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 September 28, 2019
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 0-21272

Sanmina Corporation

(Exact name of registrant as specified in its charter)

DE	**77-0228183**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
2700 N. First St., San Jose CA	**95134**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code:
408 964-3500

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock	SANM	NASDAQ Global Select Market

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 Securities 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 Exchange Act during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

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

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

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant was approximately $1,648,359,348 as of March 30, 2019, based upon the last reported sale price of the common stock on the NASDAQ Global Select Market on March 29, 2019.

As of October 31, 2019, the number of shares outstanding of the registrant's common stock was 69,976,917.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information is incorporated into Part III of this report by reference to the Proxy Statement for the registrant's 2020 annual meeting of stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Form 10-K.

SANMINA CORPORATION

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Item 1. *Business*

Overview

Sanmina Corporation (“we” or “Sanmina”) is a leading global provider of integrated manufacturing solutions, components, products and repair, logistics and after-market services. We provide these comprehensive offerings primarily to original equipment manufacturers, or OEMs, in the following industries: industrial, medical, defense and aerospace, automotive, communications networks and cloud solutions. The combination of our advanced technologies, extensive manufacturing expertise and economies of scale enables us to meet the specialized needs of our customers. We were originally incorporated in Delaware in May 1989.

Our end-to-end solutions, combined with our global expertise in supply chain management, enable us to manage our customers' products throughout their life cycles. These solutions include:

- product design and engineering, including concept development, detailed design, prototyping, validation, preproduction services and manufacturing design release and product industrialization;
- manufacturing of components, subassemblies and complete systems;
- final system assembly and test;
- direct order fulfillment and logistics services;
- after-market product service and support; and
- global supply chain management.

We operate in the Electronics Manufacturing Services (EMS) industry and manage our operations as two businesses:

1) Integrated Manufacturing Solutions (IMS). Our IMS business consists of printed circuit board assembly and test, final system assembly and test, and direct-order-fulfillment. This segment generated approximately 80% of our total revenue in 2019.

2) Components, Products and Services (CPS). Components include interconnect systems (printed circuit board fabrication, backplane, cable assemblies and plastic injection molding) and mechanical systems (enclosures and precision machining). Products include memory from our Viking Technology division; enterprise solutions from our Viking Enterprise Solutions division; radio frequency (RF), optical and microelectronic; defense and aerospace products from SCI Technology; and cloud-based manufacturing execution software from our 42Q division. Services include design, engineering, logistics and repair services. CPS generated approximately 20% of our total revenue in 2019.

We have manufacturing facilities in 22 countries on six continents. We locate our facilities near our customers and their end markets in major centers for the electronics industry or in lower cost locations. Many of our operations located near our customers and their end markets are focused primarily on new product introduction, lower-volume, higher-complexity component and subsystem manufacturing and assembly, and final system assembly and test. Our operations located in lower cost areas engage primarily in higher-volume component and subsystem manufacturing and assembly for products ranging in complexity from lower complexity products to highly complex products.

We have become one of the largest global manufacturing solutions providers by capitalizing on our competitive strengths including our:

- end-to-end solutions;
- product design and engineering resources;
- vertically integrated manufacturing solutions;
- advanced component technologies;
- global manufacturing capabilities, supported by robust IT systems and a global supplier base;
- customer-focused organization;
- expertise in serving diverse end markets; and
- expertise in industry standards and regulatory requirements.

Industry Overview

EMS companies are the principal beneficiaries of the increased use of outsourced manufacturing services by the electronics and other industries. Outsourced manufacturing refers to an OEM's use of EMS companies to manufacture their products, rather than using internal manufacturing resources. As the EMS industry has evolved, OEMs have increased their reliance on EMS companies for design services, core technology development and additional, more complex manufacturing services. Today, EMS companies manufacture and test complete systems and manage their customers' entire supply chains. Industry-leading EMS companies offer end-to-end services including product design and engineering, manufacturing, final system assembly and test, direct-order-fulfillment and logistics services, after-market product service and support, and global supply chain management.

We believe OEMs will continue to outsource manufacturing because it allows them to:

- focus on core competencies;
- access leading design and engineering capabilities;
- improve supply chain management and purchasing power;
- reduce operating costs and capital investment;
- access global manufacturing services; and
- accelerate time to market.

Our Business Strategy

Our vision is to be the trusted leader in providing products, services and supply chain solutions to accelerate customer success. Key elements to deliver this vision include:

Capitalizing on Our Comprehensive Solutions. We intend to capitalize on our end-to-end solutions, which we believe will allow us to sell additional solutions to our existing customers and attract new customers. Our end-to-end solutions include product design and engineering, manufacturing, final system assembly and test, direct order fulfillment and logistics services, after-market product service and support, and global supply chain management. Our vertically integrated manufacturing solutions enable us to manufacture additional system components and subassemblies for our customers. When we provide a customer with a number of services, such as component manufacturing or higher value-added solutions, we are often able to improve our margins and profitability. Consequently, our goal is to increase the number of manufacturing programs for which we provide multiple solutions. To achieve this goal, our sales and marketing organization seeks to cross-sell our solutions to customers.

Extending Our Technology Capabilities. We rely on advanced processes and technologies to provide our products, components and vertically integrated manufacturing solutions. We continually improve our manufacturing processes and develop more advanced technologies, providing competitive advantage to our customers. We work with our customers to anticipate their future product and manufacturing requirements and align our technology investment activities with their needs. We use our design expertise to develop product technology platforms that we can customize by incorporating other components and subassemblies to meet the needs of particular OEMs. These technologies enhance our ability to manufacture complex, high-value added products, enhancing our ability to continue to win business from existing and new customers.

Attracting and Retaining Long-Term Customer Partnerships. A core component of our strategy is to attract, build and retain long-term partnerships with companies in growth industries that will benefit from our global footprint and unique value proposition in advanced electronics manufacturing. As a result of this customer-centric approach, we have experienced business growth from both existing and new customers and will continue to cultivate these partnerships with additional products and value-added solutions.

Promoting New Product Introduction (NPI) and Joint Design Manufacturing (JDM) Solutions. As a result of customer feedback, and our customers' desire to manage research and development expenses, we offer product design services to develop systems and components jointly with our customers. Our NPI services include quick-turn prototyping, supply chain readiness, functional test development and release-to-volume production. In a JDM model, our customers bring market knowledge and product requirements and we bring complete design engineering and NPI services. Our design engineering offerings include product architecture development, detailed design, simulation, test and validation, system integration, regulatory and qualification services.

Continuing to Penetrate Diverse End Markets. We focus our marketing and sales efforts on major end markets within the electronics technology industry. We target markets we believe offer significant growth opportunities and for which

OEMs sell complex products that are subject to rapid technological change because the manufacturing of these products requires higher value-added services. We intend to continue to diversify our business across market segments and customers to reduce our dependence on any particular market or customer.

Pursuing Strategic Transactions. We seek to undertake strategic transactions that give us the opportunity to access new customers' products, manufacturing solutions, repair service capabilities, intellectual property, technologies and geographic markets. In addition, we plan to continue to pursue OEM divestiture transactions that will augment existing strategic customer relationships or build new relationships with customers in attractive end markets. In an OEM divestiture transaction, we purchase manufacturing assets and hire employees from a customer and enter into a long-term supply agreement with such customer to provide products previously manufactured by them. Potential future transactions may include a variety of different business arrangements, including acquisitions, asset purchases, spin-offs, strategic partnerships, restructurings and divestitures.

