(28.3)	—	—	—	(28.3)
Share-based compensation	—	—	69.3	—	—	—	69.3
Balance at June 2021	66,963,006	0.1	1,391.5	(1,205.4)	—	781.0	967.2
Net income	—	—	—	—	—	257.5	257.5
Other comprehensive loss	—	—	—	—	(1.8)	—	(1.8)
Issuance of common stock for share-based award compensation plans	782,794	—	15.2	—	—	—	15.2
Treasury stock issued for redemption of convertible notes	—	—	(517.8)	510.9	—	—	(6.9)
Payroll taxes for deferred stock units	—	—	(67.3)	—	—	—	(67.3)
Share-based compensation attributable to acquisition	—	—	1.7	—	—	—	1.7
Share-based compensation	—	—	100.8	—	—	—	100.8
Balance at June 2022	67,745,800	$ 0.1	$ 924.1	$ (694.5)	$ (1.8)	$ 1,038.5	$ 1,266.4

See accompanying notes to consolidated financial statements.

SYNAPTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Fiscal Year		
	2022	2021	2020
Cash flows from operating activities			
Net income	$ 257.5	$ 79.6	$ 118.8
Adjustments to reconcile net income to net cash provided by operating activities:			
Share-based compensation costs	100.8	66.1	49.3
Depreciation and amortization	24.0	21.6	26.7
Acquired intangibles amortization	123.5	110.1	51.4
Gain on sale of audio technology assets	—	(34.2)	—
Gain on sale of assets	—	—	(105.1)
Gain on sale of property and equipment and sale and leaseback transaction	(5.4)	—	(1.2)
Loss on redemption of convertible notes	8.1	0.3	—
Deferred taxes	(29.7)	(5.2)	2.7
Amortization of convertible debt discount and issuance costs	1.6	19.2	18.3
Amortization of debt issuance costs	1.8	0.6	0.6
Amortization of cost of development services	10.0	9.2	—
Acquired in-process research and development	—	—	2.4
Equity investment (gain) loss	(1.6)	9.1	2.0
Other	(1.3)	—	3.7
Foreign currency remeasurement (gain) loss	(7.6)	(2.8)	0.4
Changes in operating assets and liabilities, net of acquisitions:			
Accounts receivable, net	(81.1)	(25.9)	31.0
Inventories	(65.1)	53.1	43.0
Prepaid expenses and other current assets	6.9	(9.4)	(2.9)
Other assets	25.8	—	3.9
Accounts payable	23.2	32.2	(36.2)
Accrued compensation	5.3	14.9	29.1
Income taxes payable	48.6	(2.1)	13.8
Other accrued liabilities	17.4	(17.2)	(29.9)
Net cash provided by operating activities	462.7	319.2	221.8
Cash flows from investing activities			
Proceeds from sale of assets	55.9	—	138.7
Purchase of in-process research and development	—	—	(2.5)
Acquisition of businesses, net of cash and cash equivalents acquired	(501.1)	(626.5)	—
Advance payment on intangible assets	(30.0)	—	—
Proceeds from sale of audio technology assets	—	34.2	—
Proceeds from sales of investments	24.4	95.8	—
Purchase of short-term securities	(5.8)	—	—
Purchases of property and equipment	(31.1)	(21.1)	(16.3)
Proceeds from sale of equity method investment	5.0	—	—
Cost method investment	-	(5.0)	—
Net cash provided by (used in) investing activities	(482.7)	(522.6)	119.9
Cash flows from financing activities			
Proceeds from issuance of debt	600.0	400.0	—
Proceeds from borrowings under line-of-credit	—	—	100.0
Payment on line of credit borrowings and debt	(3.0)	(100.0)	—
Purchases of treasury stock	—	—	(30.2)
Refundable deposit paid to vendor	(16.6)	—	—
Return of deposit received from vendor	2.8	—	—
Proceeds from issuance of shares	15.2	27.8	34.5
Payment of debt issuance costs	(11.2)	(6.1)	(0.7)
Payment for redemption of convertible notes	(505.6)	(19.4)	—
Payroll taxes for deferred stock and market stock units	(67.3)	(28.2)	(9.7)
Net cash provided by financing activities	14.3	274.1	93.9
Effect of exchange rate changes on cash and cash equivalents	(6.6)	2.2	—
Net increase in cash and cash equivalents	(12.3)	72.9	435.6
Cash and cash equivalents at beginning of year	836.3	763.4	327.8
Cash and cash equivalents at end of year	$ 824.0	$ 836.3	$ 763.4
Supplemental disclosures of cash flow information			
Cash paid for interest	$ 25.0	$ 9.6	$ 3.7
Net cash paid for taxes	$ 42.0	$ 39.7	$ 18.9
Cash refund on taxes	$ 3.7	$ 0.3	$ 1.3
Non-cash investing and financing activities:			
Unpaid property, plant and equipment	$ 3.6	$ 0.8	$ 1.2

See accompanying notes to consolidated financial statements.

1. Organization and Summary of Significant Accounting Policies

Organization and Basis of Presentation

We are a leading worldwide developer and fabless supplier of premium mixed signal semiconductor solutions changing the way humans engage with connected devices and data, engineering exceptional experiences throughout the home, at work, in the car and on the go. Our current served markets include Internet of Things, or IoT, personal computer, or PC, and Mobile. We deliver complete chip, firmware and software semiconductor solutions that allow our customers to seamlessly integrate advanced functions into their end products.

The consolidated financial statements are presented in accordance with U.S. generally accepted accounting principles, or U.S. GAAP, and include our financial statements and those of our wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated upon consolidation. Certain reclassifications have been made to the amounts for prior years in order to conform to the current year's presentation

Our fiscal year is the 52- or 53-week period ending on the last Saturday in June. The fiscal years presented in this report were 52-week periods ended June 25, 2022, June 26, 2021 and June 27, 2020.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue, allowance for doubtful accounts, cost of revenue, inventories, loss on purchase commitments, product warranty, accrued liabilities, share-based compensation costs, provision for income taxes, deferred income tax asset valuation allowances, uncertain tax positions, goodwill, intangible assets, investments, and loss contingencies. We base our estimates on historical experience, applicable laws and regulations, and various other assumptions that we believe to be reasonable under the circumstances, including our expectations regarding the potential impacts on our business of the COVID-19 pandemic, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Cash Equivalents and Investments

Cash equivalents consist of highly liquid investments with original maturities of three months or less at the time of purchase. Our cash equivalents as of the end of fiscal 2022 and 2021 consisted of bank deposits and money market funds with a fair value of $824.0 million and $836.3 million, respectively.

Short-Term Investments

We classify our investments in debt securities as available-for-sale and record these investments at fair value. Investments with an original maturity of three months or less at the date of purchase are considered cash equivalents, while all other investments are classified as short-term based on management's intent and ability to use the funds in current operations. Unrealized gains and losses are reported as a component of other comprehensive income (loss). Realized gains and losses are determined based on the specific identification method, and are reflected as other income (expense), net in our Consolidated Statements of Operations.

We regularly review our investment portfolio to identify and evaluate investments that have indicators of possible impairment. Factors considered in determining whether a loss is other-than-temporary include, but are not limited to: the length of time and extent a security's fair value has been below its cost, the financial condition and near-term prospects of the investee, the credit quality of the security's issuer, likelihood of recovery and our intent and ability to hold the security for a period of time sufficient to allow for any anticipated recovery in value. For our debt instruments, we also evaluate whether we have the intent to sell the security or it is more likely than not that we will be required to sell the security before recovery of its cost basis.

Fair Value Measurements

We apply fair value accounting for all financial assets and liabilities that are required to be recognized or disclosed at fair value in the Consolidated Financial Statements. Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities, we consider the principal or most advantageous market in which we would transact, and the market-based risk measurements or assumptions that market participants would use in pricing the asset or liability, such as inherent risk, transfer restrictions and credit risk. The carrying amounts reported in the consolidated financial statements approximate the fair value for cash, accounts receivable, accounts payable and accrued liabilities due to their short-term nature.

Intangible assets, property and equipment, and goodwill are measured at fair value on a non-recurring basis if impairment is indicated. The interest rate on our bank debt is variable, which is subject to change from time to time to reflect a market interest rate; accordingly, the carrying value of our bank debt approximates fair value.

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash equivalents, investments, and accounts receivable. Our investment policy, which is predicated on capital preservation and liquidity, limits investments to U.S. government treasuries and agency issues, taxable securities, and municipal issued securities with a minimum rating of investment grade by the rating agencies.

We sell our products to contract manufacturers that provide manufacturing services for OEMs, to some OEMs directly, and to distributors. We extend credit based on an evaluation of a customer’s financial condition, and we generally do not require collateral.

The following customers accounted for more than 10% of our accounts receivable balance as of the end of fiscal 2022 and 2021:

	2022	2021
Customer A	17%	15%
Customer B	15%	12%

Other Concentrations

Our products include certain components that are currently single sourced. We believe other vendors would be able to provide similar components, however, the qualification of such vendors may require additional lead time. In order to mitigate any potential adverse impact from a supply disruption, we strive to maintain an adequate supply of critical single-sourced components.

Revenue Recognition

Our revenue is primarily generated from the sale of ASIC chips, either directly to a customer or to a distributor. Revenue is recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to receive in exchange for those goods or services. All of our revenue, except an inconsequential amount, is recognized at a point in time, either on shipment or delivery of the product, depending on customer terms and conditions. Non-product revenue is recognized over the same period of time such performance obligations are satisfied. We then select an appropriate method for measuring satisfaction of the performance obligations.

Revenue from sales to distributors is recognized upon shipment of the product to the distributors (sell-in basis). Master sales agreements are in place with certain customers, and these agreements typically contain terms and conditions with respect to payment, delivery, warranty and supply. In the absence of a master sales agreement, we consider a customer's purchase order or our standard terms and conditions to be the contract with the customer.

Our pricing terms are negotiated independently, on a stand-alone basis. In determining the transaction price, we evaluate whether the price is subject to refund or adjustment to determine the net consideration which we expect to receive for the sale of such products. In limited situations, we make sales to certain customers under arrangements where we grant stock rotation rights, price protection and price allowances; variable consideration associated with these rights is expected to be inconsequential. These adjustments and incentives are accounted for as variable consideration, classified as other current liabilities under the revenue standard and are shown as customer obligations in other accrued liabilities on our consolidated balance sheets. We estimate the amount of variable consideration for such arrangements based on the expected value to be provided to customers, and we do not believe that there will be significant changes to our estimates of variable consideration. When incentives, stock rotation rights, price protection, volume discounts, or price allowances are applicable, they are estimated and recorded in the period the related revenue is recognized. Stock rotation reserves are based on historical return rates applied to distributor inventory subject to stock rotation rights and recorded as a reduction to revenue with a corresponding reduction to cost of goods sold for the estimated cost of inventory that is expected to be returned and recorded as prepaid expenses and other current assets. In limited circumstances, we enter into volume-based tiered pricing arrangements and we estimate total unit volumes under such arrangement to determine the expected transaction price for the units expected to be transferred. Such arrangements are accounted for as contract liabilities within other accrued liabilities. Sales returns liabilities are recorded as refund liabilities within other accrued liabilities.

Our accounts receivable balance is from contracts with customers and represents our unconditional right to receive consideration from customers. Payments are generally due within three months of completion of the performance obligation and subsequent invoicing and, therefore, do not include significant financing components. In fiscal 2022, there was no material bad debt charge recorded on accounts receivable. There was $1.2 million of contract assets (i.e., unbilled accounts receivable, deferred commissions) recorded on the consolidated balance sheets as of June 25, 2022, and $1.9 million as of June 26, 2021. Contract assets are presented as part of prepaid expenses and other current assets. Contract liabilities and refund liabilities were $27.3 million and $61.3 million, respectively, as of June 25, 2022, and $7.0 million and $36.1 million, respectively, as of June 26, 2021. Both contract liabilities and refund liabilities are presented as part of customer obligations in other accrued liabilities on our consolidated balance sheets. During fiscal 2022 and 2021, we recognized $3.6 million and $1.8 million, respectively, in revenue related to contract liabilities outstanding as of the beginning of each such fiscal year.

We invoice customers for each delivery upon shipment and recognize revenue in accordance with delivery terms. As of June 25, 2022, we did not have any remaining unsatisfied performance obligations with an original duration greater than one year. Accordingly, under the optional exception provided by the ASC, we do not disclose revenues allocated to future performance obligations of partially completed contracts. We have elected to account for shipping and handling costs as fulfillment costs before the customer obtains control of the goods. We continue to classify shipping and handling costs as a cost of revenue. We have elected to continue to account for collection of all taxes on a net basis.

We incur commission expense that is incremental to obtaining contracts with customers. Sales commissions (which are recorded in the selling, general and administrative expense line item in the consolidated statements of operations) are expensed when the product is shipped because such commissions are incurred after the product has been shipped.

Revenue from contracts with customers disaggregated by geographic area based on customer location and groups of similar products is presented in Note 14 Segment, Customers, and Geographical Information.

Advertising Costs

Advertising costs, if any, are expensed when incurred.

Allowance for Doubtful Accounts

We maintain allowances for doubtful accounts for estimated losses resulting from the inability of customers to meet their financial obligations. On an ongoing basis, we evaluate the collectability of accounts receivable based on a combination of factors. In circumstances in which we are aware of a specific customer's potential inability to meet its financial obligation, we record a specific reserve of the bad debt against amounts due. In addition, we make judgments and estimates on the collectability of accounts receivable based on our historical bad debt experience, customers' creditworthiness, current economic trends, recent changes in customers' payment trends, and deterioration in customers' operating results or financial position. If circumstances change adversely, additional bad debt allowances may be required. For the fiscal year ended June 25, 2022 credit losses on our accounts receivable were $0.2 million. There were no credit losses on our accounts receivable for the fiscal year ended June 26, 2021. We believe that an adequate allowance for doubtful accounts has been provided.

Cost of Revenue

Our cost of revenue includes the cost of products shipped to our customers, which primarily includes the cost of products built to our specifications by our contract manufacturers, the cost of silicon wafers supplied by independent semiconductor wafer manufacturers, and the related assembly, package, and test costs of our products. Also included in our cost of revenue are personnel and related costs, including share-based compensation for quality assurance and manufacturing support personnel; logistics costs; depreciation of equipment supporting manufacturing; acquired intangibles amortization; fair value adjustments associated with acquired businesses; inventory write-downs and losses on purchase obligations; and warranty costs.

Inventories

Inventories are stated at the lower of cost (first-in, first-out method) or net realizable value as of the end of fiscal 2022 and 2021, and consisted of the following (in millions):

	2022	2021
Raw materials and work-in-progress	$ 92.2	$ 49.1
Finished goods	77.5	32.9
	$ 169.7	$ 82.0

We record a write-down, if necessary, to reduce the carrying value of inventory to its net realizable value. The effect of these write-downs is to establish a new cost basis in the related inventory, which we do not subsequently write-up. We also record a liability and charge to cost of revenue for estimated losses on inventory we are obligated to purchase from our contract manufacturers when such losses become probable from customer delays, order cancellations, or other factors. The following factors influence our estimates: changes to or cancellations of customer orders, unexpected or sudden decline in demand, rapid product improvements, technological advances, and termination or changes by our OEM customers of any product offerings incorporating our product solutions.

Property and Equipment

We state property and equipment at cost less accumulated depreciation and amortization. We compute depreciation using the straight-line method over the estimated useful lives of the assets. We amortize leasehold improvements over the shorter of the lease term or the useful life of the asset.

Other Assets

During fiscal 2020, we invested $5.0 million in Eta Compute in exchange for preferred stock. This investment provides us with a strategic relationship that enables us to better address expanded industry opportunities for artificial intelligence applications. The investment is accounted for under the cost method.