Continuing to Seek Cost Savings and Efficiency Improvements. We seek to optimize our facilities to provide cost-effective services for our customers. We maintain extensive operations in lower cost locations, including Latin America, Eastern Europe, China, Southeast Asia and India, and we plan to expand our presence in these lower cost locations as appropriate, taking into consideration tariffs and other factors, to meet the needs of our customers. We believe we are well positioned to take advantage of future opportunities on a global basis as a result of our existing manufacturing footprint in 22 countries on six continents.

Our Competitive Strengths

We believe our competitive strengths differentiate us from our competitors and enable us to better serve the needs of OEMs. Our competitive strengths include:

End-to-End Solutions. We provide solutions throughout the world to support our customers' products during their entire life cycle, from product design and engineering, through manufacturing, to direct order fulfillment, logistics and after-market product service and support. Our end-to-end solutions are among the most comprehensive in the industry because we focus on adding value before and after the actual manufacturing of our customers' products. These solutions also enable us to 1) provide our customers with a single source of supply for their design, supply chain and manufacturing needs, 2) reduce the time required to bring products to market, 3) lower product costs and 4) allow our customers to focus on those activities they expect to add the highest value to their business. We believe our end-to-end solutions allow us to develop closer relationships with our customers and more effectively compete for their future business.

Product Design and Engineering Resources. We provide product design and engineering services for new product designs, cost reductions and Design-for-Manufacturability/Assembly/Test (DFx) reviews. Our engineers work with our customers during the complete product life cycle. Our design and NPI centers provide turnkey system design services including: electrical, mechanical, thermal, software, layout, simulation, test development, design verification, validation, regulatory compliance and testing services. We design high-speed digital, analog, radio frequency, mixed-signal, wired, wireless, optical and electro-mechanical modules and systems.

Our engineering engagement models include Joint Design Manufacturing (JDM), Contract Design Manufacturing (CDM) and consulting engineering for DFx, Value Engineering (cost reduction re-design), and design for global environmental compliance regulations such as the European Union's Restrictions of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE). We focus on industry segments that include industrial, medical, defense and aerospace, automotive, communications networks and cloud solutions. System solutions for these industry segments are supported by our vertically integrated component technologies, namely printed circuit boards, backplanes, enclosures, cable assemblies, precision machining, plastics, memory modules, and optical, RF and microelectronics modules.

In these engagement models, our customers bring market knowledge and product requirements. We provide complete design engineering and new product introductions (NPI) services. For JDM products, typically the intellectual property is jointly owned by us and the customer, and we perform manufacturing and logistics services. For CDM projects, customers pay for all services and own the intellectual property.

Vertically Integrated Manufacturing Solutions. We provide a range of vertically integrated manufacturing solutions including high-technology components, new product introduction and test development services. These solutions are provided in every major region worldwide, with design and prototyping close to our customer’s product development centers. Our customers benefit significantly from our experience in these areas, including product cost reduction, minimization of assets deployed for manufacturing, accelerated time-to-market and a simplified supply chain. Key system components we manufacture include high-technology printed circuit boards and printed circuit board assemblies, backplanes and backplane assemblies, enclosures, cable assemblies, plastic injection molded products, precision machined components, optical and RF modules and memory modules. These components and sub-assemblies are integrated into a final product or system, configured and tested to our customer's or the end-customer's specifications and delivered to the final point of use, with Sanmina managing the entire supply chain. By manufacturing system components and subassemblies ourselves, we enhance continuity of supply and reduce costs for our customers. In addition, we are able to have greater control over the supply chain of our customers' products.

Customers also benefit from our combined design, technology and manufacturing experience with specific products and markets. For example, in communications networks, we have over 30 years of experience in developing high-speed printed circuit boards (PCBs) and backplanes. Examples of products for which our experience and vertically integrated model provide competitive advantage include wireless base stations, network switches, routers and gateways, optical switches, servers and storage appliances, automotive products, avionics and satellite systems, magnetic resonance imaging (MRI) and computer tomography (CT) scanners, and equipment used in semiconductor manufacturing processes, including equipment for photolithography, chemical mechanical polishing, vapor deposition and robotics for wafer transfer. For these and many other products, customers can gain competitive advantage with our manufacturing technology, while reducing the capital requirements associated with manufacturing and global supply chain management.

Advanced Component Technologies. We provide advanced component technologies, which we believe allow us to differentiate ourselves from our competitors. These advanced technologies include the fabrication of complex printed circuit boards, backplanes, enclosures, precision machining and plastic components. For example, we produce some of the most advanced printed circuit boards and backplanes in the world, with up to 70 layers, that are manufactured with a range of low signal loss, high-performance materials and include features such as buried capacitance and thin-film resistors, high-density interconnects and micro via technology. We also manufacture high-density flex and rigid-flex printed circuit boards with up to 32 layers and 8 transition layers for the defense and aerospace markets and high-end medical electronics market.

Our printed circuit board assembly technologies include micro ball grid arrays, chip scale packages, fine-pitch discretes and small form factor radio frequency and optical components, chip on board, as well as advanced packaging technologies used in high pin count applications for specific integrated circuits and network processors. We use innovative design solutions and advanced metal forming techniques to develop and fabricate high-performance indoor and outdoor chassis, enclosures, racks and frames. Our assembly services use advanced technologies, including precision optical alignment, multi-axis precision stages and machine vision technologies. We use sophisticated procurement and production management tools to effectively manage inventories for our customers and ourselves. We have also developed build-to-order (BTO) and configure-to-order (CTO) systems and processes that enable us to manufacture and ship finished systems in as little as 8 hours after receipt of an order. We utilize a centralized Technology Council to coordinate the development and introduction of new technologies to meet our customers' needs in various locations and to increase technical collaboration among our facilities and divisions.

Global Manufacturing Capabilities. Most of our customers compete and sell their products on a global basis. As such, they require global solutions that include regional manufacturing for selected end markets, especially when time to market, local manufacturing or content and low cost solutions are critical objectives. Our global network of manufacturing facilities in 22 countries provides our customers a combination of sites to maximize both the benefits of regional and low cost manufacturing solutions and repair services, and to help alleviate tariff costs. Our repair partners are located in an additional 27 countries.

We offer customers five regions in which all of our technology and components, integrated manufacturing and logistics solutions can be implemented and can serve both regional and global business needs. To manage and coordinate our global operations, we employ an enterprise-wide Enterprise Resource Planning (ERP) system at substantially all of our manufacturing locations that operates on a single IT platform and provides us with company-wide inventory planning and purchasing capabilities. This system enables us to standardize planning and purchasing at the facility level and to help optimize inventory management and improve asset utilization worldwide. Our systems also enable our customers to receive key information regarding the status of their programs.

We purchase large quantities of electronic components and other materials from a wide range of suppliers. Our primary supply chain goal is to consolidate our global spend to create the synergy and leverage to drive our supply base for better cost competitiveness, more favorable terms and leading-edge supply chain solutions. As a result, we often receive more favorable terms and supply chain solutions from suppliers, which generally enables us to provide our customers with greater total cost reductions than they could obtain themselves. Our strong supplier relationships are beneficial when electronic components and other materials are in short supply and provide us the necessary support to better optimize the use of our inventories.

Supply chain management also involves the planning, purchasing and warehousing of product components. A key objective of our supply chain management services is to reduce excess component inventory in the supply chain by scheduling deliveries of components at a competitive price and on a just-in-time basis. We use sophisticated production management systems to manage our procurement and manufacturing processes in an efficient and cost effective manner. We collaborate with our customers to enable us to respond to their changing component requirements and to reflect any changes in these requirements in our ERP system. This system enables us to forecast future supply and demand imbalances and develop strategies to help our customers manage their component requirements, especially during supply shortages that have affected our industry in the past. Our enterprise-wide ERP systems provide us with company-wide information regarding component inventories and orders to help optimize inventories, planning and purchasing at the facility level.

Customer-Focused Organization. We believe customer relationships are critical to our success and we are focused on providing a high level of customer service. Our key customer accounts are managed by dedicated account teams, including a global account manager directly responsible for account management. Global account managers coordinate activities across divisions to effectively satisfy our customers' requirements and have direct access to our senior management to quickly address customer opportunities and needs. Local customer account teams further support the global teams.

Expertise in Serving Diverse End Markets. We have experience in serving our customers in the industrial, medical, defense and aerospace, automotive, communications networks and cloud solutions end markets. Our diversification across end markets reduces our dependence upon any one customer or segment. In order to cater to the specialized needs of customers in particular market segments, we have dedicated personnel, and in some cases facilities, with industry-specific capabilities and expertise.

Expertise in Industry Standards and Regulatory Requirements. We maintain compliance with industry standards and regulatory requirements applicable to certain markets, including, among others, medical, automotive, energy and defense and aerospace.

Our Products and Solutions

We offer our OEM customers a diverse set of products and solutions with a focus on wireless, wireline and optical communications and network infrastructure equipment, such as switches, routers and base stations, computing and storage systems, defense and commercial avionics and communications, medical imaging, diagnostic and patient monitoring systems, point-of-sale, gaming systems, semiconductor tools for metrology, lithography, dry and wet processing, industrial products including large format printers and automated teller machines, energy and clean technology products such as solar and wind products, LED lighting, smart meters and battery systems, electric vehicle power control systems, automotive infotainment devices, and automotive engine-control modules. These products may require us to use some or all of our end-to-end solutions including design, component technologies and logistics and repair services.

Integrated Manufacturing Solutions includes:

Printed Circuit Board Assembly and Test. Printed circuit board assembly involves attaching electronic components, such as integrated circuits, capacitors, microprocessors, resistors and memory modules, to printed circuit boards. The most common technologies used to attach components to printed circuit boards employ surface mount technology (SMT) and pin-through-hole assembly (PTH). SMT is an automated assembly system that places and solders components to the printed circuit board. In PTH, components are inserted into holes punched in the circuit board. Another method is press-fit-technology, in which components are pressed into holes on the printed circuit board. We use SMT, PTH, press-fit and other attachment technologies that are focused on miniaturization and increasing the density of component placement on printed circuit boards. These technologies, which support the needs of our customers to provide greater functionality in smaller products, include chip-scale packaging, ball grid array, direct chip attach and high density interconnect. We perform in-circuit and functional testing of printed circuit board assemblies. In-circuit testing verifies that all components are properly inserted and attached, and that electrical circuits are complete. We perform functional tests to confirm the board or assembly operates in accordance with its final design and manufacturing specifications. We either design and procure test fixtures and develop our own test software, or we use our customers' test fixtures and test software. In addition, we provide environmental stress tests of the board or assembly that are designed to confirm that the board or assembly will meet the environmental stresses, such as heat, to which it will be subjected.

Final System Assembly and Test. We provide final system assembly and test in which assemblies and modules are combined to form complete, finished products. Products for which we currently provide final system assembly and test include wireless base stations, wireline communications switches, optical networking products, high-end servers, industrial and automotive products, LED lighting fixtures, diagnostic medical equipment, point of sale devices, and storage. We often integrate Sanmina-manufactured printed circuit board assemblies with enclosures, cables and memory modules. Our final assembly activities may also involve integrating components and modules that others manufacture. The complex, finished products we produce typically require extensive test protocols. We offer both functional and environmental test services. We also test products for conformity to applicable industry, product integrity and regulatory standards. Our test engineering expertise enables us to design functional test processes that assess critical performance elements including hardware, software and reliability. By incorporating rigorous test processes into the manufacturing process, we can help assure our customers that their products will function as designed.

Direct-Order-Fulfillment. We provide direct-order-fulfillment for our OEM customers. Direct-order-fulfillment involves receiving customer orders, configuring products to quickly fill the orders and delivering the products either to the OEM, a distribution channel, or directly to the end customer. We manage our direct-order-fulfillment processes using a core set of common systems and processes that receive order information from the customer and provide comprehensive supply chain management including procurement and production planning. These systems and processes enable us to process orders for multiple system configurations and varying production quantities including single units. Our direct-order-fulfillment services include BTO and CTO capabilities: in BTO, we build a system with the particular configuration ordered by the OEM customer; in CTO, we configure systems to an end customer's order, for example by installing software desired by the end customer. The end customer typically places this order by choosing from a variety of possible system configurations and options. Using advanced manufacturing processes and a real-time warehouse management and data control system on the manufacturing floor, we can meet a 48 to 72 hour turn-around-time for BTO and CTO requests. We support our direct-order-fulfillment services with logistics that include delivery of parts and assemblies to the final assembly site, distribution and shipment of finished systems and processing of customer returns.

Components, Products and Services includes:

Product Design and Engineering. Our design and engineering groups provide customers with comprehensive services from initial product design and detailed product development to prototyping and validation, production launch and end-of-life support for a wide range of products covering all our market segments. These groups complement our vertically integrated manufacturing capabilities by providing component level design services for printed circuit boards, backplanes and a variety of electro-mechanical systems. Our offerings in design engineering include product architecture, detailed development, simulation, test and validation, integration and regulatory and qualification services, and our NPI services include quick-turn prototypes, functional test development and release-to-volume production. We also offer post-manufacturing and end-of-life support including repair and sustaining engineering support through our Global Services division. We can also complement our customer's design team with our unique skills and services which can be used to develop custom, high-performance products that are manufacturable and cost optimized to meet product and market requirements. Such engineering services can help in improving a customer’s time-to-market and cost-to-market objectives.

Printed Circuit Boards. We have the ability to produce multilayer printed circuit boards on a global basis with high layer counts and fine line circuitry. We have also developed several proprietary technologies and processes which improve electrical performance, connection densities and reliability of printed circuit boards. Our ability to support NPI and quick-turn fabrication followed by manufacturing in both North America and Asia allows our customers to accelerate their time-to-market as well as their time-to-volume. Standardized processes and procedures make transitioning of products easier for our customers. Our technology roadmaps provide leading-edge capabilities and high yielding processes. Our engineering teams are available on a worldwide basis to support designers in Design for Manufacturability (DFM) analysis and assemblers with field applications support.