In April 2017, we paid $18.4 million for a 14.4% interest in OXi Technology Ltd., or OXi. In April 2019, our investment ownership was reduced to 13.8% as a result of new investment in OXi. We determined the equity method of accounting applied to our investment as we had significant influence over OXi’s operating and financial policies. We recorded our portion of OXi’s net income or net loss on a one quarter lag due to the timing of the availability of OXi’s financial records. We did not have any material related party transactions with OXi. During fiscal 2022, we sold our investment in OXi for $5.0 million. In connection with the sale of our investment in OXi, we recorded a gain of $2.5 million, offset by our share of OXi's net losses of $0.9 million. The net gain of $1.6 million is included in Equity investment (gain) loss in the consolidated statements of operations.

Foreign Currency

The U.S. dollar is our functional and reporting currency. We remeasure our monetary assets and liabilities not denominated in our functional currency into U.S. dollar equivalents at the rate of exchange in effect on the balance sheet date. We measure and record non-monetary balance sheet accounts at the historical rate in effect at the date of transaction. We remeasure foreign currency expenses at the weighted average exchange rate in the month that the transaction occurred. These foreign currency transactions and remeasurement gains and losses, resulted in a net gain of $5.6 million and $0.2 million in fiscal 2022 and 2020, respectively, and a net loss of $1.4 million in fiscal 2021. Gains and losses resulting from foreign currency transactions are included in selling, general, and administrative expenses in the consolidated statements of operations.

Goodwill

Goodwill represents the excess of the purchase price of an acquired business over the identifiable assets acquired and liabilities assumed. We test for impairment of goodwill on an annual basis in the fourth quarter and at any other time when events occur or circumstances indicate that the carrying amount of goodwill may not be recoverable. We have the option to first assess qualitative factors to determine whether it is necessary to perform the quantitative goodwill impairment test. The qualitative factors we assess include long-term prospects of our performance, share price trends and market capitalization, and Company specific events. Unanticipated events and circumstances may occur that affect the accuracy of our assumptions, estimates and judgments.

If we determine that as a result of the qualitative assessment that it is more likely than not (i.e., greater than 50% likelihood) that the fair value of a reporting unit is less than its carrying amount, then the quantitative test is required. Otherwise, no further testing is required. The quantitative goodwill impairment test requires us to estimate the fair value of our reporting units. If the carrying value of a reporting unit exceeds its fair value, the goodwill of that reporting unit is potentially impaired and we record an impairment loss equal to the excess of the carrying value of the reporting unit over its fair value, not to exceed the carrying amount of goodwill. The fair value of each of our goodwill reporting units is generally estimated using discounted cash flow methodologies.

Based on the impairment analysis performed in the fourth quarter of each year presented, the fair value of our reporting units exceeded the carrying value; as such, our annual qualitative assessment did not indicate that a more detailed quantitative analysis was necessary and no goodwill impairment was recognized for each period presented.

Intangible Assets

Intangible assets consist primarily of intangible assets purchased through acquisitions. Finite-lived intangible assets are amortized for financial reporting purposes using the straight-line method over the estimated useful lives of the assets ranging from 1 to 6 years. Indefinite-lived intangible assets are not amortized but tested annually for impairment on an annual basis in the fourth quarter, or when events or changes in circumstances indicate that indefinite-lived intangible assets might be impaired.

Impairment of Long-Lived Assets

We evaluate long-lived assets, such as property and equipment and intangible assets subject to amortization, for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. We measure recoverability of assets to be held and used by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. We review the carrying value of indefinite-lived intangible assets for impairment at least annually during the last quarter of our fiscal year, or more frequently if we believe indicators of impairment exist. If the carrying amount of the asset exceeds its estimated undiscounted future cash flows, we recognize an impairment charge in an amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the consolidated balance sheets and reported at the lower of the carrying amount or fair value less costs to sell and would no longer be depreciated. The assets and liabilities of a disposed group classified as held for sale would be presented separately in the appropriate asset and liability sections of the consolidated balance sheets. No impairment of long-lived assets was recognized for fiscal 2022, 2021, and 2020.

Leases

We determine if a contract is a lease or contains a lease at the inception of the contract and reassess that conclusion if the contract is modified. All leases are assessed for classification as an operating lease or a finance lease. Operating lease right-of-use, or ROU, assets are included in non-current other assets on our consolidated balance sheet. Operating lease liabilities are separated into a current portion, included within other accrued liabilities on our consolidated balance sheet, and a non-current portion, included within other long-term liabilities on our consolidated balance sheet. We do not have any finance lease ROU assets or liabilities. 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. We do not obtain and control the right to use the identified asset until the lease commencement date.

Our lease liabilities are recognized at the applicable lease commencement date based on the present value of the lease payments required to be paid over the lease term. Because the interest rate implicit in the lease is not readily determinable, we generally use our incremental borrowing rate to discount the lease payments to present value. The estimated incremental borrowing rate is derived from information available at the lease commencement date. We factor in publicly available data for instruments with similar characteristics when calculating our incremental borrowing rates. Our ROU assets are also recognized at the applicable lease commencement date. The ROU asset equals the carrying amount of the related lease liability, adjusted for any lease payments made prior to lease commencement and lease incentives provided by the lessor. Variable lease payments are expensed as incurred and do not factor into the measurement of the applicable ROU asset or lease liability.

The term of our leases equals the non-cancellable period of the lease, including any rent-free periods provided by the lessor, and also include options to renew or extend the lease (including by not terminating the lease) that we are reasonably certain to exercise. We establish the term of each lease at lease commencement and reassess that term in subsequent periods if a triggering event occurs. Operating lease cost for lease payments is recognized on a straight-line basis over the lease term.

Our lease contracts often include lease and non-lease components. For our leases, we have elected the practical expedient offered by the standard to not separate lease from non-lease components and account for them as a single lease component.

We have elected, for all classes of underlying assets, not to recognize ROU assets and lease liabilities for leases with a term of twelve months or less. Lease cost for short-term leases is recognized on a straight-line basis over the lease term.

Other Accrued Liabilities and Other Long-Term Liabilities

As of the end of fiscal 2022 and 2021, other accrued liabilities consisted of the following (in millions):

	2022	2021
Customer obligations	$ 88.6	$ 43.1
Inventory obligations	14.1	17.0
Operating lease liabilities	7.6	9.3
Other	35.0	26.8
	$ 145.3	$ 96.2

As of the end of fiscal 2022 and 2021, other long-term accrued liabilities consisted of the following (in millions):

	2022	2021
Income taxes payable, long-term	$ 29.1	$ 15.4
Non-current deferred tax liability	52.6	27.1
Operating lease liabilities, long-term	51.5	24.0
Other	19.4	12.0
	$ 152.6	$ 78.5

Segment Information

We operate in one segment: the development, marketing, and sale of human experience semiconductor solutions for electronic devices and products. The chief operating decision maker, or CODM, is our CEO, Our CODM evaluates financial performance and allocates resources using financial information reported on a company-wide basis.

Share-Based Compensation

We charge the estimated fair value less actual forfeitures to earnings on a straight-line basis over the vesting period of the entire underlying award, which is generally three or four years for our restricted stock units, or RSU, awards, three years for our market stock units, or MSU, awards, three years for our performance stock units, or PSU, awards, and up to one year for shares purchased under our 2019 employee stock purchase plan .

We estimate the fair value of market-based MSUs at the date of grant using a Monte Carlo simulation model and amortize those fair values over the requisite service period, which is generally three years. The Monte Carlo simulation model that we use to estimate the fair value of market-based MSUs at the date of grant incorporates into the valuation the possibility that the market condition may not be satisfied. Provided that the requisite service is rendered, the total fair value of the market-based MSUs at the date of grant must be recognized as compensation expense even if the market condition is not achieved. However, the number of shares that ultimately vest can vary significantly with the performance of the specified market criteria.

We value PSUs using the aggregate intrinsic value on the grant date and amortize the compensation expense over the three-year service period on a ratable basis, dependent upon the probability of meeting the performance measures.

We recognize compensation expense for phantom stock units on a straight-line basis for each tranche of each award based on the average closing price of our common stock over the thirty calendar days ended prior to each balance sheet date. As our phantom stock is a cash-settled award, it is recorded as a liability and remeasured each reporting period.

Income Taxes

We account for income taxes under the asset and liability method. We recognize deferred tax assets and liabilities for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and operating loss and tax credit carryforwards. We measure deferred tax assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. We recognize the effect of a change in tax rates in income on deferred tax assets and liabilities in the period that includes the enactment date. We establish valuation allowances when necessary to reduce deferred tax assets to the amounts that are more likely than not to be realized.

We use a two-step approach to recognizing and measuring uncertain tax positions. The first step is to determine whether it is more-likely-than-not that a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon ultimate settlement with a taxing authority. The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of highly complex tax laws. Resolution of these uncertainties in a manner inconsistent with our expectations could have a material impact on our consolidated financial position, results of operations, and cash flows. We believe we have adequately provided for reasonably foreseeable outcomes in connection with the resolution of income tax uncertainties. However, our results have in the past, and could in the future, include favorable and unfavorable adjustments to our estimated tax liabilities in the period a determination of such estimated tax liability is made or resolved, upon the filing of an amended return, upon a change in facts, circumstances, or interpretation, or upon the expiration of a statute of limitation. Accordingly, our effective tax rate could fluctuate materially from period to period.

Product Warranty

We generally provide warranties to cover defects in workmanship, materials and manufacturing for a period of twelve months to meet the stated functionality as agreed to in each sales arrangement. Products are tested against specified functionality requirements prior to delivery, but we nevertheless from time to time experience claims under our warranty guarantees. These standard warranties are assurance type warranties and do not offer any services in addition to the assurance that the product will continue working as specified. Therefore, warranties are not considered separate performance obligations in the arrangement. We accrue for estimated warranty costs under those guarantees based upon historical experience, and for specific items, at the time their existence is known and the amounts are determinable.

Business Combinations

In accordance with the guidance for business combinations, we determine whether a transaction or other event is a business combination, which requires that the assets acquired and liabilities assumed constitute a business. Each business combination is then accounted for by applying the acquisition method. If the assets acquired are not a business, we account for the transaction or other event as an asset acquisition. Under both methods, we recognize the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquired entity. We capitalize acquisition-related costs and fees associated with asset acquisitions and immediately expense acquisition-related costs and fees associated with business combinations.

We allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. When determining the fair values of assets acquired and liabilities assumed, we make significant estimates and assumptions, especially with respect to intangible assets. Critical estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from customer relationships and acquired developed technology and discount rates. Our estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ materially from estimates. Other estimates associated with the accounting for acquisitions may change as additional information becomes available regarding the assets acquired and liabilities assumed. Any change in facts and circumstances that existed as of the acquisition date and impacts our preliminary estimates is recorded to goodwill if identified within the measurement period. Any adjustments subsequent to the measurement period or our final determination of fair value of assets and liabilities, will be charged to earnings.

Research and Development

Research and development costs are expensed as incurred.

2. Net Income Per Share

The computation of basic and diluted net income per share for fiscal 2022, 2021, and 2020 was as follows (in millions, except per share amounts):

	2022	2021	2020
Numerator:			
Net income	$ 257.5	$ 79.6	$ 118.8
Denominator:			
Shares, basic	39.0	34.8	33.6
Effect of dilutive share-based awards and convertible notes	1.7	3.5	1.2
Shares, diluted	40.7	38.3	34.8
Net income per share:			
Basic	$ 6.60	$ 2.29	$ 3.54
Diluted	$ 6.33	$ 2.08	$ 3.41

Diluted net income per share does not include the effect of potential common shares related to certain share-based awards for fiscal 2022, 2021, and 2020 as follows (in millions):

	2022	2021	2020
Share-based awards	0.1	-	0.7

These share-based awards were not included in the computation of diluted net income per share because the proceeds received, if any, from such share-based awards combined with the average unamortized compensation costs, were greater than the average market price of our common stock, and therefore, their effect would have been antidilutive.

Our basic net income per share amounts for each period presented have been computed using the weighted average number of shares of common stock outstanding. Our diluted net income per share amounts for each period presented include the weighted average effect of potentially dilutive shares. We used the "treasury stock" method to determine the dilutive effect of outstanding stock options, RSUs, MSUs, PSUs and convertible notes.

3. Property and Equipment

Property and equipment as of the end of fiscal 2022 and 2021 consisted of the following (in millions):

	Life	2022	2021
Land	—	$ -	$ 13.3
Building and building improvements	Up to 35 years	-	52.7
Computer equipment	3 - 5 years	19.3	22.9
Manufacturing equipment	1 - 5 years	93.3	71.9
Furniture, fixtures, and leasehold improvements	3 - 10 years	39.6	27.2
Capitalized software	3 - 7 years	24.3	28.1
Construction in progress		9.2	6.1
		185.7	222.2
Accumulated depreciation and amortization		(122.8)	(131.0)
Property and equipment, net		$ 62.9	$ 91.2

Our construction in progress primarily includes machinery and equipment that we expect to place in service in the next 12 months.

4. Acquisitions, Divestiture and Investment

Acquisitions

DSP Group, Inc.

On August 30, 2021, we entered into an agreement and plan of merger with DSP Group, Inc., or DSPG, to acquire all of the equity of DSPG, a leading global provider of voice and wireless chipset solutions for converged communications, for $22.00 per share in an all-cash transaction, referred to as the DSPG acquisition. The DSPG acquisition closed on

December 2, 2021, or the DSPG Closing Date, whereupon we obtained voice and wireless technology and product solutions for converged communications. In addition, under the terms of the agreement and plan of merger, we provided replacement equity awards to the transferred employees and allocated $1.7 million of the replacement equity awards value to consideration transferred.

The DSPG acquisition has been accounted for using the purchase method of accounting in accordance with the business acquisition guidance. Under the purchase accounting method, the total estimated purchase consideration of the acquisition was allocated to the tangible and identifiable intangible assets acquired and liabilities assumed based on their relative fair values. The excess of the purchase consideration over the net tangible and identifiable intangible assets acquired and liabilities has been recorded as goodwill. Our estimate of the fair values of the acquired intangible assets at June 25, 2022, was based on established and accepted valuation techniques performed with the assistance of our third-party valuation specialists.

The adjusted purchase price paid for DSPG was $543.3 million. The final purchase price allocation is as follows (in millions):

	Final As Adjusted June 25, 2022
Cash and cash equivalents	$ 40.5
Short-term investments	71.9
Accounts receivable, net	12.9
Inventory	22.6
Prepaid expenses and other current assets	4.0
Property and equipment	5.9
Intangible assets	212.0
Right-of-use lease asset	9.8
Severance pay fund	16.2
Deferred tax asset	6.7
Non-current other assets	2.3
Total identifiable assets acquired	404.8
Accounts payable	(6.7)
Other accrued expenses	(19.8)
Short-term lease liabilities	(1.5)
Long-term lease liabilities	(8.2)
Accrued severance	(16.4)
Deferred tax liability	(39.4)
Other long-term liabilities	(6.1)
Total liabilities	(98.1)
Net identifiable assets acquired	306.7
Goodwill	236.6
Net assets acquired	$ 543.3

The following table summarizes the final amounts of the fair values recognized for the assets acquired and liabilities assumed for these two acquisitions as of the acquisition date as well as adjustments made during the measurement period:

	Previously Reported December 25, 2021	Measurement Period Adjustments (1)	As Adjusted
Other current assets	$ 151.9	$ -	$ 151.9
Goodwill	256.6	(20.0)	236.6
Developed technology and other intangible assets	200.5	11.5	212.0
Deferred tax asset	0.3	6.4	6.7
Other long-term assets	35.6	(1.4)	34.2
Current liabilities	(26.8)	(1.2)	(28.0)
Deferred tax liability	(38.1)	(1.3)	(39.4)
Other long-term liabilities	(29.1)	(1.6)	(30.7)
Consideration adjustment	-	7.6	-
Net assets acquired	$ 550.9	$ -	$ 543.3

(1) The measurement period adjustments were based upon information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the measurement of the amounts recognized at that date.