Printed circuit boards are made of fiberglass/resin-laminated material layers and contain copper circuits which interconnect and transmit electrical signals among the components that make up electronic systems. Increasing the density of the circuitry in each layer is accomplished by reducing the width of the circuit traces and placing them closer together in the printed circuit board along with adding layers and via hole structures. We are currently capable of efficiently producing printed circuit boards with up to 70 layers and circuit trace widths as narrow as two mils (50 microns) in production volumes. Specialized production equipment along with an in-depth understanding of high performance laminate materials allow us to fabricate some of the largest form factor and highest speed (frequencies in excess of 40 gigahertz) backplanes available in the industry.

Backplanes and Backplane Assemblies. Backplanes are very large printed circuit boards that serve as the backbones of sophisticated electronics products, such as internet routers. Backplanes provide interconnections for printed circuit board assemblies, integrated circuits and other electronic components. We fabricate backplanes in our printed circuit board plants. Backplane fabrication is significantly more complex than printed circuit board fabrication due to the large size and thickness of the backplanes. We manufacture backplane assemblies by press-fitting high density connectors into plated through-holes in the bare backplane. In addition, many of the newer, advanced technology backplanes require SMT attachment of passive discrete components as well as high-pin count ball grid array packages. These advanced assembly processes require specialized equipment and a strong focus on quality and process control. We also perform in-circuit and functional tests on backplane assemblies. We have developed proprietary technology and "know-how" which enable backplanes to run at data rates in excess of 40 gigahertz. We currently have capabilities to manufacture backplanes with greater than 60 layers in sizes up to 26x40 and 22x52 inches and up to 0.425 inch in thickness, using a wide variety of high performance laminate materials. These are among the largest and most complex commercially manufactured backplanes and the test equipment we have ensures the quality and performance of these backplane systems is "world class." We are not only fully capable of the electronic integrity testing of these backplanes, but can also utilize state of the art x-ray equipment to verify defect-free installation of the new high density/high speed connectors. Lastly, performance of the backplane system is checked through a signal integrity tester to ensure the product will meet design intent. We are one of a limited number of manufacturers with these capabilities.

Cable Assemblies. Cable assemblies are used to connect modules, assemblies and subassemblies in electronic devices. We provide a broad range of cable assembly products and services, from cable assemblies and harnesses for automobiles, to complex harnesses for industrial products and semiconductor manufacturing equipment. We design and manufacture a broad range of high-speed data, radio frequency and fiber optic cabling products. Our cable assemblies are often used in large rack systems to interconnect subsystems and modules. Our manufacturing footprint with facilities in the U.S., Mexico, the EU and China enables us to support our customers NPI and volume production needs on a global basis.

Plastic Injection Molded Products. Plastic injection molded products are used to create a vast array of everyday items; from very small intricate mechanical components, to cosmetic enclosures designed to protect sensitive electronic equipment. Our diverse capability within the plastic injection molding space spans all major markets and industries. We are equipped with nearly 80 plastic injection molding machines with clamping pressure ranging from 28 tons to 1,000 tons. Our experienced tooling, process, quality and resin engineers work concurrently using a scientific molding approach to develop cost effective, highly reliable manufacturing solutions for medical, industrial, defense, multimedia, computing and data storage customers. We apply the principles of scientific molding, combined with strategic partnerships with U.S. and Asian toolmakers to enable delivery of cost effective high-quality plastic manufacturing solutions.

Mechanical Systems. Mechanical systems are used across all major markets to house and protect complex and fragile electronic components, modules and sub-systems so that the system's functional performance is not compromised due to mechanical, environmental or any other usage conditions. Our mechanical systems manufacturing services are capable of fabricating mechanical components, such as cabinets, chassis (soft tool and hard progressive tools), frames, racks, and data storage cabinets integrated with various electronic components and sub-systems for power management, thermal management, sensing functions and control systems.

We manufacture a broad range of enclosures for a wide range of products from set-top boxes, medical equipment, and storage, to large and highly complex mechanical systems, such as those used in indoor and outdoor wireless base station products and high precision vacuum chambers for the semiconductor industry.

Our mechanical systems expertise is available at several of our state-of-the-art facilities worldwide. Our operations provide metal fabrication by soft tools, high-volume metal stamping and forging by hard tools with stage and progressive tools, plastic injection molding, robotic welding, powder coating, wet painting, plating and cleaning processes.

We also offer a suite of world-class precision machining services in the U.S., Mexico and Israel. We use advanced numerically controlled machines enabling the manufacture of components to very tight tolerances and the assembly of these components in clean environments. Capabilities include complex medium and large format mill and lathe machining of aluminum, stainless steel, plastics, ferrous and nonferrous alloys and exotic alloys. We also have helium and hydrostatic leak-test capabilities. By leveraging our established supply chain, we do lapping, anodizing, electrical discharge machining (EDM), heat-treating, cleaning, laser inspection, painting and packaging. We have dedicated facilities supporting machining and complex integration with access to a range of state-of-the-art, computer-controlled machining equipment that can satisfy rigorous demands for production and quality. This includes fully automated “lights-out” machinery that continues production in the absence of human operators. With some of the largest horizontal milling machines in the U.S., we are a supplier of vacuum chamber systems for the semiconductor, flat-panel display, LED equipment, industrial, medical and AS9100-certified aerospace markets.

***Optical Technology*.** Optical Technology is our high-end product technology and engineering division that focuses on RF, optical, microelectronics and enterprise solutions for OEM's as well as cloud and communications service providers. Our mission and philosophy is to deliver leading-edge technology solutions that help optimize the value and performance of our customers’ applications.

Optical and radio frequency (RF) components are key building blocks of many systems. We produce both passive and active optical components as well as modules that are built from a combination of industry standard and/or custom components, interconnected using microelectronic and micro-optic technologies to achieve a unique function.

Based on microelectronic design and manufacturing technologies, we provide RF and optical components, modules and systems for customers in the communications, networking, medical, industrial, military and aerospace markets. Our experience in RF and optical communication and networking products spans long-haul/ultra-long-haul and metro regions for transport/transmission, as well as access and switching applications, including last-mile solutions. We are currently supplying product to the 10G, 40G, 100G, 200G and 400G optical communication marketplace based on foundational IP within optical and RF technologies. In the medical market, we develop and manufacture components and subassemblies that support Sanmina’s medical operations for products such as blood analyzers, food contamination analyzers, and specialized optical spectrometers and fluorometers utilizing the latest optical technologies. Our optical technology service offerings are designed to deliver end-to-end solutions with special focus on product design, test infrastructure development and industrialization, optical and RF components and module and blade manufacturing, as well as system integration and test.

Viking Technology. Viking supplies leading edge Non-Volatile DIMMs (NVDIMM), Solid State Drives (SSD) and DRAM solutions.

With a range of products that spans both SSD and DRAM technologies, Viking provides storage solutions ranging from high-performance computing SSDs tailored for the enterprise market to small form factor flash and DRAM modules optimized for industrial, telecommunications, and military markets. To continue its leadership in the memory space, Viking Technology is investing in several advanced technologies such as NVDIMM and new storage class memory. These investments will enable Viking to support the large and growing server market with products that optimize performance, capacity, and persistence in enhancing its customer’s applications. In addition, Viking will continue to focus on the enterprise and embedded markets with a further emphasis on medical, military and automotive applications.

Viking's comprehensive memory product offerings include Enterprise Class & Industrial Grade SSDs available across a wide portfolio of standard and OEM customized form-factors (2.5”, 1.8” SlimSATA, mSATA, M.2, PCIe/NVMe SSDs, SATADIMM™, DFC and eUSB). Viking also supports the broadest range of DDR4, DDR3, DDR2, DDR and SDRAM modules; from High-Density to Small-Form Factor with Error Checking and Correction (ECC Memory). In addition to its broad DRAM offering, Viking specializes in DRAM and Flash chip stacking, allowing for higher density Modules and drives ordinarily unachievable through normal chip manufacturing.

Viking’s custom build capabilities, extended temperature ranges, locked BOM support, test capabilites, manufacturing capabilities and logistics services, create a unique combination of value adds. These capabilities have enabled Viking to further differentiate itself in an industry that is becoming increasingly competitive.

Viking Enterprise Solutions. Viking designs and manufactures both standard and custom storage and server products, including high performance SSD arrays, high performance HDD (Hard Disk Drive) arrays, cold storage, and cloud solutions including software to manage and provision storage across multiple fabrics. Some products are customized for streaming video applications. Viking provides complete rack scale solutions to customers.

SCI Technology Inc. (SCI). SCI has been providing engineering services, products, manufacturing, test, and depot and repair solutions to the global defense and aerospace industry for more than 60 years. SCI offers advanced products for aircraft systems and tactical communications, as well as fiber optics capabilities for use in a variety of defense related applications.

SCI's customers include U.S. government agencies, U.S. allies and major defense and aerospace prime contractors. SCI has the infrastructure and facility security clearance to support the stringent certifications, regulations, processes and procedures required by these customers.

42Q. 42Q provides an innovative, world-class cloud-based manufacturing execution solution (MES) that is scalable, flexible, secure and easy to implement. Our solution provides customers advantages in efficiencies and costs relative to legacy systems and offers traceability and genealogy, multi-plant visibility, compliance management and on-demand work instructions.

Logistics and Repair Services. Our logistics and repair services focus on highly complex and mission-critical products and processes. We support the logistics and repair needs of customers in the communications, defense, embedded computing and medical markets worldwide. Through our operational infrastructure of 34 Sanmina sites and 27 repair partner sites, we provide a wide range of services including direct-order-fulfillment, configure-to-order, supplier, inventory and warranty management, reverse logistics, repair, asset recovery, sustaining engineering, test development and end-of-life management to embrace the specific needs of our customers.

Drawing on a robust set of information systems, we offer configurable environments tailored to meet specific customer needs including customized web portals, order and serial number tracking, special routings and promotions. Local, regional and global solutions are supported by a robust set of business processes that focus on inventory reduction and risk mitigation. This can improve cycle times by leveraging infrastructure, people and technology to enable reliable shipments of products to end users worldwide generally within 24 to 72 hours, depending on our customer’s requirements.

Logistics and repair services complement our end-to-end manufacturing strategy by integrating engineering, supply chain, manufacturing, logistics and repair into a seamless solution for customers around the world.

Our End Markets

We target markets that we believe offer significant growth opportunities and where OEMs sell complex products that are subject to rapid technological change. We believe that markets involving complex, rapidly changing products offer opportunities to produce products with higher margins because they require higher value-added manufacturing services and may also include our advanced vertically integrated components. Our diversification across market segments and customers helps mitigate our dependence on any particular market or customer.

Industrial/Medical/Defense/Automotive

Industrial. We utilize our end-to-end component, engineering and complex assembly services to support the industrial market. We support a wide range of segments including transportation, power management, industrial controls, instrumentation and test equipment, inspection and public safety equipment, capital equipment, and self-service kiosk solutions. We have significant experience in manufacturing high precision components that are utilized in highly complex systems such as vacuum chambers, photolithography tools, etch tools, wafer handling systems, airport security, 3D printing, flat panel display test and repair equipment, chem-mech planarization tools, optical inspection and x-ray equipment, explosive detection equipment, and large format printing machines. We have specialized and dedicated facilities for the assembly of large / complex electro-mechanical, thermal and liquid-management equipment for applications including ATMs, beverage dispensing, cash-counting and management systems, electro-mechanical patient transfer tables, industrial printers and semiconductor capital equipment.

We also manufacture sub-assemblies for machine-control units, such as high-speed machining tools, liquid management equipment and complex hydraulic-electro-mechanical systems, for applications such as industrial-grade printing and liquid dispensing.

We are committed to serving companies leading the energy and clean technology revolution in the solar, wind, battery systems, LED lighting fixtures (including indoor, outdoor, industrial-grade and construction lighting products), and smart infrastructure industries. We leverage traditional EMS for clean technology customers in areas related to power electronics, control and distribution, smart meters and full-system integration of complex industrial power inverters. Beyond traditional

EMS, our extensive range of electro-mechanical design and complex system manufacturing capabilities are an excellent fit across all clean technology segments. Our design and manufacturing operations are strategically located in close proximity to clean technology business hubs.

Medical. We provide comprehensive manufacturing and related services to the medical industry including design, logistics and regulatory services. The manufacturing of products for the medical industry often requires compliance with domestic and foreign regulations including the Food and Drug Administration's (FDA's) quality system regulations and the European Union's medical device directive. In addition to complying with these standards, our medical manufacturing facilities comply with ISO 13485 (formerly EN 46002) and ISO 9001. We manufacture a broad range of medical devices including blood glucose meters, computed tomography scanner assemblies, respiration systems, blood analyzers, molecular diagnostics, cosmetic surgery systems, ultrasound imaging systems and a variety of patient monitoring equipment.

Defense. We offer our end-to-end services to the defense, aerospace and high-reliability electronics industry. We design, manufacture and support a comprehensive range of defense and aerospace products including avionics systems and processors, cockpit and wireless communications systems, tactical and secure network communications systems, radar subsystems, and fiber-optic systems for defense related applications. We believe our experience in serving the defense, aerospace and high-reliability electronics industry, as well as our product design and engineering capabilities, are our key competitive strengths.

Automotive. We provide services to the automotive industry for which we manufacture sensors, controllers, engine control units, infotainment modules, eMobility sub-modules, Electric Vehicle (EV) charging system sub-modules, heating ventilation and air-conditioning (HVAC) control modules, a wide array of LED (Light Emitting Diode) interior and exterior light assemblies, as well as cables for interconnect solutions. We also provide design support, product and process qualification, manufacturing, supply chain management, supplier quality assurance and end-of-life services. Substantially all of our automotive facilities are IATF 16949 certified and produce printed circuit boards, printed circuit board assemblies, cable assemblies and higher level electronic assemblies.

Communications Networks

In the communications sector, we focus on infrastructure equipment including LTE, 5G and microwave wireless RF filters and antennas, wireline access, switching, routing, optical networking and transmission and enterprise networking systems. Our product design and engineering team has extensive experience designing and industrializing advanced communications products and components for these markets. Products we manufacture include wireless base stations, remote radio heads and small cells, point-to-point microwave systems and other fronthaul/backhaul solutions, satellite receivers and various radio frequency appliances, optical PON, metro and long-haul, transmission hardware and switching along with core, service and edge routers among others. We also design and manufacture advanced optical, RF and microelectronic components which are key elements in many of these products.