The following table summarizes the estimated fair value of the intangible assets as of the DSPG Closing Date (in millions):

	Estimated Weighted Average Useful Lives in Years	Estimated Fair Value
Developed technology	5.2	$ 150.0
Customer contracts and related relationships	4.0	45.0
In process research and development	N/A	16.0
Trade names	1.0	1.0
Estimated fair value of acquired intangibles		$ 212.0

We estimated the fair value of the identified intangible assets using a discounted cash flow model for each of the underlying identified intangible assets. These fair value measurements were based on significant inputs not observable in the market and thus represent a Level 3 measurement. Key assumptions include the level and timing of expected future cash flows, conditions and demands specific to each intangible asset over its remaining useful life, and discount rates we believe to be consistent with the inherent risks associated with each type of asset, which range from 4% to 18%. The fair value of these intangible assets is primarily affected by the projected revenue, gross margins, operating expenses, the technology migration curve, customer ramp up period and the anticipated timing of the projected income associated with each intangible asset coupled with the discount rates used to derive their estimated present values. We believe the level and timing of expected future cash flows appropriately reflects market participant assumptions.

In-process research and development consists of advanced semiconductor telecommunications products for the Internet of Things, or IoT, market. We expect to complete the in-process research and development project in calendar year 2023.

The value of goodwill reflects the anticipated synergies of the combined operations and workforce of DSPG as of the DSPG Closing Date. None of the goodwill is expected to be deductible for income tax purposes.

Prior to the DSPG acquisition, we did not have an existing relationship or transactions with DSPG.

The consolidated financial statements include approximately $83.8 million of revenue from the DSPG Closing Date through June 25, 2022. It is impracticable to determine the effect on net income attributable to DSPG as we initiated the integration of a substantial portion of DSPG into our ongoing operations during the second quarter of fiscal 2022, which was completed in the subsequent quarter.

Supplemental Pro Forma Information (Unaudited)

The supplemental pro forma financial information presented below is for illustrative purposes only and is not necessarily indicative of the financial position or results of operations that would have been realized if the acquisition had been completed on the date indicated, does not reflect synergies that might have been achieved, nor is it indicative of future operating results or financial position. The pro forma adjustments are based upon currently available information and certain assumptions we believe are reasonable under the circumstances.

The following supplemental pro forma information presents the combined results of operations for the year ended June 25, 2022 and June 26, 2021, as if DSPG had been acquired as of the beginning of fiscal 2021. Pro forma adjustments used to arrive at pro forma net income included adjustments for the addition of intangible amortization expense for the value of intangibles under the purchase price allocation, adjustments to record acquired inventories at fair value, transaction and restructuring costs. The total pro forma adjustments for fiscal 2022 was an increase to net income of $5.9 million and a decrease in net income of $86.3 million in fiscal 2021. The unaudited supplemental pro forma financial information for the periods presented is as follows (in millions):

	2022	**2021**
Revenue	$ 1,802.6	$ 1,466.0
Net income (loss)	$ 263.4	$ (6.7)

DisplayLink

On July 17, 2020, we entered into a definitive agreement to acquire 100% of equity interest in DisplayLink Corporation, or DisplayLink, a leader in high-performance video compression technology, for $305 million in cash adjusted for (i) estimated cash and cash equivalents and short-term investments at the closing (ii) estimated indebtedness outstanding immediately prior to the closing, (iii) unpaid portion as of the closing of certain transaction expenses incurred by DisplayLink, and (iv) the amount that the estimated working capital of DisplayLink exceeds or falls short, respectively, of a certain specified target working capital set forth in an Agreement and Plan of Merger, or the Merger Agreement, with $3.1 million of the purchase price held in escrow accounts for adjustments after closing and to secure the Seller Parties' indemnification obligations under the Merger Agreement. The acquisition closed on July 31, 2020, or the DisplayLink Closing Date, whereupon we obtained high-performance video compression technology which will further enhance our current IoT business.

This acquisition has been accounted for using the purchase method of accounting in accordance with the business acquisition guidance. Under the purchase accounting method, the total estimated purchase consideration of the acquisition was allocated to the tangible and identifiable intangible assets acquired and liabilities assumed based on their relative fair values. The excess of the purchase consideration over the net tangible and identifiable intangible assets acquired and liabilities has been recorded as goodwill. Our estimate of the fair values of the acquired intangible assets at June 26, 2021, was based on established and accepted valuation techniques performed with the assistance of our third-party valuation specialists.

The adjusted purchase price paid for DisplayLink was $444.0 million.

The following table summarizes the amounts recorded for the estimated fair values of the assets acquired and liabilities assumed as of the DisplayLink Closing Date (in millions):

Cash and cash equivalents	$ 40.9
Short-term investments	94.0
Accounts receivable, net	7.1
Inventory	33.1
Prepaid expenses and other current assets	9.1
Property and equipment	6.8
Intangible assets	193.0
Right-of-use lease asset	20.0
Non-current other assets	0.6
Total identifiable assets acquired	404.6
Accounts payable	(5.2)
Other accrued liabilities	(9.1)
Short-term lease liabilities	(1.7)
Long-term lease liabilities	(18.2)
Other long-term liabilities	(32.8)
Total liabilities	(67.0)
Net identifiable assets acquired	337.6
Goodwill	106.4
Net assets acquired	$ 444.0

There were no measurement period adjustments during fiscal year ended June 25, 2022. During the fiscal year ended June 26, 2021 we recorded measurement period adjustments of $0.9 million to goodwill comprising of increases of $2.3 million in prepaid expenses and decreases of $0.8 million to other accrued liabilities and increases of $1.4 million in other long-term liabilities for a net increase of $1.7 million to the fair value of other acquired net tangible assets.

The following table summarizes the estimated fair value of the intangible assets as of the DisplayLink Closing Date (in millions):

	Estimated Weighted Average Useful Lives in Years	Estimated Fair Value
Developed technology	3.0	$ 82.0
Customer contracts and related relationships	3.0	54.0
In process research and development	N/A	51.0
Trade names	4.0	3.0
Licensed technology	2.5	3.0
Estimated fair value of acquired intangibles		$ 193.0

We estimated the fair value of the identified intangible assets using a discounted cash flow model for each of the underlying identified intangible assets. These fair value measurements were based on significant inputs not observable in the market and thus represent a Level 3 measurement. Key assumptions include the level and timing of expected future cash flows, conditions and demands specific to each intangible asset over its remaining useful life, and discount rates we believe to be consistent with the inherent risks associated with each type of asset, which range from 11.0% to 11.5%. The fair value of these intangible assets is primarily affected by the projected revenue, gross margins, operating expenses, the technology migration curve, customer ramp up period and the anticipated timing of the projected income associated with each intangible asset coupled with the discount rates used to derive their estimated present values. We believe the level and timing of expected future cash flows appropriately reflects market participant assumptions.

In-process research and development consists of a next generation docking and video interface products for the IoT market. We expect to complete the in-process research and development project in fiscal 2023.

The value of goodwill reflects the anticipated synergies of the combined operations and workforce of DisplayLink as of the DisplayLink Closing Date. None of the goodwill is expected to be deductible for income tax purposes.

Prior to the DisplayLink acquisition, we did not have an existing relationship or transactions with DisplayLink.

The consolidated financial statements include approximately $115.3 million and $110.0 million of revenue during fiscal 2022 and 2021, respectively. It is impracticable to determine the effect on net income attributable to DisplayLink as we integrated a substantial portion of DisplayLink into our ongoing operations during the first quarter of fiscal 2021.

The following unaudited pro forma financial information (in millions, except per share data) presents the combined results of operations for us and DisplayLink as if the DisplayLink acquisition had occurred at the beginning of fiscal 2020. The unaudited pro forma financial information has been prepared for comparative purposes only and does not purport to be indicative of the actual operating results that would have been recorded had the DisplayLink acquisition actually taken place at the beginning of fiscal 2020 and should not be taken as indicative of future consolidated operating results. Additionally, the unaudited pro forma financial results do not include any anticipated synergies or other expected benefits from the DisplayLink acquisition.

	2021 (1)
Revenue	$ 1,346.9
Net income	$ 72.1

(1) Includes results of Broadcom Wireless Connectivity Business

Pro forma adjustments used to arrive at pro forma net income included adjustments for historical amortization expense, the addition of intangible amortization expense for the value of intangibles under the purchase price allocation, transaction costs and restructuring costs. The total pro forma adjustments for fiscal 2021 was a decrease to net income of $1.1 million.

Broadcom Wireless Connectivity Business

On July 2, 2020, we entered into definitive agreements with Broadcom to acquire certain assets and assume certain liabilities of, and obtain non-exclusive licenses relating to, Broadcom's existing Wi-Fi, Bluetooth and GPS/GNSS products and business in the IoT market, or Broadcom Business Acquisition, for an aggregate consideration of $250 million in cash which closed on July 23, 2020, or the Broadcom Business Acquisition Closing Date. We also entered into certain transition agreements with Broadcom for a period of three years. We acquired these assets and assumed certain liabilities from Broadcom in order to obtain wireless connectivity technology which will enhance our current IoT business.

The acquisition has been accounted for using the purchase method of accounting in accordance with the business acquisition guidance. Under the purchase accounting method, the total estimated purchase consideration of the acquisition was allocated to the tangible and identifiable intangible assets acquired and liabilities assumed based on their relative fair values. The excess of the purchase consideration over the net tangible and identifiable intangible assets acquired and liabilities has been recorded as goodwill. Our estimate of the fair values of the acquired intangible assets at the Broadcom Business Acquisition Closing Date was based on established and accepted valuation techniques performed with the assistance of our third-party valuation specialists.

The following table summarizes the adjusted purchase price paid for the Broadcom Business Acquisition (in millions):

Cash	$	250.1
Adjustments to consideration transferred, net		1.5
Roadmap products - estimated cost of development		(25.0)
	$	226.6

We entered into a derivative and roadmap product agreement and an asset purchase agreement with Broadcom. The derivative and roadmap product agreement includes the purchase of derivative and roadmap product development services to be performed by Broadcom. We estimated the value of the development services to be approximately $25.0 million, and accounted for it separate from the business combination. At June 25, 2022 and June 26, 2021, the net book value of the development services is $5.8 million and $15.8 million, respectively. The estimated value of the development services is amortizing over the period of time estimated to complete the development or approximately thirty months. The amortization of the estimated cost of development is included in research and development in our consolidated statements of operations. In addition, under the terms of the asset purchase agreement we provided replacement equity compensation awards to the transferred employees and Broadcom agreed to make cash payments to transferred employees as incentive to accept employment offers from our company. We determined $3.5 million of value related to these arrangements should be included as consideration transferred, which was partially offset by $2.0 million of cash payments to transferred employees as a reduction of consideration transferred.

The following table summarizes the amounts recorded for the estimated fair values of the assets acquired and liabilities assumed as of the Broadcom Business Acquisition Closing Date (in millions):

Property and equipment	$	1.0
Acquired intangible assets		123.0
Total identifiable assets acquired		124.0
Liabilities assumed		(0.2)
Goodwill		102.8
Net assets acquired	$	226.6

We estimated the fair value of the identified intangible assets using a discounted cash flow model for each of the underlying identified intangible assets. These fair value measurements were based on significant inputs not observable in the market and thus represent a Level 3 measurement. Key assumptions include the level and timing of expected future cash flows, conditions and demands specific to each intangible asset over its remaining useful life, and discount rates we believe to be consistent with the inherent risks associated with each type of asset, which is 2.2% for order backlog and 13.0% for the rest of the intangible assets. The fair value of these intangible assets is primarily affected by the projected revenue, gross margins, operating expenses, the technology migration curve, customer ramp up period and the anticipated timing of the projected income associated with each intangible asset coupled with the discount rates used to derive their estimated present values. We believe the level and timing of expected future cash flows appropriately reflects market participant assumptions.

The following table summarizes the estimate of the intangible assets as of the Broadcom Business Acquisition Closing Date (in millions):

	Estimated Weighted Average Useful Lives in Years	Estimated Fair Value
Developed technology	6.0	$ 93.0
Customer contracts and related relationships	6.0	18.0
Order backlog	0.5	12.0
Estimated fair value of acquired intangibles		$ 123.0

The value of goodwill reflects the anticipated synergies of the combined operations and workforce of the transferred Broadcom Business assets as of the Broadcom Business Acquisition Closing Date. All of the goodwill is expected to be deductible for income tax purposes.

Prior to the Broadcom Business Acquisition, we did not have an existing relationship or transactions with Broadcom.

The consolidated financial statements include approximately $228.8 million and $100.4 million of revenue during fiscal 2022 and 2021, respectively. It is impracticable to determine the effect on net income attributable to the Broadcom Business Acquisition as we had integrated a substantial portion of the Broadcom Business Acquisition into our ongoing operations at the close.

Divestiture

In December 2020, we completed the sale of limited audio technology intangible assets, received a fully-paid up perpetual license back from the buyer and, as an element of the transaction licensed other audio technology intangible assets to the buyer under a fully-paid up perpetual license arrangement. Under the asset purchase agreement and the intellectual property license agreement, we received $35.0 million in cash. The gain on the sale of the audio technology assets was $34.2 million.

In April 2020, we completed the sale of the assets of our LCD Touch Controller and Display Driver Integration product line, or TDDI, for LCD mobile displays. We retained our automotive TDDI product line and our discrete touch and discrete display driver product lines supporting LCD and OLED for the mobile market. The assets sold under the asset purchase agreement had a carrying value of approximately $33.6 million as of the closing date of the transaction for cash consideration of $138.7 million. The gain on sale of the assets was $105.1 million.

5. Cash, Cash Equivalents and Short-Term Investments

The following table summarizes our cash, cash equivalents and short-term investments by category at June 25, 2022 (in millions):

	Amortized Cost	Gross unrealized gain (loss)	Fair Value
Cash	$ 811.9	$ -	$ 811.9
Cash equivalents:			
Money market funds	12.1	-	12.1
Total cash and cash equivalents	$ 824.0	$ -	$ 824.0
Short-term investments:			
Certificates of deposit	$ 2.4	$ -	$ 2.4
Corporate debt securities	43.7	(1.9)	41.8
Municipal bonds	7.9	(0.1)	7.8
Total short-term investments	$ 54.0	$ (2.0)	$ 52.0

We did not hold any short-term investments at the end of fiscal 2021. We use the specific-identification method to determine any realized gains or losses from the sale of our short-term investments classified as available-for-sale. During fiscal 2022, we did not realize significant gains or losses on a gross level from the sale of our short-term investments classified as available-for-sale.

The following table classifies our short-term investments by contractual maturities (*in millions*):

	Amortized Cost
Due within 1 year	$ 20.4
Due between 1 year to 5 years	31.6
	$ 52.0

All available-for-sale securities have been classified as current, based on management's intent and ability to use the funds in current operations.

6. Fair Value Measurements

We determine fair value based on the fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value assumes that the transaction to sell the asset or transfer the liability occurs in the principal or most advantageous market for the asset or liability and establishes that the fair value of an asset or liability shall be determined based on the assumptions that market participants would use in pricing the asset or liability. The classification of a financial asset or liability within the hierarchy is based upon the lowest level input that is significant to the fair value measurement. The fair value hierarchy prioritizes the inputs into three levels that may be used to measure fair value:

- Level 1 – Valuation is based upon unadjusted quoted prices for identical assets or liabilities in active markets.
- Level 2 – Valuation is based upon quoted prices for similar assets and liabilities in active markets, or other inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instruments.
- Level 3 – Valuation is based upon other unobservable inputs that are significant to the fair value measurements.