Cloud Solutions

We provide comprehensive design and manufacturing solutions, as well as BTO and CTO services, to the embedded computing and data storage markets. We tightly couple our vertically integrated supply chain with manufacturing and logistics allowing for assembly and distribution of products all over the world. In addition, we manufacture a broad range of products with embedded processor capability including point of sale equipment, casino gaming equipment, digital home gateways, professional audio-video equipment, a variety of touch-screen-operated equipment and internet connected entertainment devices. Our vertical integration capabilities include racks, enclosures, cables, complex multi-layer printed circuit boards, printed circuit assemblies and backplanes, fiber optics and final system assembly and test, direct order fulfillment and repair services. In addition, we have designed and developed some of the most compact and powerful storage modules available in the market today which we have coupled with our global, vertically integrated supply chain to deliver some of the most compelling embedded computing and storage solutions to the data storage industry.

Customers

Sales to our ten largest customers typically represent approximately 50% of our net sales. Nokia represented 10% or more of our net sales in 2019, 2018 and 2017. In 2017, Motorola Solutions, Inc. also represented 10% or more of our net sales.

We seek to establish and maintain long-term relationships with our customers. Historically, we have had substantial recurring sales from existing customers. We seek to expand our customer base through our marketing and sales efforts as well as acquisitions. We have been successful in broadening relationships with customers by providing vertically integrated products and services as well as multiple products and services in multiple locations.

We typically enter into supply agreements with our major OEM customers with terms ranging from three to five years. Our supply agreements generally do not obligate the customer to purchase minimum quantities of products. However, the customer is typically liable for the cost of the materials and components we have ordered to meet their production forecast but which are not used, provided that the material was ordered in accordance with an agreed-upon procurement plan. In some cases, the procurement plan contains provisions regarding the types of materials for which our customers will assume responsibility. Our supply agreements generally contain provisions permitting cancellation and rescheduling of orders upon notice and are subject to cancellation charges and, in some cases, rescheduling charges. Order cancellation charges vary by product type, depending how far in advance of shipment a customer notifies us of an order cancellation. In some circumstances, our supply agreements with customers include provisions for cost reduction objectives during the term of the agreement, which can have the effect of reducing revenue and profitability from these arrangements.

Seasonality

With the continued diversification of our customer base, we generally have not experienced significant seasonality in our business in recent years. However, we cannot predict whether this trend will continue.

Backlog

We generally do not obtain firm, long-term commitments from our customers and our customers usually do not make firm orders for product delivery more than thirty to ninety days in advance. Additionally, customers may cancel or postpone scheduled deliveries, in some cases without significant penalty. Therefore, we do not believe the backlog of expected product sales covered by firm orders is a meaningful measure of future sales.

Marketing and Sales

Our sales efforts are organized and managed on a regional basis with regional sales managers in geographic regions throughout the world.

We develop relationships with our customers and market our vertically integrated manufacturing solutions through our direct sales force and marketing and sales staff. Our sales resources are directed at multiple management and staff levels within target accounts. Our direct sales personnel work closely with the customers' engineering and technical personnel to understand their requirements. Our marketing and sales staff supports our business strategy of providing end-to-end solutions by encouraging cross-selling of vertically integrated manufacturing solutions and component manufacturing across a broad range of major OEM products. To achieve this objective, our marketing and sales staff works closely with our various manufacturing and design and engineering groups and engages in marketing and sales activities targeted at key customer opportunities.

Each of our key customer accounts is managed by a dedicated account team including a global account manager directly responsible for account management. Global account managers coordinate activities across divisions to satisfy customer requirements and have direct access to our senior management to quickly address customer concerns. Local customer account teams further support the global teams.

Competition

For our integrated manufacturing solutions business, we face competition from other major global EMS companies such as Benchmark Electronics, Inc., Celestica, Inc., Flex Ltd., Hon Hai Precision Industry Co., Ltd. (Foxconn), Jabil Inc. and Plexus Corp. Our components, products and services business faces competition from EMS and non-EMS companies that often have a regional product, service or industry-specific focus. In addition, our potential customers may also compare the benefits of outsourcing their manufacturing to us with the merits of manufacturing products themselves.

We compete with different companies depending on the type of solution or geographic area. We believe the primary competitive factors in our industry include manufacturing technology, quality, global footprint, delivery, responsiveness, provision of value-added solutions and price. We believe our primary competitive strengths include our ability to provide global end-to-end solutions, product design and engineering resources, vertically integrated manufacturing solutions, advanced technologies, global manufacturing capabilities, global supplier base, customer focus and responsiveness, expertise in serving diverse end markets, and expertise in industry standards and regulatory requirements.

Intellectual Property

We hold U.S. and foreign patents and patent applications relating to, among other things, printed circuit board manufacturing technology, enclosures, cables, memory modules, optical technology, medical devices and computing and storage. For other proprietary processes, we rely primarily on trade secret protection. A number of our patents have expired or will expire in the near term. The expiration and abandonment of patents reduces our ability to assert claims against competitors or others who use similar technologies and to license such patents to third parties. We have registered a number of trademarks and have pending trademark applications in both the U.S. and internationally.

Environmental Matters

We are subject to a variety of local, state, federal and foreign environmental laws and regulations relating to the storage and use of hazardous materials used in our manufacturing processes, as well as the storage, treatment, discharge, emission and disposal of hazardous waste that are by-products of these processes. We are also subject to occupational safety and health laws, product labeling and product content requirements, either directly or as required by our customers. Proper waste disposal is a major consideration for printed circuit board manufacturers due to the metals and chemicals used in the manufacturing process. Water used in the printed circuit board manufacturing process must be treated to remove metal particles and other contaminants before it can be discharged into municipal sanitary sewer systems. We operate on-site wastewater treatment systems at our printed circuit board manufacturing plants in order to treat wastewater generated in the fabrication process.

Additionally, the electronics assembly process can generate lead dust. Upon vacating a facility, we are responsible for remediating lead dust from the interior of the manufacturing facility. Although there are no applicable standards for lead dust remediation in manufacturing facilities, we endeavor to remove the residues. To date, lead dust remediation costs have not been material to our results of operations. We also monitor for airborne concentrations of lead in our buildings and are unaware of any significant lead concentrations in excess of the applicable OSHA or other local standards.

We have a range of corporate programs that aim to reduce the use of hazardous materials in manufacturing. We developed corporate-wide standardized environmental management systems, auditing programs and policies to enable better management of environmental compliance activities. For example, almost all of our manufacturing facilities are certified under ISO 14001, a set of standards and procedures relating to environmental compliance management. In addition, the electronics industry must adhere to the European Union's Restrictions of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE). Parallel initiatives have been adopted in other jurisdictions throughout the world, including several states in the U.S. and the Peoples' Republic of China. RoHS limits the use of lead, mercury and other specified substances in electronics products. WEEE requires producers to assume responsibility for the collection, recycling and management of waste electronic products and components. We implemented procedures intended to ensure our manufacturing processes are compliant with RoHS and the European Union's Registration, Evaluation and Authorization of Chemicals (REACH) legislation, when required. WEEE compliance is primarily the responsibility of OEMs.

Asbestos containing materials, or ACM, are present at several of our manufacturing facilities. Although ACM is being managed and controls have been put in place pursuant to ACM operations and maintenance plans, the presence of ACM could give rise to remediation obligations and other liabilities.