The fair value of our Level 1 financial instruments are traded in active markets and are based on quoted market prices for identical instruments. The fair value of our Level 2 fixed income securities is obtained from an independent pricing service, which may use quoted market prices for identical or comparable instruments or model driven valuations using observable market data or inputs corroborated by observable market data. Our marketable securities are held by custodians who obtain investment prices from a third-party pricing provider that incorporates standard inputs in various asset price models.

At June 25, 2022, financial assets measured at fair value on a recurring basis are summarized below (in millions):

	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	$ 12.1	$ -	$ -	$ 12.1
Short-term investments:				
Certificates of deposit	-	2.4	-	2.4
Corporate debt securities	-	41.8	-	41.8
Municipal bonds	-	7.8	-	7.8
	$ 12.1	$ 52.0	$ -	$ 64.1

The above table excludes $811.9 million of cash held in our bank accounts. There were no transfers in or out of our Level 1, 2 or 3 assets during fiscal 2022 or 2021.

We did not hold any financial assets measured at fair value during fiscal 2021.

Financial Instruments Not Recorded at Fair Value on a Recurring Basis

We report our financial instruments at fair value with the exception of the Senior Debt and Term Loan (“Note 8. Debt”). The estimated fair value of the notes was determined based on the trading price of the notes as of the last day of trading for the period. We consider the fair value of the notes to be a Level 2 measurement as they are not actively traded in markets.

The carrying amounts and estimated fair values of the Senior Notes and Term Debt are as follows for the periods presented (in millions):

	June 25, 2022		June 26, 2021	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
Senior Notes due 2029	$ 395.0	$ 326.9	$ 400.0	$ 401.5
Term Loan due 2028	586.7	$ 575.0	-	-
Convertible notes due 2022	-	-	$ 505.6	$ 1,013.3
	$ 981.7	$ 901.9	$ 905.6	$ 1,414.8

7. Goodwill and Acquired Intangible Assets

The following table presents our goodwill balance as of June 25, 2022 and June 26, 2021 (in millions):

	2022	2021
Beginning balance	$ 570.0	$ 360.8
Acquisition activity	236.6	209.2
Ending balance	$ 806.6	$ 570.0

The following table summarizes the life, the gross carrying value of our acquired intangible assets, and the related accumulated amortization as of the end of fiscal 2022 and 2021 (in millions):

		2022			2021		
	Weighted Average Life in Years	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Audio and video technology	5.6	$ 232.1	$ (109.3)	$ 122.8	$ 138.6	$ (97.6)	$ 41.0
Customer relationships	4.1	170.5	(99.7)	70.8	125.5	(63.8)	61.7
Wireless connectivity technology	5.7	128.0	(33.8)	94.2	93.0	(14.2)	78.8
Video interface technology	3.0	82.0	(52.4)	29.6	82.0	(25.1)	56.9
Display driver technology	7.0	20.4	(20.4)	—	20.4	(17.5)	2.9
Backlog	Not applicable	—	—	—	12.0	(12.0)	—
Licensed technology and other	4.5	9.9	(7.5)	2.4	13.0	(8.1)	4.9
Patents	8.0	4.4	(3.7)	0.7	4.4	(3.2)	1.2
Tradename	4.4	5.8	(3.3)	2.5	4.8	(1.7)	3.1
In process research and development	Not applicable	67.0	—	67.0	51.0	—	51.0
Acquired intangibles, gross	5.0	$ 720.1	$ (330.1)	$ 390.0	$ 544.7	$ (243.2)	$ 301.5

During fiscal 2022, we retired fully amortized intangible assets of $21.5 million of audio and video developed technology, $12.0 million in backlog and $3.1 million in licensed technology and other. During fiscal 2021, we retired fully amortized intangible assets of $143.6 million of display driver developed technology and $28.3 million of customer relationships.

Amortization expense is calculated using the straight-line method over the estimated useful lives of the acquired intangibles. The total amortization expense for the acquired intangible assets was $123.5 million in fiscal 2022, $110.1 million in fiscal 2021, and $51.4 million in fiscal 2020. This amortization expense was included in our consolidated statements of operations as acquired intangibles amortization and cost of revenue.

The following table presents expected annual aggregate amortization expense in future fiscal years (in millions):

2023	$ 127.5
2024	66.9
2025	60.0
2026	47.0
2027	16.6
Thereafter	5.0
To be determined	67.0
Future amortization	$ 390.0

8. Debt

Senior Debt

On March 11, 2021, we completed an offering of $400.0 million aggregate principal amount of 4.0% senior notes due 2029, or the Senior Notes, in a private offering. The Senior Notes were issued pursuant to an Indenture, dated as of March 11, 2021, or the Senior Notes Indenture, by and among our company, the guarantors named therein and Wells Fargo Bank, National Association, as trustee.

The Senior Notes Indenture provides that the Senior Notes will bear interest at a rate of 4.0% per annum, payable in cash semi-annually in arrears on December 15 and June 15 of each year, commencing on June 15, 2021. The Senior Notes will mature on June 15, 2029 and are fully and unconditionally guaranteed, jointly and severally, on a senior unsecured basis by each of our current and future domestic restricted subsidiaries that guarantee our obligations under our senior secured credit facilities.

Prior to June 15, 2024, we may redeem the Senior Notes, in whole or in part, at a redemption price of 100% of the principal amount thereof, plus a make-whole premium set forth in the Senior Notes Indenture, plus accrued and unpaid interest, if any, up to, but excluding, the redemption date.

We may redeem some or all of the Senior Notes on or after June 15, 2024 at the redemption prices specified below, plus accrued and unpaid interest, if any, up to, but excluding, the redemption date:

Year	Price
2024	102 %
2025	101 %
2026 and thereafter	100 %

In addition, at any time prior to June 15, 2024, we may redeem up to 40% of the aggregate principal amount of the Senior Notes at a redemption price equal to 104% of the principal amount thereof, plus accrued and unpaid interest, if any, up to, but excluding, the applicable redemption date with the net cash proceeds from one or more equity offerings by us.

The Senior Notes are the general unsecured obligations of our company. The Senior Note guarantees are the senior unsecured obligations of each guarantor. Under certain circumstances, the guarantors may be released from their Senior Note guarantees without consent of the holders of Senior Notes. Under the terms of the Senior Notes Indenture, the Senior Notes rank equally in right of payment with all of our and the guarantors' existing and future senior indebtedness, and rank contractually senior in right of payment to our and the guarantors' future indebtedness and other obligations that are, by their terms, expressly subordinated in right of payment to the Senior Notes. The Senior Notes are effectively subordinated to our and the guarantors' existing and future secured indebtedness, including secured indebtedness under our senior secured credit facilities, to the extent of the value of the assets securing such indebtedness. The Senior Notes and guarantees are structurally subordinated to all existing and future indebtedness and liabilities (including trade payables) of our subsidiaries that do not guarantee the Senior Notes.

The Senior Notes Indenture contains covenants that, subject to exceptions and qualifications, among other things, limit our ability and the ability of our Restricted Subsidiaries (as defined in the Senior Notes Indenture) to (i) incur additional indebtedness and guarantee indebtedness; (ii) pay dividends or make other distributions or repurchase or redeem our company's or any parent's capital stock; (iii) prepay, redeem or repurchase certain indebtedness; (iv) issue certain preferred stock or similar equity securities; (v) make loans and investments; (vi) dispose of assets; (vii) incur liens; (viii) enter into transactions with affiliates; (ix) enter into agreements restricting its subsidiaries' ability to pay dividends; and (x) consolidate, merge or sell all or substantially all of its assets.

The Senior Notes Indenture contains customary events of default including, without limitation, failure to make required payments, failure to comply with certain agreements or covenants, cross-acceleration to certain other indebtedness in excess of specified amounts, certain events of bankruptcy and insolvency, and failure to pay certain judgments. An event of default under the Senior Notes Indenture will allow either the trustee or the holders of at least 25% in aggregate principal amount of the then outstanding Senior Notes to accelerate, or in certain cases, will automatically cause the acceleration of, the maturity of the principal, and accrued and unpaid interest, if any, on all outstanding Notes.

Debt issuance costs relating to the Senior Notes of $5.7 million, netted against the debt amount on the consolidated balance sheet, are amortized as interest expense using the effective interest method over 99 months. The total interest expense recorded on the Senior Notes during the fiscal year ended June 25, 2022 was $16.6 million.

Revolving Credit Facility

On March 11, 2021, we amended and restated our Amended and Restated Credit Agreement, with the lenders and Wells Fargo Bank, National Association, as administrative agent, or the Credit Agreement, to, among other changes, extend the maturity date of our senior secured revolving credit facility, to five years from the closing date of the amendment, increase the facility size from $200.0 million to $250.0 million, and replace the requirement to maintain a total debt to Consolidated EBITDA (as defined in the Credit Agreement) ratio of not more than 4.75 to 1.00 with a requirement to maintain a net total debt to Consolidated EBITDA ratio of not more than 3.75 to 1.00 provided that for the four fiscal quarters ending after the date of a material acquisition, such maximum leverage ratio shall be adjusted to 4.25 to 1.00, and thereafter 3.75 to 1.00, provided further, that such deemed increase pursuant to the foregoing shall not apply to more than two material acquisitions consummated during the term of the Credit Agreement.

The Credit Agreement provides for a revolving credit facility in a principal amount of up to $250 million, which includes a $20 million sublimit for letters of credit and a $25 million sublimit for swingline loans. Under the terms of the Credit Agreement, we may, subject to the satisfaction of certain conditions, request increases in the revolving credit facility commitments in an aggregate principal amount of up to $150 million to the extent existing or new lenders agree to provide such increased or additional commitments, as applicable. Future proceeds under the revolving credit facility are available for working capital and general corporate purposes. In March 2021, we used a portion of the proceeds from the Senior Notes described above to repay the $100.0 million outstanding borrowings on this revolving credit facility. As of June 25, 2022, there was no balance outstanding under the revolving credit facility.

Borrowings under the revolving credit facility are required to be repaid in full by March 11, 2026. Debt issuance costs relating to the revolving credit facility of $1.6 million, included in non-current other assets on our consolidated balance sheet, are being amortized over 60 months.

Our obligations under the Credit Agreement are guaranteed by the material domestic subsidiaries of our company, subject to certain exceptions (such material subsidiaries, together with our company, collectively, the Credit Parties). The obligations of the Credit Parties under the Credit Agreement and the other loan documents delivered in connection therewith are secured by a first priority security interest in substantially all of the existing and future personal property of the Credit Parties, including, without limitation, 65% of the voting capital stock and 100% of the non-voting capital stock of certain of the Credit Parties’ direct foreign subsidiaries, subject to certain exceptions.

The revolving credit facility bears interest at our election of a Base Rate plus an Applicable Margin or LIBOR plus an Applicable Margin. Swingline loans bear interest at a Base Rate plus an Applicable Margin. The Base Rate is a floating rate that is the greater of the Prime Rate, the Federal Funds Rate plus 50 basis points, or LIBOR plus 100 basis points. The Applicable Margin is based on a sliding scale which ranges from 0.25 to 100 basis points for Base Rate loans and 100 basis points to 175 basis points for LIBOR loans. We are required to pay a commitment fee on any unused commitments under the Credit Agreement which is determined on a leverage-based sliding scale ranging from 0.175% to 0.25% per annum. Interest and fees are payable on a quarterly basis. The LIBOR index is expected to be discontinued at the end of June 2023. Under our credit facility, when the LIBOR index is discontinued, we will switch to a comparable or successor rate as selected by us and the administrative agent, which may include the Secured Overnight Financing Rate, or SOFR.

Under the Credit Agreement, there are various restrictive covenants, including two financial covenants which limit the consolidated total leverage ratio, or leverage ratio, the consolidated interest coverage ratio, or interest coverage ratio, a restriction that permits accounts receivable financings provided that the aggregate unpaid amount of permitted accounts receivable financings are no more than the greater of $100 million and 50% of the amount of all accounts receivable of our company and specified subsidiaries and other specific items. The leverage ratio is the ratio of debt as of the measurement date to Consolidated EBITDA, for the four consecutive quarters ending with the quarter of measurement. The current leverage ratio shall not exceed 3.75 to 1.00 provided that for the four fiscal quarters ending after the date of a material acquisition, such maximum leverage ratio shall be adjusted to 4.25 to 1.00, and thereafter 3.75 to 1.0. The interest coverage ratio is Consolidated EBITDA to interest expense for the four consecutive quarters ending with the quarter of measurement. The interest coverage ratio must not be less than 3.50 to 1.0 during the term of the Credit Agreement. As of the end of fiscal 2022, we remain in compliance with the restrictive covenants.

Term Loan Facility

On December 2, 2021, we entered into that certain First Amendment and Lender Joinder Agreement to the Credit Agreement, to, among other things, establish a new $600.0 million incremental term loan facility, or the Term Loan Facility. The Term Loan Facility was advanced by certain existing and new lenders under the Credit Agreement to finance the DSPG acquisition. The Term Loan Facility matures on December 2, 2028. Principal on the Term Loan Facility is payable in equal quarterly installments on the last day of each March, June, September and December of each year, beginning December 31, 2021, at a rate of 1.00% per annum.

Borrowings under the Term Loan Facility will accrue interest at the London Interbank Offered Rate, or LIBOR, plus 2.25% or at the base rate plus 1.50%, subject to a 25 basis point step-down based on total gross leverage, and subject to a LIBOR floor of 50 basis points. The base rate is the highest of (i) the Federal Funds Rate plus 0.50%, (ii) the Wells Fargo Bank, National Association prime rate and (iii) the one-month LIBOR plus 1.00%. The Term Loan Facility contains customary representations and warranties, affirmative and negative covenants and events of default, in each case consistent with the Credit Agreement. The Term Loan Facility does not contain any financial covenant.

The Term Loan Facility is subject to a 1.00% prepayment premium in the event all or any portion of the Term Loan Facility is prepaid within the first 6 months in connection with a repricing transaction only. The Term Loan Facility is subject to customary mandatory prepayments, including, commencing June 30, 2023, an excess cash flow sweep, subject to customary step-downs and thresholds.

Debt issuance costs relating to the Term Loan Facility of $11.2 million, netted against the debt amount on the consolidated balance sheet, are amortized as interest expense over 96 months. The total interest expense recorded on the Term Loan during fiscal 2022 was $10.4 million.

Convertible Debt

On June 1, 2021, pursuant to the Indenture, dated as of June 26, 2017 between us and Wells Fargo Bank, National Association, as trustee, or the Convertible Notes Indenture, we provided an irrevocable notice of redemption, for all $525,000,000 aggregate principal amount of our outstanding 0.50% convertible senior notes due in 2022, or the Convertible Notes. The Convertible Notes were redeemable at a cash redemption price of 100.0% of the principal amount, plus accrued and unpaid interest, if any, to, but excluding, the redemption date of August 4, 2021.

Holders of the Convertible Notes had the right to convert the Convertible Notes called for redemption no later than August 3, 2021, or the Conversion Deadline. The conversion rate was equal to 13.7267 shares per $1,000 principal amount of the Convertible Notes, which was the initial conversion rate of 13.6947 shares per $1,000 principal amount of the Convertible Notes plus a number of additional shares equal to 0.0320 shares per $1,000 principal amount of the Convertible Notes. We elected to settle any conversions by Combination Settlement (as defined in the Convertible Notes Indenture) with a Specified Dollar Amount (as defined in the Convertible Notes Indenture) per $1,000 principal amount of Convertible Notes equal to $1,000, plus a number of shares of the our common stock, to be determined pursuant to the Convertible Notes Indenture, together with additional cash, if applicable, in lieu of delivering any fractional shares of common stock. As a result of this election, on August 4, 2021, we settled or redeemed the remaining outstanding Convertible Notes for $505.6 million in cash representing the principal amount outstanding and delivered approximately 3.5 million shares in common stock from our treasury stock for additional amounts, resulting in a loss of approximately $8.1 million which is included in Interest and other expense, net on our condensed consolidated statements of income included elsewhere in this report.

9. Leases, Commitments and Contingencies

Leases

In fiscal 2020, we adopted Accounting Standards Codification Topic 842, or ASC 842, Leases, which requires recognition of ROU assets and lease liabilities for most leases on our consolidated balance sheet. We adopted ASC 842 using a modified retrospective transition approach as of the effective date as permitted. As a result, we were not required to adjust our comparative period financial information for effects of the standard or make the new required lease disclosures for the periods before the date of adoption. We elected the package of practical expedients which allows us not to reassess (1) whether existing or expired contracts, as of the adoption date, contain leases, (2) the lease classification for existing leases, and (3) whether existing initial direct costs meet the new definition. We also elected the practical expedient to not separate lease and non-lease components for our leases, and to not recognize ROU assets and liabilities for short-term leases.

The most significant impact of the adoption of the standard was the recognition of ROU assets and lease liabilities for operating leases on our consolidated balance sheet. Adoption of the standard did not have a material impact on our consolidated statements of operations or cash flows.

Our leases primarily include our headquarters office and worldwide office and research and development facilities which are all classified as operating leases. Certain leases include renewal options that are under our discretion. The leases expire at various dates through fiscal year 2034, some of which include options to extend the lease for up to seven years. During fiscal

2022, we recorded approximately $12.7 million of operating leases expense. Our short-term leases are immaterial and we do not have finance leases.

As of the end of fiscal 2022 and 2021, the components of leases are as follows (in millions):

	2022	2021
Operating lease right-of-use assets	$ 61.2	$ 31.7
Operating lease liabilities	$ 7.6	$ 9.3
Operating lease liabilities, long-term	51.5	24.0
Total operating lease liabilities	$ 59.1	$ 33.3

Supplemental cash flow information related to leases is as follows (in millions):

	2022	2021
Cash paid for operating leases included in operating cash flows	$ 12.5	$ 10.0
Supplemental non-cash information related to lease liabilities arising from obtaining right-of-use assets	42.5	21.8

As of the end of fiscal 2022, the weighted average remaining lease term was 8.02 years, and the weighted average discount rate was 4.14%.

Future minimum lease payments for the operating lease liabilities are as follows (in millions):

Fiscal Year	Operating Lease Payments
2023	$ 6.3
2024	10.3
2025	9.2
2026	9.0
2027	8.3
Thereafter	28.5
Total future minimum operating lease payments	71.6
Less: interest	(12.5)
Total lease liabilities	$ 59.1

We recognized rent expense on a straight-line basis of $12.7 million, and $10.1 million for fiscal 2022 and 2021, respectively.

Sale and Leaseback Transaction

On February 8, 2022, we executed a sale and leaseback transaction of our properties located at 1109-1251 McKay Drive and 1140-1150 Ringwood Court, San Jose, California, for a purchase price, net of closing and other expenses payable by us, of $55.9 million. Concurrent with the sale, we entered into a lease agreement with the buyer to lease back the land and properties located at 1109 and 1151 McKay Drive, San Jose, California, for an initial term of 12 years and a renewal option for an additional seven years. The transaction qualified for sale and leaseback and operating lease accounting classification, and we recorded a gain of $5.4 million which is recorded in the gain on sale and leaseback transaction line in the consolidated statements of operations.

Legal proceedings

We are subject to a variety of claims and suits that arise from time to time in the ordinary course of our business. While management currently believes that resolving claims against us, individually or in the aggregate, will not have a material adverse impact on our financial position, results of operations or statements of cash flows, these matters are subject to inherent uncertainties and management's view of these matters may change in the future. We accrue for loss contingencies when it is both probable that we will incur the loss and when we can reasonably estimate the amount of the loss or range of loss.

Contingencies

We have in the past and may in the future receive notices from third parties that claim our products infringe their intellectual property rights. We cannot be certain that our technologies and products do not and will not infringe issued patents or other proprietary rights of third parties.

Any infringement claims, with or without merit, could result in significant litigation costs and diversion of management and financial resources, including the payment of damages, which could have a material adverse effect on our business, financial condition, and results of operations.

Indemnifications

In connection with certain agreements, we are obligated to indemnify the counterparty against third-party claims alleging infringement of certain intellectual property rights by us. We have also entered into indemnification agreements with our officers and directors. Maximum potential future payments under these agreements cannot be estimated because these agreements do not have a maximum stated liability. However, historical costs related to these indemnification provisions have not been significant. We have not recorded any liability in our consolidated financial statements for such indemnification obligations.

10. Stockholders' Equity

Preferred Stock

We are authorized, subject to limitations imposed by Delaware law, to issue up to a total of 10,000,000 shares of preferred stock in one or more series without stockholder approval. Our Board of Directors has the power to establish, from time to time, the number of shares to be included in each series and to fix the rights, preferences, and privileges of the shares of each wholly unissued series and any of its qualifications, limitations, or restrictions. Our Board of Directors can also increase or decrease the number of shares of a series, but not below the number of shares of that series then outstanding, without any further vote or action by the stockholders.

Our Board of Directors may authorize the issuance of preferred stock with voting or conversion rights that could harm the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of our company and might harm the market price of our common stock and the voting power and other rights of the holders of our common stock. As of the end of fiscal 2022, there were no shares of preferred stock outstanding.

Shares Reserved for Future Issuance

Shares of common stock reserved for future issuance as of the end of fiscal 2022 were as follows:

Stock options outstanding	31,185
Restricted stock units outstanding	1,220,573
Market stock units outstanding	251,974
Performance stock units outstanding	441,375
Awards available for grant under all share-based compensation plans	4,449,604
Reserved for future issuance	6,394,711

Treasury Stock

Our cumulative authorization of repurchases under our common stock repurchase program as of the end of fiscal 2022 was $1.8 billion expiring July 2025. The program authorizes us to repurchase our common stock in the open market or in privately negotiated transactions depending upon market conditions and other factors. The number of shares repurchased and the timing of repurchases is based on the level of our cash balances, general business and market conditions, and other factors, including alternative investment opportunities. Common stock repurchased under this program is held as treasury stock. As of the end of fiscal 2022, we had $577.4 million of common stock remaining to be repurchased under our common stock repurchase program. During fiscal 2022 and 2021, we issued 3.5 million and 0.1 million shares, respectively, from treasury stock for settlement of redemptions of our convertible notes.

11. Share-Based Compensation

The purpose of our various share-based compensation plans is to attract, motivate, retain, and reward high-quality employees, directors, and consultants by enabling such persons to acquire or increase their proprietary interest in our common stock in order to strengthen the mutuality of interests between such persons and our stockholders and to provide such persons with annual and long-term performance incentives to focus their best efforts on the creation of stockholder value. Consequently, we determine whether to grant share-based compensatory awards subsequent to the initial award for our employees and consultants primarily on individual performance.

Share-Based Compensation Plans

On October 29, 2019, our stockholders approved: (i) our 2019 Equity and Incentive Compensation Plan, or the 2019 Incentive Plan, to replace our Amended and Restated 2010 Incentive Compensation Plan, or the 2010 Incentive Plan, and (ii) our 2019 Employee Stock Purchase Plan, or the 2019 ESPP, to replace our Amended and Restated 2010 Employee Stock Purchase Plan, or our 2010 ESPP. Upon approval of the 2019 Incentive Plan, new awards are no longer issued under the 2010 Incentive Plan. Awards outstanding at October 29, 2019 under our prior share-based compensation plans were not impacted by the approval of the 2019 Incentive Plan and continue to remain outstanding and vest by their terms under the applicable share-based compensation plan. Shares underlying certain share-based awards forfeited under the 2010 Incentive Plan subsequent to the approval of the 2019 Incentive Plan automatically transfer to and become available for award issuance from the 2019 Incentive Plan.

The 2019 Incentive Plan authorizes our Board of Directors to provide equity-based compensation in the form of stock options, stock appreciation rights, restricted stock units, cash incentive awards, performance shares, performance stock units, and other stock-based awards. The cumulative number of shares approved under the 2019 Incentive Plan was 4,590,000. The 2019 ESPP authorizes us to provide eligible employees with an opportunity to acquire an equity interest in our company through the purchase of stock at a discount, with an initial authorization of 1,500,000 shares.

Effective August 19, 2019, we adopted the 2019 Inducement Equity Plan. 650,000 shares of our common stock have been reserved for issuance under the 2019 Inducement Equity Plan, subject to adjustment for stock dividends, stock splits, or other changes in our common stock or capital structure. The 2019 Inducement Equity Plan is intended to comply with Rule 5635(c)(4) of the Nasdaq Stock Market Listing Rules, which provide an exception to the Nasdaq Stock Market Listing Rules' on the shareholder approval requirement for the issuance of securities with regards to grants to employees of the company or its subsidiaries as an inducement material to such individuals entering into employment with the company or its subsidiaries. An individual was eligible to receive an award under the 2019 Inducement Equity Plan only if he or she was not previously an employee or director of our company (or is returning to work after a bona-fide period of non-employment), and an award under the 2019 Inducement Equity Plan is a material inducement for him or her to accept employment with our company. As a result of approval by our stockholders of our amended and restated 2019 Incentive Plan on October 27, 2020, no new awards will be granted under the 2019 Inducement Equity Plan.

Our share-based compensation plans with outstanding awards consist of our 2010 Incentive Plan, our 2019 Incentive Plan, our 2019 Inducement Equity Plan, and our 2019 ESPP.

Share-based compensation awards available for grant or issuance for each plan as of the beginning of the fiscal year, including changes in the balance of awards available for grant for fiscal 2022, were as follows:

	Awards Available Under All Share-Based Award Plans	2019 Incentive Compensation Plan	2019 Employee Inducement Equity Plan	2019 Employee Stock Purchase Plan	2010 Incentive Compensation Plan	DSPG Replacement Award Plan
Balance at June 2021	3,381,840	2,114,407	—	1,208,582	—	58,851
Additional shares authorized	2,000,000	2,000,000	—	—	—	—
Transferred between plans	-	14,625	—	—	(14,625)	—
Restricted stock units granted	(641,690)	(582,839)	—	—	—	(58,851)
Market stock units granted	(65,000)	(65,000)	—	—	—	—
Performance stock units granted	(96,914)	(96,914)	—	—	—	—
Performance stock units performance adjustment	(133,627)	(133,627)	—	—	—	—
Market stock units performance adjustment	(69,728)	(33,675)	—	—	(36,053)	—
Purchases under employee stock purchase plan	(138,502)	—	—	(138,502)		—
Forfeited	337,171	162,547	27,768	—	146,856	—
Plan shares no longer available for new grants	(123,946)	—	(27,768)	—	(96,178)	—
Balance at June 2022	4,449,604	3,379,524	—	1,070,080	—	—

Share-based compensation and the related tax benefit recognized in our consolidated statements of income for fiscal 2022, 2021, and 2020 were as follows (in millions):

	2022	2021	2020
Cost of revenue	$ 4.0	$ 3.4	$ 2.1
Research and development	42.5	45.4	32.3
Selling, general, and administrative	54.4	44.3	26.0
Total	$ 100.9	$ 93.1	$ 60.4
Income tax benefit on share-based compensation	$ 23.1	$ 15.2	$ 6.3

Included in the preceding table is share-based compensation for our cash-settled phantom stock units, which we granted in October 2019 (see *Phantom Stock Units* below) (in millions):

	2022	2021	2020
Cost of revenue	$ 0.2	$ 0.4	$ 0.2
Research and development	27.2	21.9	9.1
Selling, general, and administrative	4.7	4.7	1.8
Total	$ 32.1	$ 27.0	$ 11.1

We recognize a tax benefit upon expensing certain share-based awards associated with our share-based compensation plans, including RSUs, market stock units, or MSUs, PSUs, and phantom stock units. We do not recognize a tax benefit upon expensing all or a portion of share-based awards granted to certain executive officers and certain foreign-based employees.

We compare the actual tax benefit associated with the tax deduction from share-based award activity to the hypothetical tax benefit based on the grant date fair values of the corresponding share-based awards. Tax benefit associated with excess tax deduction creditable to income tax provision is recognized when incurred. Tax deficiency associated with a tax shortfall is debited to income tax provision when incurred.

Historically, we have issued new shares in connection with our share-based compensation plans, however, treasury shares are also available for issuance. Any additional shares repurchased under our common stock repurchase program will be available for issuance under our share-based compensation plans.

Stock Options

Our share-based compensation plans with outstanding stock option awards include our 2010 Incentive Plan. Under our 2010 Incentive Plan, we were able to grant incentive stock options or nonqualified stock options to purchase shares of our common stock at not less than 100% of the fair market value, or FMV, on the date of grant. We ceased granting stock options in fiscal 2018.

Options granted under our 2010 Incentive Plan generally vest three to four years from the vesting commencement date and expire seven years after the date of grant if not exercised.

Certain stock option activity for fiscal 2022 and balances as of the end of fiscal 2022 were as follows:

	Stock Option Awards Outstanding	Weighted Average Exercise Price	Intrinsic Value (In millions)
Balance at June 2021	55,061	$ 66.68	
Exercised	(23,876)	73.44	
Balance at June 2022	31,185	61.50	$ 2.1
Exercisable at June 2022	31,185	61.50	$ 2.1

The aggregate intrinsic value was determined using the closing price of our common stock on the last trading day of fiscal 2022, or June 24, 2022, of $128.78. All of the stock options outstanding were vested and in-the-money as of the end of fiscal 2022.

Cash received and the aggregate intrinsic value of stock options exercised for fiscal 2022, 2021, and 2020 were as follows (in millions):

	2022	2021	2020
Cash received	$ 5.3	$ 23.9	$ 23.9
Aggregate intrinsic value	$ 3.6	$ 8.6	$ 10.8

There have been no stock options granted since fiscal 2018.

There was no unrecognized share-based compensation costs for stock options granted under our various plans.

Restricted Stock Units

Our 2019 Incentive Plan provides for the grant of RSUs to our employees, consultants, and directors, and previously our 2019 Inducement Equity Plan and our 2010 Incentive Plan provided for the grant of deferred stock units, or DSUs, to our employees, consultants, and directors. An RSU and a DSU are each a promise to deliver shares of our common stock at a future date in accordance with the terms of the grant agreement and the words can be used interchangeably. We began granting DSUs in January 2006 and RSUs in 2019. The use of RSUs will cover the meaning of both RSUs and DSUs.

RSUs granted generally vest ratably over three to four years from the vesting commencement date. Delivery of shares under the plans take place on the quarterly vesting dates. At the delivery date, we withhold shares to cover applicable statutory minimum tax withholding for grantees subject to withholding and deliver a net quantity of shares to the grantee after such withholding. Until delivery of shares, the grantee has no rights as a stockholder with respect to any shares underlying the RSU award.

RSU activity, including RSUs granted, delivered, and forfeited in fiscal 2022, and the balance and aggregate intrinsic value of RSUs as of the end of fiscal 2022 were as follows:

	RSU Awards Outstanding	Aggregate Intrinsic Value (in millions)	Weighted Average Grant Date Fair Value
Balance at June 2021	1,323,286		$ 64.13
Granted	641,690		183.97
Delivered	(578,400)		63.23
Forfeited	(166,003)		120.72
Balance at June 2022	1,220,573	$ 157.2	119.83

Of the shares delivered, 169,529 shares valued at $31.4 million were withheld to meet statutory tax withholding requirements. The aggregate intrinsic value was determined using the closing price of our common stock on the last trading day of fiscal 2022, or June 24, 2022, of $128.78.