Our facilities generally operate under environmental permits issued by governmental authorities. For the most part, these permits must be renewed periodically and are subject to revocation in the event of violations of environmental laws. Any such revocation may require us to cease or limit production at one or more of our facilities, adversely affecting our results of operations.

In connection with certain acquisitions, we have incurred liabilities associated with environmental contamination. These include ongoing investigation and remediation activities at a number of current and former sites, including those located in Owego, New York; Derry, New Hampshire; and Brockville, Ontario. In addition, we have been named in a lawsuit alleging operations at our current and former facilities in Orange County, California contributed to groundwater contamination and also have ongoing investigation and remediation activities at other sites in Orange County, California. There are some sites, including our acquired facility in Gunzenhausen, Germany, that are known to have groundwater contamination caused by a third-party, and that third-party has provided indemnification to us for the related liability. However, in certain situations, third-party indemnities may not be effective to reduce our liability for environmental contamination.

We use environmental consultants primarily for risk assessments and remediation, including remedial investigation and feasibility studies, remedial action planning and design and site remediation. Our consultants provide information regarding the nature and extent of site contamination, acceptable remediation alternatives and estimated costs associated with each remediation alternative. We consider their recommendations together with other information when determining the appropriate amount to accrue for environmental liabilities.

Employees

As of September 28, 2019, we had approximately 43,000 employees, including approximately 9,000 temporary employees. None of our U.S. employees are represented by a labor union. In some international locations, our employees are represented by labor unions on either a national or plant level or are subject to collective bargaining agreements.

Available Information

Our Internet address is *http://www.sanmina.com.* We make available through our website, free of charge, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or SEC. All reports we file with the SEC are also available free of charge via EDGAR through the SEC's website at *http://www.sec.gov*.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following table sets forth the name, position and age of our current executive officers and their ages as of October 31, 2019.

Name	Age	Position
Jure Sola	68	Executive Chairman
Hartmut Liebel	56	Chief Executive Officer
Kurt Adzema	50	Executive Vice President, Chief Financial Officer
Alan Reid	56	Executive Vice President, Global Human Resources
Dennis Young	68	Executive Vice President, Worldwide Sales and Marketing

Jure Sola has served as our Executive Chairman since October 2017. Mr. Sola served as our Chief Executive Officer from April 1991 until October 2017, as Chairman of our Board of Directors from April 1991 until December 2001 and from December 2002 until October 2017, and as Co-Chairman of our Board of Directors from December 2001 until December 2002. In 1980, Mr. Sola co-founded Sanmina and initially held the position of Vice President of Sales. In October 1987, he became the Vice President and General Manager of Sanmina, responsible for manufacturing operations, sales and marketing. Mr. Sola served as our President from October 1989 to March 1996.

Hartmut Liebel has served as our Chief Executive Officer since September 2019. Mr. Liebel had initially served as President and Chief Operating Officer when he joined us in July 2019. Prior to that, Mr. Liebel was President and Chief Executive Officer of privately owned iQor, a leading global provider of intelligent customer interaction and product outsourcing solutions, from June 2013 until August 2018 and as a board member of iQor from August 2018 through July 2019. Mr. Liebel was Chief Executive Officer, Aftermarket Services, of Jabil Inc., from 2005 until May 2013, and previously held the positions of President, Aftermarket Services and Executive Vice President and Chief Operating Officer, Aftermarket Services at Jabil, which he joined in 2002.

Kurt Adzema has served as our Executive Vice President and Chief Financial Officer since October 2019. Mr. Adzema previously served as the Executive Vice President, Finance and Chief Financial Officer of Finisar Corporation, an optical components company, from January 2011 until September 2019. Prior to January 2011, Mr. Adzema held the positions of Vice President of Strategy and Corporate Development and Senior Vice President, Finance and Chief Financial Officer at Finisar, which he joined in 2005. Prior to joining Finisar, Mr. Adzema held various positions at SVB Alliant, a subsidiary of Silicon Valley Bank which advised technology companies on merger and acquisition transactions, at Montgomery Securities/Banc of America Securities, an investment banking firm, and in the financial restructuring group of Smith Barney.

Alan Reid has served as our Executive Vice President of Global Human Resources since October 2012. Mr. Reid has held various roles at Sanmina, including Senior Vice President of Global Human Resources and Human Resources Director of EMEA, from July 2001 to October 2012. Prior to joining us, he was Group Human Resources Manager at Kymata Ltd., an optoelectronic technology startup from June 2000 to July 2001. Prior to Kymata, Mr. Reid held various roles in operations and human resources with The BOC Group PLC. (British Oxygen Company), a global industrial gases and engineering company, from September 1986 to June 2000.

Dennis Young has served as our Executive Vice President of Worldwide Sales and Marketing since March 2003. Prior to joining Sanmina, Mr. Young served as Senior Vice President of Sales from May 2002 to March 2003 and Vice President of Sales from March 1998 to May 2002, of Pioneer-Standard Electronics, a provider of industrial and consumer electronic products.

Item 1A. *Risk Factors*

Adverse changes in the key end markets we target could harm our business by reducing our sales.

We provide products and services to companies that serve the industrial, medical, defense and aerospace, automotive, communications networks and cloud solutions industries. Adverse changes in any of these end markets could reduce demand for our customers' products or make these customers more sensitive to the cost of our products and services, either of which could reduce our sales, gross margins and net income. A number of factors could affect any of these industries in general, or our customers in particular, and lead to reductions in net sales, thus harming our business. These factors include:

- intense competition among our customers and their competitors, leading to reductions in prices for their products and increases in pricing pressure placed on us;
- failure of our customers' products to gain widespread commercial acceptance which could decrease the volume of orders customers place with us;
- changes in regulatory requirements affecting the products we build for our customers, leading to product redesigns or obsolescence and potentially causing us to lose business; and
- recessionary periods in our customers' markets, which decrease orders from affected customers, such as the currently depressed conditions in the oil and gas industry, which decrease orders from affected customers.

We realize a substantial portion of our revenues from communications equipment customers. This market is highly competitive, particularly in the area of price. Should any of our larger customers in this market fail to effectively compete with their competitors, they could reduce their orders to us or experience liquidity difficulties, either of which could have the effect of substantially reducing our revenue and net income. There can be no assurance that we will not experience declines in demand in this or in other end markets in the future.

Our operating results are subject to significant uncertainties, which can cause our future sales, net income and cash generated from operations to be variable.

Our operating results can vary due to a number of significant uncertainties, including:

- our ability to replace declining sales from end-of-life programs and customer disengagements with new business wins;
- conditions in the economy as a whole and in the industries we serve;
- fluctuations in component prices, component shortages and extended component lead times caused by high demand, natural disaster or otherwise;
- timing and success of new product developments and ramps by our customers, which create demand for our services, but which can also require us to incur start-up costs relating to new tooling and processes;
- levels of demand in the end markets served by our customers;
- timing of orders from customers and the accuracy of their forecasts;
- inventory levels of customers, which if high relative to their normal sales volume, could cause them to reduce their orders to us;
- customer payment terms and the extent to which we factor customer receivables during the quarter;
- increasing labor costs in the regions in which we operate;
- mix of products ordered by and shipped to major customers, as high volume and low complexity manufacturing services typically have lower gross margins than more complex and lower volume services;
- our ability to pass tariffs through to our customers;
- resolution of claims with our customers;
- degree to which we are able to utilize our available manufacturing capacity;
- customer insolvencies resulting in bad debt or inventory exposures that are in excess of our reserves;
- our ability to efficiently move manufacturing operations to lower cost regions;
- changes in our tax provision due to changes in our estimates of pre-tax income in the jurisdictions in which we operate, uncertain tax positions, and our ability to utilize our deferred tax assets; and
- political and economic developments in countries in which we have operations, which could restrict our operations or increase our costs.