The unrecognized share-based compensation cost for RSUs granted under our 2019 Incentive Plan, our 2019 Inducement Equity Plan and our 2010 Incentive Plan was approximately $107.1 million as of the end of fiscal 2022, which will be recognized over a weighted average period of approximately 1.9 years. The aggregate market value of RSUs delivered in fiscal 2022, 2021, and 2020 was $106.4 million, $48.2 million, and $36.0 million, respectively.

Market Stock Units

Our 2019 Incentive Plan, and previously our 2019 Inducement Equity Plan, provide for the grant of MSU awards, to our employees, consultants, and directors. An MSU is a promise to deliver shares of our common stock at a future date based on the achievement of market-based performance requirements in accordance with the terms of the MSU grant agreement.

We have granted MSU awards to our executive officers and other management members under our 2010 Incentive Plan, our 2019 Incentive Plan and our 2019 Inducement Equity Plan, which are designed to vest in three or four tranches with the target quantity for each tranche equal to one-third or one-fourth of the total MSU grant. The first tranche vests based on a one-year performance period; the second tranche vests based on a two-year performance period; the third tranche vests based on a three-year performance period; and the fourth tranche (in the case of four-year vesting) vests based on a four-year performance period.

For MSU awards granted in fiscal 2022 and 2021, performance is measured based on our achievement of a specified level of total stockholder return, or TSR, relative to the TSRs of each company in the Russell 2000 Index. The potential payout ranges from 0% to 200% of the target grant quantity based on our TSR performance relative to the TSRs of each company in the Russell 2000 Index. No payout will occur if our TSR performance falls below the 25th percentile of the TSRs of each company in the Russell 2000 Index, and a 200% payout will occur if our TSR performance exceeds the 75th percentile of the TSRs of each company in the Russell 2000 Index. Performance payouts between the 25th and 75th percentiles will be determined on a linear basis with performance at the 50th percentile equal to 100% of target.

For MSU awards granted in fiscal 2022 and 2021, the first tranche and the second tranche can payout up to 200%, and the payout for the third tranche will be calculated based on the total target quantity for the entire grant multiplied by the payout factor, based on performance for the three-year performance period, less shares issued for the first tranche and the second tranche.

For outstanding MSU awards granted prior to fiscal 2021, performance is measured based on our achievement of a specified level of TSR relative to the TSR of the S&P Semiconductor Select Industry Index, or SPSISC Index. The potential payout ranges from 0% to 200% of the target grant quantity and is adjusted on a two-to-one ratio based on our TSR performance relative to SPSISC Index TSR.

For MSU awards granted prior to fiscal 2021 and vesting over three years, the payout for the first tranche and the second tranche will not exceed 100% and the payout for the third tranche will be calculated based on the total target quantity for the entire grant multiplied by the payout factor, based on performance for the three-year performance period, less shares issued for the first tranche and the second tranche. For MSUs vesting over four years, the payout for the first tranche, the second tranche and the third tranche will not exceed 100% and the payout for the fourth tranche will be calculated based on the total target quantity for the entire grant multiplied by the payout factor, based on performance for the four-year performance period, less shares issued for the first tranche, the second tranche and the third tranche.

Delivery of shares earned, if any, will take place on the dates provided in the applicable MSU grant agreement, assuming the grantee is still an employee, consultant, or director of our company at the end of the applicable performance period. On the delivery date, we withhold shares to cover statutory tax withholding requirements and deliver a net quantity of shares to the recipient after such withholding. Until delivery of shares, the grantee has no rights as a stockholder with respect to any shares underlying the MSU award.

MSU activity, including MSUs granted, delivered, and forfeited in fiscal 2022, and the balance and aggregate intrinsic value of MSUs as of the end of fiscal 2022 were as follows:

	MSU Awards Outstanding	Aggregate Intrinsic Value (in millions)	Weighted Average Grant Date Fair Value
Balance at June 2021	347,027		$ 82.18
Granted	65,000		191.68
Performance adjustment	69,728		—
Delivered	(203,883)		78.05
Forfeited	(25,898)		136.26
Balance at June 2022	251,974	$ 32.4	

As a result of the Synaptics TSR outperforming the Index TSR by 185.21 percentage points for the tranche three payout period ended in fiscal 2022, we delivered 200% of the targeted shares underlying the fiscal 2019 MSU grants. As a result of the Synaptics TSR outperforming the Index TSR by 226.12 percentage points for the tranche two payout period ended in fiscal 2022, we delivered 100% of the targeted shares underlying the fiscal 2020 MSU grants as the tranche two payout is capped at a 100% payout. As a result of the Synaptics TSR performing at the 76th percentile relative to the constituents of the Russell 2000 Index for the tranche one payout period ended in fiscal 2022, we delivered 200% of the targeted shares underlying the fiscal 2021 MSU grants.

Of the shares delivered, 105,719 shares valued at $18.3 million were withheld to meet statutory minimum tax withholding requirements. The aggregate intrinsic value assumes a 100% payout factor and was determined using the closing price of our common stock on the last trading day of fiscal 2022, or June 24, 2022, of $128.78.

The fair value of each MSU granted from our plans for fiscal 2022, 2021, and 2020 was estimated at the date of grant using the Monte Carlo simulation model, assuming no expected dividends and the following assumptions:

	2022	2021	2020
Expected volatility of company	52.61 %	53.62 %	45.46% - 52.55%
Expected volatility of Index	17.4% - 581.6%	19.6% - 197.6%	24.64% - 33.44%
Correlation coefficient	0.53	0.51	0.53 - 0.58
Expected life in years	2.87	2.87	2.50 - 4.00
Risk-free interest rate	0.40 %	0.17 %	0.26% - 1.52%
Fair value per award	$284.43 - $342.89	$131.34 - $175.15	$55.52 - $100.38

We amortize the compensation expense over the three- or four-year performance and service period on a ratable basis. The unrecognized share-based compensation cost of our outstanding MSUs was approximately $14.9 million as of the end of fiscal 2022, which will be recognized over a weighted average period of approximately 0.72 years.

Performance Stock Units

Our 2019 Incentive Plan and our 2010 Incentive Plan provide for the grant of PSU awards to our employees, consultants, and directors. A PSU is a promise to deliver shares of our common stock at a future date based on the achievement of performance-based requirements in accordance with the terms of the PSU grant agreement.

We have granted PSU awards to our executive officers and other key management team members under our 2010 Incentive Plan, our 2019 Incentive Plan and our 2019 Inducement Equity Plan, which, generally, are designed to vest in three tranches with the target quantity for each tranche equal to one-third of the total PSU award. Generally, PSU awards have a specific one-year performance period and vesting occurs over three service periods with the final service period ending approximately three years from the grant date. Performance is measured based on the achievement of a specified level of performance relative to predefined performance criteria (for PSU awards granted in fiscal 2022 and prior to fiscal 2021 the performance criteria is based on non-GAAP earnings per share, for PSU awards granted in fiscal 2021 the performance criteria is based on a combination of our design win revenue, non-GAAP gross margin percentage and non-GAAP operating expenses). For our fiscal 2022 PSU awards, the potential payout ranges from 0% to 200% of the target grant quantity and is adjusted on a linear basis with a payout triggering if our measurement results equals greater than 75% of the target with a maximum payout achieved at 125% of target.

Delivery of shares earned, if any, will take place on the dates provided in the applicable PSU grant agreement, assuming the grantee is still an employee, consultant, or director of our company at the end of the applicable service period. On the delivery date, we withhold shares to cover statutory tax withholding requirements and deliver a net quantity of shares to the recipient after such withholding. Until delivery of shares, the grantee has no rights as a stockholder with respect to any shares underlying the PSU award.

PSU activity, including PSUs granted, delivered, and forfeited in fiscal 2022, and the balance and aggregate intrinsic value of PSUs as of the end of fiscal 2022 were as follows:

	PSU Awards Outstanding	Aggregate Intrinsic Value (in millions)	Weighted Average Grant Date Fair Value
Balance at June 2021	317,392		$ 62.41
Granted	96,914		111.90
Performance adjustment	88,762		—
Delivered	(208,023)		55.01
Forfeited	(37,142)		79.79
Balance at June 2022	257,903	$ 33.2	

We value PSUs using the aggregate intrinsic value on the grant date and amortize the compensation expense over the three-year service period on a ratable basis, dependent upon the probability of meeting the performance measures. Of the shares delivered, 94,642 shares valued at $17.6 million were withheld to meet statutory minimum tax withholding requirements. The PSU awards outstanding balance at June 2022 is based on the target grant quantity and does not include the performance adjustment of 183,472 shares for completed performance periods. The unrecognized share-based compensation cost of our outstanding PSUs was approximately $31.7 million as of June 25, 2022, which will be recognized over a weighted average period of approximately 0.72 years.

Phantom Stock Units

The 2019 Incentive Plan authorizes the grant of phantom stock units to non-employee directors, officers and employees. We initially granted phantom stock units in October 2019. Phantom stock units are cash-settled and entitle the recipient to receive a cash payment equal to the value of a single share for each unit based on the average closing share price of our stock over the thirty calendar days prior to the vesting date. Grants of phantom stock units vest over three years, with an annual vesting date of October 31 each year subsequent to the grant date. We recognize compensation expense for phantom stock units on a straight-line basis for each tranche of each award based on the average closing price of our common stock over the thirty calendar days ended prior to each balance sheet date. The outstanding phantom stock units had a fair value of $135.07 per unit at June 25, 2022 and our accrued liability for such units was $15.4 million. The outstanding phantom stock units had a fair value of $140.17 per unit at June 26, 2021 and our accrued liability for such units was $18.4 million.

Phantom stock activity was as follows:

	Phantom Stock Units Outstanding	Aggregate Intrinsic Value (in millions)
Balance as of June 2021	402,458	
Paid	(196,420)	
Forfeited	(29,941)	
Balance as of June 2022	176,097	$ 22.7

Employee Stock Purchase Plan

Our 2019 ESPP became effective October 29, 2019 and replaced our 2010 ESPP. The 2019 ESPP, and previously the 2010 ESPP, allows employees to designate up to 15% of their base compensation, subject to legal restrictions and limitations, to purchase shares of common stock at 85% of the lesser of the FMV at the beginning of the offering period or the exercise date. Under the 2019 ESPP, the offering period extends for up to one year and includes two exercise dates occurring at six-month intervals. Under the 2010 ESPP, the offering period extended for up to two years and included four exercise dates occurring at six-month intervals. Under the terms of our 2019 ESPP, and previously under our 2010 ESPP, if the FMV at an exercise date is less than the FMV at the beginning of the offering period, the current offering period will terminate and a new offering period will commence.

Shares purchased, weighted average purchase price, cash received, and the aggregate intrinsic value for employee stock purchase plan purchases in fiscal 2022, 2021, and 2020 were as follows (in millions, except shares purchased and weighted average purchase price):

	2022	2021	2020
Shares purchased	138,502	220,389	346,502
Weighted average purchase price	$ 97.90	$ 57.00	$ 30.50
Cash received	$ 13.6	$ 12.6	$ 10.6
Aggregate intrinsic value	$ 12.5	$ 10.3	$ 10.1

The fair value of each award granted under our 2019 ESPP and our 2010 ESPP for fiscal 2022, 2021, and 2020 was based on the Black-Scholes option pricing model. The fair value per award for fiscal 2022, 2021 and 2020 was $38.93, $20.82 and $15.48, respectively.

Unrecognized share-based compensation costs for awards granted under our 2019 ESPP at the end of fiscal 2022 were approximately $1.4 million that will be amortized over the next 2 months.

12. Employee Benefit Plans

401(k) Plan

We have a 401(k) Retirement Savings Plan for full-time employees in the U.S. Under the plan, eligible employees may contribute a portion of their net compensation up to the annual limit of $20,500, or $27,000 for employees who are 50 years or older. In fiscal 2022, we provided matching funds of 25% of our employees' contributions, excluding catch-up contributions.

The employer matching funds vest immediately. We made matching contributions of $1.7 million, $1.8 million and $2.1 million in fiscal 2022, 2021, and 2020, respectively.

13. Income Taxes

Income/(loss) before provision for income taxes for fiscal 2022, 2021, and 2020 consisted of the following (in millions):

	2022	2021	2020
United States	$ (44.8)	$ (21.0)	$ (13.5)
Foreign	365.3	141.1	172.9
Income before provision for income taxes	$ 320.5	$ 120.1	$ 159.4

The provision for income taxes for fiscal 2022, 2021, and 2020 consisted of the following (in millions):

	2022	2021	2020
Current tax expense/(benefit)			
Federal	$ (0.6)	$ 4.1	$ 0.8
State	—	0.1	—
Foreign	94.9	36.1	35.4
	94.3	40.3	36.2
Deferred tax expense/(benefit)			
Federal	(21.8)	(0.5)	(5.8)
State	-	-	0.1
Foreign	(7.9)	(8.4)	8.1
	(29.7)	(8.9)	2.4
Provision for income taxes	$ 64.6	$ 31.4	$ 38.6

The provision for income taxes differs from the federal statutory rate for fiscal 2022, 2021, and 2020 as follows (in millions):

	2022	2021	2020
Provision at U.S. federal statutory tax rate	$ 67.3	$ 25.1	$ 33.5
State income taxes	—	0.1	—
Non-deductible share-based compensation	7.9	5.2	3.0
(Windfall)/shortfall related to share-based compensation	(18.1)	(3.8)	2.1
Non-deductible officer compensation	6.4	6.4	1.9
Business credits	(10.0)	(3.8)	(6.1)
Foreign tax differential	6.4	(6.7)	4.9
Foreign income inclusion	3.6	5.2	0.7
Deferred taxes on unremitted foreign earnings	0.7	3.5	—
Other differences	0.4	0.2	(1.4)
Provision for income taxes	$ 64.6	$ 31.4	$ 38.6

Non-current deferred tax assets and non-current deferred tax liabilities are included in "Non-current other assets" and "Other long-term liabilities", respectively, on our consolidated balance sheets.

Significant components of our deferred tax assets (liabilities) as of the end of fiscal 2022 and 2021 consisted of the following (in millions):

	2022	2021
Deferred tax assets:		
Capital loss carryforward	$ 17.8	$ 0.2
Inventory write downs	2.6	3.9
Property and equipment and intangible assets	11.7	6.0
Share-based compensation	12.0	8.8
Nondeductible interest	5.4	—
Business credit carryforward	62.0	39.1
Lease liabilities	11.2	6.5
Net operating loss carryforward	16.3	7.2
Other accruals	5.6	5.1
	144.6	76.8
Valuation allowance	(59.0)	(32.6)
	85.6	44.2
Deferred tax liabilities:		
Property and equipment	(2.0)	(0.9)
Interest	—	(3.4)
Right-of-use assets	(11.5)	(6.2)
Unremitted foreign earnings	(22.1)	(3.5)
Acquisition intangibles	(45.8)	(29.0)
	(81.4)	(43.0)
Net deferred tax assets	$ 4.2	$ 1.2

Realization of deferred tax assets depends on our generating sufficient U.S. and certain foreign taxable income in future years to obtain a benefit from the utilization of those deferred tax assets on our tax returns. Accordingly, the amount of deferred tax assets considered realizable may increase or decrease when we reevaluate the underlying basis for our estimates of future U.S. and foreign taxable income. As of the end of fiscal 2022, a valuation allowance of $59.0 million was maintained to reduce deferred tax assets primarily related to state tax credits and capital losses carryforwards that are not more likely than not to be realized through future taxable income. The net change in the valuation allowance during fiscal 2022 was an increase of $26.4 million, primarily due to an increase of unrealized deferred tax assets associated with the capital loss carryforwards from our DSPG acquisition..

We consider most of the earnings of our foreign subsidiaries as not indefinitely reinvested overseas and have made appropriate provisions for income or withholding taxes, that may result from a future repatriation of those earnings. Further, we determined not to indefinitely reinvest earnings of certain subsidiaries acquired as part of our DSPG acquisition and established a $17.9 million deferred tax liability on the acquisition date balance sheet. As a result, $22.1 million of our deferred tax liability is associated with unremitted foreign earnings, which if remitted would not result in a further provision for income taxes. We continue to indefinitely reinvest $200 million on certain accumulated earnings and outside basis differences primarily related to our DSPG acquisition. If the undistributed earnings and other outside basis differences were recognized in a taxable transaction, the associated foreign tax credits would be expected to reduce the U.S. income tax liability associated with the foreign distribution or the otherwise taxable transaction. As of our fiscal 2022, assuming full utilization of the associated foreign tax credits, the potential net deferred tax liability associated with these undistributed earnings and outside basis differences would be approximately $46 million.

As of the end of fiscal 2022, we had federal, California, and foreign net operating loss carryforwards of approximately $37.7 million, $14.8 million, and $58.2 million, respectively. The federal and California net operating loss will begin to expire in fiscal 2034 and 2029, respectively, if not utilized. Most of our foreign net operating losses have no expiration date. Under current tax law, net operating loss and tax credit carryforwards available to offset future income or income taxes may be limited by statute or upon the occurrence of certain events, including significant changes in ownership.

We had $25.4 million and $50.4 million of federal and state research tax credit carryforwards, respectively, as of the end of fiscal 2022. The federal research tax credit carryforward will begin to expire in 2029 and the state research tax credit can be carried forward indefinitely.

The total liability for gross unrecognized tax benefits related to uncertain tax positions, included in other liabilities in our consolidated balance sheets, increased by $7.2 million from $22.6 million in fiscal 2021 to $29.8 million in fiscal 2022. Of this amount, $19.6 million will reduce the effective tax rate on income from continuing operations, if recognized. A reconciliation of the beginning and ending balance of gross unrecognized tax benefits for fiscal 2022, 2021, and 2020 consisted of the following (in millions):

	2022	2021	2020
Beginning balance	$ 22.6	$ 20.1	$ 18.9
Increase in unrecognized tax benefits related to current year tax positions	7.1	5.5	3.2
Increase in unrecognized tax benefits related to prior year tax positions	5.5	—	0.1
Remeasurement of unrecognized tax benefits	(0.5)	—	—
Decrease due to statute expiration	(4.9)	(3.0)	(2.1)
Ending Balance	$ 29.8	$ 22.6	$ 20.1

Accrued interest and penalties increased by $0.8 million in fiscal 2022 as compared to fiscal 2021 and decreased by $0.2 million in fiscal 2021 as compared to fiscal 2020. Accrued interest and penalties were $2.5 million and $1.7 million as of the end of fiscal 2022 and 2021, respectively. Our policy is to classify interest and penalties, if any, as components of income tax expense.

It is reasonably possible that the amount of liability for unrecognized tax benefits may change within the next 12 months; an estimate of the range of possible changes could result in a decrease of $0.9 million to an increase of $6.9 million. Any prospective adjustments to our unrecognized tax benefits will be recorded as an increase or decrease to income tax expense and cause a corresponding change to our effective tax rate. Accordingly, our effective tax rate could fluctuate materially from period to period.

Our major tax jurisdictions are the U.S., Hong Kong SAR, Japan, Israel and the U.K. From fiscal 2016 onward, we remain subject to examination by one or more of these jurisdictions.

In January 2022, final foreign tax credit regulations, final regulations, were issued by the U.S. Treasury modifying long established rules, including rules used in the determination of whether foreign taxes paid or accrued are creditable against U.S. income taxes. Subsequently, in July 2022, technical corrections and amendments to the final regulations were issued by the U.S. Treasury. These technical corrections and amendments do not change our initial view that certain foreign taxes we incur may not be creditable under the final regulations. We are currently assessing the impact of the final regulations, together with certain research and development capitalization rules, all effective beginning with our fiscal 2023, but anticipate the impact will have a material adverse effect on our fiscal 2023 and future provision for income taxes.

14. Segment, Customers, and Geographic Information

We operate in one segment: the development, marketing, and sale of semiconductor products used in electronic devices and products. We generate our revenue from three broad product categories: the IoT product applications market, the personal computing, or PC, product applications market, and the mobile, product applications market.

Net revenue within geographic areas based on our customers' locations for fiscal 2022, 2021, and 2020, consisted of the following (in millions):

	2022	2021	2020
China	$ 609.1	$ 524.0	$ 540.6
Taiwan	539.4	382.6	204.5
Japan	453.1	330.7	446.5
Other	83.9	69.5	77.3
South Korea	39.1	28.5	58.3
United States	15.1	4.3	6.7
	$ 1,739.7	$ 1,339.6	$ 1,333.9

Net revenue from external customers for each group of similar products for fiscal 2022, 2021, and 2020 consisted of the following (in millions):

	2022	2021	2020
IoT product applications	$ 1,100.9	$ 612.9	$ 329.8
PC product applications	343.0	354.7	317.4
Mobile product applications	295.8	372.0	686.7
	$ 1,739.7	$ 1,339.6	$ 1,333.9

A reclassification has been made to the prior periods revenue presentation in the above table in order to conform to the current period revenue presentation. The reclassification of $32.0 million and $12.2 million during the fiscal years ended 2021 and 2020, respectively, moved virtual reality product revenue from Mobile product applications to IoT product applications.

Long-lived assets within geographic areas as of the end of fiscal 2022 and 2021 consisted of the following (in millions):

	2022	2021
United States	$ 118.2	$ 168.5
Asia/Pacific	624.7	191.9
Europe	516.6	602.3
	$ 1,259.5	$ 962.7

Our goodwill of $806.6 million has been allocated to two reporting units which include IoT and Mobile/PC.

Major customers' revenue as a percentage of total net revenue for fiscal 2022, 2021, and 2020 were as follows:

	2022	2021	2020
Customer A	*	14%	18%
Customer B	13%	13%	*
Customer C	12%	10%	12%

* Less than 10%

15. Restructuring Activities

We have initiated various strategic restructuring actions primarily intended to reduce costs, gain synergies from our recent acquisitions and align our business in response to market conditions.

The following table summarizes the restructuring activity and related charges during the periods presented (in millions):

	Years Ended		
	2022	2021	2020
Balance, beginning of period	$ 0.2	$ 6.1	$ 5.2
Charges	18.3	7.4	33.0
Payments	(17.1)	(13.3)	(32.1)
Balance, end of period	$ 1.4	$ 0.2	$ 6.1

During fiscal 2022, we recorded restructuring and related charges of $18.3 million in our consolidated statements of operations. The charges were for activities intended to further improve efficiencies in our operational activities and gain synergies from the DSPG acquisition. These activities from the restructuring actions taken during fiscal 2022 are complete as of the end of fiscal 2022.

During fiscal 2021, we recorded restructuring and related charges of $7.4 million in our consolidated statements of operations. The charges were for activities to gain synergies from our DisplayLink acquisition. The activities from the restructuring actions taken during fiscal 2021 were complete as of the end of fiscal 2021.

Exhibit 10.3(k)

SYNAPTICS INCORPORATED
MARKET STOCK UNIT AWARD AGREEMENT

This Market Stock Unit Award Agreement (this "***Agreement***") is made as of August 17, 2022, by and between Synaptics Incorporated, a Delaware corporation (the "***Company***"), and ___________ (the "***Grantee***").

1. **<u>Certain Definitions</u>**. Capitalized terms used, but not otherwise defined, in this Agreement will have the meanings given to such terms in the Synaptics Incorporated 2019 Equity and Incentive Compensation Plan (the "***Plan***"). As used herein:

(a) "***Beginning Price***" shall mean, with respect to the Company and any other Russell 2000 Company, the average of the closing market prices of such company's common stock on the principal exchange on which such stock is traded for the trading days in the period of ninety (90) calendar days ending on the June 30 immediately preceding the applicable Performance Period, as reported in The Wall Street Journal. As to a stock which goes ex-dividend during such 90-day period, the closing market prices as to such stock for the portion of the 90-day period preceding the ex-dividend date shall be equitably adjusted to exclude the amount of the related dividend.

(b) "***Change in Control MSUs***" shall mean, with respect to each Tranche for which the applicable Vesting Date is after the effective date of a Change in Control, (i) the Target Number of MSUs subject to such Tranche, multiplied by (ii) the Payout Factor applicable to such Tranche, multiplied by (iii) a fraction, the numerator of which shall be the number of days that elapsed during the applicable Performance Period through the effective date of the Change in Control, and the denominator of which shall be the total number of days in the applicable Performance Period.

(c) "***Determination Date***" shall mean the last day of the applicable Performance Period, or, if earlier, the day immediately prior to the effective date of the Change in Control.

(d) "***Ending Price***" shall mean, with respect to the Company and any other Russell 2000 Company, the average of the closing market prices of such company's common stock on the principal exchange on which such stock is traded for the trading days in the period of ninety (90) calendar days ending on the last day of the applicable Performance Period, as reported in The Wall Street Journal, plus dividends paid over the applicable Performance Period and with dividends deemed reinvested on the applicable dividend payment date. However, if a Change in Control occurs prior to the last day of a Performance Period, the Ending Price used to determine the Company TSR for the Performance Period shall be (i) the value of the consideration offered for a share of Common Stock in the Change in Control or (ii) in the event that there is no consideration offered for a share of Common Stock in the Change in Control, the average closing price for the Common Stock during the thirty (30) calendar day period ending on the day immediately prior to the effective date of the Change in Control, as reported in The Wall Street Journal and in each case including any dividends paid over the applicable Performance Period prior to the Change in Control and with dividends deemed reinvested on the applicable dividend payment date. As to a share which goes ex-dividend during the 90-day or 30-day, as applicable, period referred to above, the closing market prices as to such stock for the portion of the 90-day or 30-day, as applicable, period preceding the ex-dividend date shall be equitably and proportionately adjusted to exclude the amount of the related dividend.

(e) "***Good Reason***" shall mean the occurrence of any of the following events without the Grantee's prior written approval: (i) the Grantee is demoted by means of a material reduction in authority, responsibilities, or duties; (ii) the Grantee's annual base salary for a fiscal year ("***Base Salary***") is reduced to a level that is less than 90% of the Base Salary paid to the Grantee during the prior fiscal year, or the Grantee's Targeted Bonus is reduced to a level that is less than 90% of the Targeted Bonus for the Grantee during the prior fiscal year; (iii) the Grantee is required to render his or her principal duties from a Company location that is more than fifty (50) miles from a Company location from which the Grantee performs his or her principal duties at the earlier of the time the Grantee entered into any employment or other service agreement with the Company or the date of this Agreement, in either case other than as has been previously contemplated by the Company and the Grantee, and such relocation increases the Grantee's one way commute; or (iv) the Company breaches a material provision of any employment or other service agreement to which the Grantee is party; provided, however, that any such event shall not constitute Good Reason unless both (x) the Grantee provides written notice to the Company of the event claimed to constitute Good Reason within sixty (60) days of the initial existence of such event and (y) the Company fails to remedy such event within thirty (30) days of receiving such written notice thereof; and provided, further, that in all events the termination of the Grantee's employment with the Company shall not constitute a termination for Good Reason unless such termination occurs not more than six (6) months following the initial existence of the event claimed to constitute Good Reason.

(f) "***Non-Vested MSUs***" means, with respect to each Tranche for which the applicable Vesting Date is after the effective date of a Change in Control, the difference of (i) (A) the Target Number of MSUs subject to such Tranche, multiplied by (B) the Payout Factor, minus (ii) the Change in Control MSUs for such Tranche; provided, however, that in no event shall such number be less than zero.

(g) "***Payout Factor***" for a Performance Period shall be determined based on the Company's TSR Percentile Ranking for that Performance Period as follows:

TSR Percentile Ranking	**Payout Factor**
80^{th} or higher	300%
50^{th}	100%
25^{th} or below	0%

If the Company's TSR Percentile Ranking for a Performance Period is between two levels set forth in the table above, the Payout Factor for that Performance Period will be determined by linear interpolation between such two levels. In no event shall the Payout Factor for any Performance Period be less than 0% or greater than 300%.

(h) ***"Russell 2000 Companies"*** shall mean, for each Performance Period, each company that is in the Russell 2000 Index on the first day of the Performance Period without regard to whether the company continues to be a member of such index throughout the duration of that Performance Period, provided that (i) the TSR for any company that ceases to be in the Russell 2000 Index (or its successor) during the Performance Period due to its bankruptcy or insolvency shall be deemed for purposes of determining the Company's TSR Percentile Ranking to be equal to -100% for the entire Performance Period and (ii) the TSR for any company that ceases to be in the Russell 2000 Index (or its successor) as a result of its acquisition by another company shall be excluded from the calculation of the Company's TSR Percentile Ranking. Notwithstanding the foregoing, in the event a company that is on the Russell 2000 Index on the first day of the Performance Period acquires or disposes of a subsidiary or business (including through a spin-off) prior to the last day of the Performance Period, the Committee shall determine in its sole discretion whether the company's TSR will be used to determine the Company's TSR Percentile Ranking for that Performance Period.

(i) "***Targeted Bonus***" shall mean, for each fiscal year of the Company, either (i) a bonus program in which the Grantee shall be entitled to participate, which provides the Grantee with a reasonable opportunity, based on the past compensation practices of the Company and the Grantee's then base salary, to maintain or increase the Grantee's total compensation compared to the previous fiscal year or (ii) a targeted bonus based on such factors as the Board may determine.

(j) "***TSR***" shall mean total shareholder return and shall be determined with respect to the Company (the "***Company TSR***") and each other Russell 2000 Company by dividing (i) the applicable Ending Price minus the applicable Beginning Price by (ii) the applicable Beginning Price. For purposes of determining TSR, the value of dividends and other distributions shall be determined by treating them as reinvested in additional shares at the closing market price on the ex-dividend date. Any non-cash distributions shall be valued at fair market value. There shall also be an equitable and proportionate adjustment to the relevant stock price(s) to the extent (if any) necessary to preserve the intended incentives and mitigate the impact of any stock split, stock dividend or reverse stock split occurring during the period beginning ninety (90) days prior to the applicable Performance Period and ending on the last day of the Performance Period.

(k) "***TSR Percentile Ranking***" shall mean the percentile ranking of the Company TSR for the applicable Performance Period among the TSRs for the Russell 2000 Companies for the Performance Period. If the Company TSR for a Performance Period is equal to the TSR(s) of one or more other Russell 2000 Companies for that Performance Period, the Company TSR will be deemed to be greater than the TSR of such other Russell 2000 Companies for that Performance Period.

(l) "***Vested MSUs***" means the portion of the MSUs subject to this Agreement that become vested on the applicable Vesting Date or otherwise, as set forth in **Section 4** below.

2. **Grant of MSUs**. Subject to and upon the terms, conditions and restrictions set forth in this Agreement, including any additional terms and conditions for the Grantee's country (for Grantees outside the United States only) set forth in any attached Appendix that would form part of this Agreement, and in the Plan, pursuant to authorization under resolutions of the Committee, the Company has granted to the Grantee as of August 17, 2021 (the "***Date of Grant***") the target number of market stock units set forth below ("***MSUs***"), which are a type of Restricted Stock Unit under the Plan and which may be earned based on the Payout Factor.

Target Number of MSUs	

The Target Number of MSUs has been divided into the following three Tranches (each, a "***Tranche***"), each with a corresponding "***Performance Period***" with respect to which the Payout Factor will be determined.

Tranche	**Target Number of MSUs**	**Performance Period**
Tranche One		July 1, 2022 – June 30, 2023
Tranche Two		July 1, 2022 – June 30, 2024
Tranche Three		July 1, 2022 – June 30, 2025

Subject to the degree of attainment of the performance goals established pursuant to this Agreement, the Grantee may earn from 0% to 300% of the Target Number of MSUs attributed to such Performance Period. Each earned MSU shall then represent the right of the Grantee to receive one share of Common Stock subject to and upon the terms and conditions of this Agreement.

3. **Restrictions on Transfer of MSUs**. Subject to Section 15 of the Plan, neither the MSUs evidenced hereby nor any interest therein or in the Common Stock underlying such MSUs shall be transferable prior to payment to the Grantee pursuant to **Section 5** hereof other than by will or pursuant to the laws of descent and distribution.

4. **Vesting of MSUs**.

(a) As of each Determination Date, the Company shall determine the Payout Factor for the applicable Performance Period. For each Tranche, the Company shall multiply the Payout Factor for such Tranche by the Target Number of MSUs subject to the Tranche, and the resulting number of MSUs shall vest in full and become Vested MSUs on the Vesting Date set forth below for that Tranche, in each case subject to the Grantee's continuous employment with the Company or a Subsidiary until each such date.

Tranche	**Vesting Date**
Tranche One	August 17, 2023
Tranche Two	August 17, 2024
Tranche Three	August 17, 2025

In addition, if the Payout Factor for Tranche Three is greater than the Payout Factor previously determined for Tranche One and/or Tranche Two, an additional number of MSUs subject to Tranche One and/or Tranche Two, as applicable, shall vest in full and become Vested MSUs on the Vesting Date set forth below for Tranche Three (subject to the Grantee's continuous employment with the Company or a Subsidiary through such Vesting Date) equal to (i) the target number of MSUs subject to the applicable Tranche multiplied by the Payout Factor for Tranche Three, less (ii) the number of MSUs subject to the applicable Tranche that had previously vested on the Vesting Date for such

Tranche. For avoidance of doubt, MSUs subject to Tranche One and/or Tranche Two that became Vested MSUs on the Vesting Date applicable to such Tranche shall not be subject to adjustment or clawback if the Payout Factor for Tranche Three is lower than the Payout Factor that was previously determined for such Tranche.

There shall be no proportionate or partial vesting of the MSUs in or during the months, days or periods prior to each Vesting Date, and except as otherwise provided in **Sections 4(b)**, **4(c)** or **4(d)** hereof, all vesting of MSUs shall occur only on the applicable Vesting Date.

(b) Acceleration of Vesting Upon a Change in Control. In the event that while the Grantee is continuously employed by the Company or a Subsidiary, a Change in Control occurs prior to the last day of a Performance Period, the Change in Control MSUs shall become immediately Vested MSUs as of the effective date of the Change in Control, and all such Performance Periods shall be deemed completed. After giving effect to the preceding sentence and except as provided in Section 4(c) below, any Non-Vested MSUs with respect to each Tranche shall remain outstanding and will vest and become Vested MSUs thereafter on the applicable Vesting Date for such Tranche, subject to the Grantee's continuous employment with the Company or a Subsidiary until each such date.

(c) Treatment of Non-Vested MSUs Upon a Change in Control. Effective as of and contingent upon the consummation of a Change in Control, the Non-Vested MSUs shall become immediately Vested MSUs and will be payable to the Grantee in accordance with **Section 5** hereof, except to the extent that a Replacement Award is provided to the Grantee to continue, replace or assume the Non-Vested MSUs covered by this Agreement.

(d) Acceleration of Vesting Upon Termination. Notwithstanding any other term or provision of this Agreement, in the event the Grantee ceases to be continuously employed by the Company or a Subsidiary either due to a termination by the Company or a Subsidiary without Cause or by the Grantee for Good Reason during the eighteen (18) month period immediately following a Change in Control, all Non-Vested MSUs subject to this Agreement that are then outstanding shall become immediately Vested MSUs as of the date of the Grantee's termination of employment.

(e) Forfeiture. Subject to the terms of the Plan and except as otherwise determined by the Committee in its sole discretion, any MSUs that are not Vested MSUs, and that do not become Vested MSUs pursuant to this **Section 4**, shall be forfeited immediately upon the termination of the Grantee's continuous employment without any payment to the Grantee. For purposes of this Agreement, "continuous employment" (or substantially similar terms) means the absence of any interruption or termination of the Grantee's employment with the Company or a Subsidiary. Continuous employment shall not be considered interrupted or terminated in the case of transfers between locations of the Company and its Subsidiaries. In addition, any MSUs that are then outstanding and are not Vested MSUs after the Payout Factor for Tranche Three has been determined and applied to such Tranche (and any earlier Tranche to which such Payout Factor applies pursuant to Section 4(a) above) shall be forfeited as of the last day of the Performance Period for Tranche Three, and if a Change in Control occurs during a Performance Period, any MSUs subject to the Tranche to which the Performance Period applies and are not Change in Control MSUs or Non-Vested MSUs after applying the Payout Factor for the Performance Period to such Tranche shall be forfeited as of the date of the Change in Control.

5. **Form and Time of Payment of MSUs**.

(a) Payment for the MSUs, after and to the extent they have become Vested MSUs pursuant to this Agreement, shall be made in the form of Common Stock. Except as provided in **Section 5(b)**, payment shall be made as soon as administratively practicable following (but no later than thirty (30) days following) the date that the MSUs become Vested MSUs pursuant to Section 4 hereof.

(b) Notwithstanding **Section 5(a)**, the Grantee will receive payment for the Change in Control MSUs that become Vested MSUs upon a Change in Control immediately prior to the consummation of such Change in Control.

(c) The Company's obligations to the Grantee with respect to the Vested MSUs will be satisfied in full upon the issuance of Common Stock corresponding to such Vested MSUs.

6. **Dividend Equivalents; Voting and Other Rights**.

(a) The Grantee shall have no rights of ownership in the Common Stock underlying the MSUs and no right to vote the Common Stock underlying the MSUs until the date on which the Common Stock underlying the MSUs is issued or transferred to the Grantee pursuant to **Section 5** above.

(b) Upon the payment of Vested MSUs in accordance with **Section 5** above, the Grantee shall receive additional shares of Common Stock equal in value to the accrued dividend equivalents (without interest). The amount of dividend equivalents for each Vested MSU shall equal the dividends paid on one share of Common Stock for each dividend whose record date occurs during the period between the Date of Grant and the payment of the Vested MSUs in accordance with **Section 5** above.

(c) The obligations of the Company under this Agreement will be merely that of an unfunded and unsecured promise of the Company to deliver Common Stock in the future, and the rights of the Grantee will be no greater than that of an unsecured general creditor. No assets of the Company will be held or set aside as security for the obligations of the Company under this Agreement.

(d) Notwithstanding any term or provision of this Agreement to the contrary, the existence of this Agreement, or of any outstanding MSUs awarded hereunder, shall not affect in any manner the right, power, or authority of the Company or any Subsidiary to make, authorize, or consummate: (i) any or all adjustments, recapitalizations, reorganizations, or other changes in the Company's or any Subsidiary's capital structure or its business; (ii) any merger, consolidation, or similar transaction by or of the Company or any Subsidiary; (iii) any offer, issue, or sale by the Company or any Subsidiary of any capital stock of the Company or any Subsidiary, including any equity or debt securities, or preferred or preference stock that would rank prior to or on parity with the shares of Common Stock represented by the MSUs and/or that would include, have or possess other rights, benefits, and/or preferences superior to those that such shares of Common Stock includes, has or possesses, or any warrants, options, or rights with respect to any of the foregoing; (iv) the dissolution or liquidation of the Company or any Subsidiary; (v) any sale, transfer, or assignment of all or any part of the stock, assets, or business of the Company or any Subsidiary; or (vi) any other corporate transaction, act, or proceeding (whether of a similar character or otherwise).

7. **Adjustments**. The MSUs and the number of shares of Common Stock issuable for each MSU, and the other terms and conditions of the grant evidenced by this Agreement, are subject to adjustment as provided in Section 11 of the Plan.

8. **Withholding Taxes**. To the extent that the Company is required to withhold federal, state, local or foreign taxes or other amounts in connection with the delivery to the Grantee of Common Stock or any other payment to the Grantee or any other payment or vesting event under this Agreement, the Grantee agrees that the Company will withhold from the shares of Common Stock required to be delivered to the Grantee under this Agreement, shares of Common Stock having a value equal to the amount required to be withheld under applicable income and employment tax laws. The shares so retained shall be credited against any such withholding requirement at the market value of such Common Stock on the date of such delivery. To the extent that the amounts available to the Company for such withholding are insufficient, it shall be a condition to the obligation of the Company to make any such delivery or payment that the Grantee make arrangements satisfactory to the Company for payment of the balance of such taxes or other amounts required to be withheld. In no event will the market value of the shares of Common Stock to be withheld and/or delivered pursuant to this **Section 8** to satisfy applicable withholding taxes exceed the minimum amount required to be withheld, unless (i) an additional amount can be withheld and not result in adverse accounting consequences, (ii) such additional withholding amount is authorized by the Committee, and (iii) the total amount withheld does not exceed the Grantee's estimated tax obligations attributable to the applicable transaction.

9. **Compliance With Law**. The Company shall make reasonable efforts to comply with all applicable federal and state securities laws; provided, however, notwithstanding any other provision of the Plan and this Agreement, the Company shall not be obligated to issue any Common Stock pursuant to this Agreement if the issuance thereof would result in a violation of any such law.

10. **Compliance With or Exemption From Section 409A of the Code**. To the extent applicable, it is intended that this Agreement and the Plan comply with or be exempt from the provisions of Section 409A of the Code. This Agreement and the Plan shall be administered in a manner consistent with this intent, and any provision that would cause this Agreement or the Plan to fail to satisfy Section 409A of the Code shall have no force or effect until amended to comply with or be exempt from Section 409A of the Code (which amendment may be retroactive to the extent permitted by Section 409A of the Code and may be made by the Company without the consent of the Grantee). Notwithstanding the foregoing, the Company is not guaranteeing any particular tax outcome, and the Grantee shall remain solely liable for any and all tax consequences associated with the MSUs.

11. **Interpretation**. Any reference in this Agreement to Section 409A of the Code will also include any proposed, final regulations, or any other guidance, promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service.

12. **No Right to Future Awards or Employment**. The grant of the MSUs under this Agreement to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the MSUs and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing contained in this Agreement shall confer upon the Grantee any right to be employed or remain employed by the Company or any of its

Subsidiaries, nor limit or affect in any manner the right of the Company or any of its Subsidiaries to terminate the employment or adjust the compensation of the Grantee.

13. **Relation to Other Benefits**. Any economic or other benefit to the Grantee under this Agreement or the Plan shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Company or any of its Subsidiaries and shall not affect the amount of any life insurance coverage available to any beneficiary under any life insurance plan covering employees of the Company or any of its Subsidiaries.

14. **Amendments**. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that (a) no amendment shall adversely affect the rights of the Grantee under this Agreement without the Grantee's written consent, and (b) the Grantee's consent shall not be required to an amendment that is deemed necessary by the Company to ensure compliance with Section 409A of the Code or Section 10D of the Exchange Act.

15. **Severability**. In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

16. **Relation to Plan and Compensation Recovery Policy**. This Agreement is subject to the terms and conditions of the Plan. In the event of any inconsistency between the provisions of this Agreement and the Plan, the Plan shall govern. The Committee acting pursuant to the Plan, as constituted from time to time, shall, except as expressly provided otherwise herein or in the Plan, have the right to determine any questions which arise in connection with this Agreement. Notwithstanding anything in this Agreement to the contrary, Grantee acknowledges and agrees that this Agreement and the award described herein (and any settlement thereof) are subject to the terms and conditions of the Company's clawback policy (if any) as may be in effect from time to time specifically to implement Section 10D of the Exchange Act and any applicable rules or regulations promulgated thereunder (including applicable rules and regulations of any national securities exchange on which the Common Stock may be traded) (the "***Compensation Recovery Policy***"), and that relevant sections of this Agreement shall be deemed superseded by and subject to the terms and conditions of the Compensation Recovery Policy from and after the effective date thereof.

17. **Electronic Delivery**. The Company may, in its sole discretion, deliver any documents related to the MSUs and the Grantee's participation in the Plan, or future awards that may be granted under the Plan, by electronic means or request the Grantee's consent to participate in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and, if requested, agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

18. **Governing Law.** This Agreement shall be governed by and construed with the internal substantive laws of the State of Delaware, without giving effect to any principle of law that would result in the application of the law of any other jurisdiction.

19. **Successors and Assigns**. Without limiting **Section 3** hereof, the provisions of this Agreement shall inure to the benefit of, and be binding upon, the successors, administrators, heirs, legal representatives and assigns of the Grantee, and the successors and assigns of the Company.

20. **Acknowledgement**. The Grantee acknowledges that the Grantee (a) has received a copy of the Plan, (b) has had an opportunity to review the terms of this Agreement and the Plan, (c) understands the terms and conditions of this Agreement and the Plan and (d) agrees to such terms and conditions.

21. **Counterparts**. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same agreement.

SYNAPTICS INCORPORATED

By: ____________________________

Name:
Title:

Grantee Acknowledgment and Acceptance

By: ____________________________

Name:

Exhibit 21

List of Subsidiaries

NAME	STATE OR JURISDICTION OF ORGANIZATION
DisplayLink (UK) Limited	United Kingdom
DSP Group Ltd	Israel
Synaptics Holding GmbH	Switzerland
Synaptics Hong Kong Limited	Hong Kong
Synaptics Japan GK	Japan
Synaptics LLC	Delaware

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Synaptics Incorporated:

We consent to the incorporation by reference in the registration statements (Nos. 333-170401, 333-193470, 333-214950, 333-221585, 333-228118, 333-233338, 333-234437, 333-249793, and 333-261460) on Form S-8 and (No. 333-115274) on Form S-4 of our report dated August 19, 2022, with respect to the consolidated financial statements of Synaptics Incorporated and the effectiveness of internal control over financial reporting.

/S/ KPMG LLP

Santa Clara, California
August 19, 2022

Exhibit 31.1

Certification of Chief Executive Officer Pursuant to
Rule 13a-14(a)/15d-14(a)

I, Michael E. Hurlston, certify that:

1. I have reviewed this annual report on Form 10-K of Synaptics Incorporated;

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(s) 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 fiscal quarter (the registrant's fourth fiscal 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; and

5. The registrant's other certifying officer(s) 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: August 19, 2022

/s/ *Michael E. Hurlston*
Michael E. Hurlston
Chief Executive Officer

Exhibit 31.2

Certification of Chief Financial Officer Pursuant to Rule 13a-14(a)/15d-14(a)

I, Dean Butler, certify that:

1. I have reviewed this annual report on Form 10-K of Synaptics Incorporated;

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(s) 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 fiscal quarter (the registrant's fourth fiscal 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; and

5. The registrant's other certifying officer(s) 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: August 19, 2022

/s/ *Dean Butler*
Dean Butler
Chief Financial Officer

Exhibit 32.1

Section 1350 Certification of Chief Executive Officer

In connection with the Annual Report on Form 10-K of Synaptics Incorporated (the “Company”) for the year ended June 25, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michael E. Hurlston, President and Chief Executive Officer of the Company, certify, to the best of my knowledge and belief, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ *Michael E. Hurlston*

Michael E. Hurlston
Chief Executive Officer
August 19, 2022

Exhibit 32.2

Section 1350 Certification of Chief Financial Officer

In connection with the Annual Report on Form 10-K of Synaptics Incorporated (the “Company”) for the year ended June 25, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Dean Butler, Chief Financial Officer of the Company, certify, to the best of my knowledge and belief, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ *Dean Butler*
Dean Butler
Chief Financial Officer
August 19, 2022