Variability in our operating results may also lead to variability in cash generated by operations, which can adversely affect our ability to make capital expenditures, engage in strategic transactions and repurchase stock.

We are subject to risks arising from our international operations.

The substantial majority of our net sales are generated through our non-U.S. operations. As a result, we are affected by economic, political and other conditions in the foreign countries in which we do business, including:

- changes in trade and tax laws that may result in us or our customers being subjected to increased taxes, duties and tariffs, which could increase our costs and/or reduce our customers’ willingness to use our services in countries in which we are currently manufacturing their products;
- compliance with laws concerning the export of U.S. technology, including the International Traffic in Arms Regulations and the Export Administration Regulations, sanctions administered by the Office of Foreign Asset Controls and the Foreign Corrupt Practices Act;
- rising labor costs;
- compliance with foreign labor laws, which generally provide for increased notice, severance and consultation requirements compared to U.S. laws;
- labor unrest, including strikes;
- difficulties in staffing due to immigration or travel restrictions imposed by national governments, including the U.S.;
- security concerns;
- political instability and/or regional military tension or hostilities;
- fluctuations in currency exchange rates, which may either increase or decrease our operating costs and for which we have significant exposure;
- the imposition of currency controls;
- exposure to heightened corruption risks;
- aggressive, selective or lax enforcement of laws and regulations by national governmental authorities; and
- potentially increased risk of misappropriation of intellectual property.

We operate in countries that have experienced labor unrest, political instability or conflict and strife, including Brazil, China, India, Israel, Malaysia and Thailand, and we have experienced work stoppages and similar disruptions in these foreign jurisdictions. To the extent such developments prevent us from adequately staffing our plants and manufacturing and shipping products in those jurisdictions, our margins and net income could be reduced and our reputation as a reliable supplier could be negatively impacted.

Certain of our foreign manufacturing facilities are leased from third parties. To the extent we are unable to renew the leases covering such facilities as they expire on reasonable terms, or are forced to move our operations at those facilities to other locations as a result of a failure to agree upon renewal terms, production for our customers may be interrupted, we may breach our customer agreements, we could incur significant start-up costs at new facilities and our lease expense may increase, potentially significantly.

We rely on a relatively small number of customers for a substantial portion of our sales, and declines in sales to these customers could reduce our net sales and net income.

Sales to our ten largest customers have historically represented approximately half of our net sales. We expect to continue to depend upon a relatively small number of customers for a significant percentage of our sales for the foreseeable future. The loss of, or a significant reduction in sales or pricing to, our largest customers could substantially reduce our revenue and margins.

We are subject to intense competition in the EMS industry, which could cause us to lose sales and, therefore, harm our financial performance.

The EMS industry is highly competitive and the industry has experienced a surplus of manufacturing capacity. Our competitors include major global EMS providers, including Benchmark Electronics, Inc., Celestica, Inc., Flex Ltd., Hon Hai Precision Industry Co., Ltd. (Foxconn), Jabil Circuit, Inc. and Plexus Corp., as well as other companies that have a regional, product, service or industry-specific focus. We also face competition from current and potential OEM customers who may elect to manufacture their own products internally rather than outsourcing to EMS providers.

Competition is based on a number of factors, including end markets served, price and quality. We may not be able to offer prices as low as some of our competitors for any number of reasons, including the willingness of competitors to provide EMS services at prices we are unable or unwilling to offer. There can be no assurance that we will win new business or maintain existing business due to competitive factors, which could decrease our sales and net income. In addition, due to the extremely price sensitive nature of our industry, business that we do win or maintain may have lower margins than our historical or target margins. As a result, competition may cause our gross and operating margins to fall.

Current U.S. trade policy could increase the cost of using both our onshore and offshore manufacturing services for our U.S customers, leading them to reduce their orders to us.

Although we maintain significant manufacturing capacity in the United States, the substantial majority of our manufacturing operations are located outside the United States. This manufacturing footprint has allowed us to provide cost-effective volume manufacturing for our customers. As a result of continuing trade disputes, the U.S., China, the E.U and several other countries have imposed tariffs on certain imported products. In particular, the U.S. has imposed tariffs impacting certain components and products imported from China into the U.S. These tariffs apply to both components imported into the U.S. from China for use in the manufacture of products at our U.S. plants and to certain of our customers' products that we manufacture for them in China and that are then imported into the U.S. Any decision by a large number of our customers to cease using our manufacturing services due to tariffs or other potential changes in the U.S.'s, or its trading partners', trade policies would materially reduce our revenue and net income, an effect that would be compounded if the amount of these tariffs increases or should they be applied to additional categories of components, as is currently proposed. In addition, our gross margins would be reduced in the event we are for any reason unable to pass on any tariffs that we incurred to our customers. Although our customers are generally liable for tariffs we pay on their behalf on importation of components used in the manufacture of their products, our gross margins would be reduced in the event we were for any reason unable to recover tariffs or duties from our customers. Further, although we are required to pay tariffs upon importation of the components, we may not be able to recover these amounts from customers until sometime later, if at all, which would adversely impact our operating cash flow in a given period.

Our supply chain is subject to a number of economic, regulatory and environmental risks that could increase our costs or cause us to delay shipments to customers, reducing our revenue and margins and increasing our inventory.

Our supply chain is subject to a number of risks and uncertainties. For example, we are dependent on certain suppliers, including limited and sole source suppliers, to provide key components we incorporate into our products. We are currently experiencing, and may continue to experience in the future, delays in delivery and shortages of components, particularly certain types of capacitors, resistors and discrete semiconductors used in many of the products we manufacture. These conditions have resulted and could continue to result in increased component prices and delays in product shipments to customers, both of which have decreased our revenue and margins, as well as increases of inventory of other components, which have reduced our operating cash flow.

Our components are manufactured using a number of commodities, including petroleum, gold, copper and other metals that are subject to frequent and unpredictable changes in price due to worldwide demand, investor interest and economic conditions. We do not hedge against the risk of these fluctuations, but rather attempt to adjust our product pricing to reflect such changes. Should significant increases in commodities prices occur and should we not be able to increase our product prices enough to offset these increased costs, our gross margins and profitability could decrease, perhaps significantly. In addition, we, along with our suppliers and customers, rely on various energy sources in our manufacturing and transportation activities. There has been significant volatility in the prices of energy during the recent past and such volatility is likely to continue in the future.

Concern over climate change has led to state, federal and international legislative and regulatory initiatives aimed at reducing carbon dioxide and other greenhouse gas emissions. Such initiatives could lead to an increase in the price of energy over time. A sustained increase in energy prices for any reason could increase our raw material, components, operations and transportation costs. In addition, government regulations, such as the Dodd-Frank Act disclosure requirements relating to conflict minerals, and customer interest in responsible sourcing could decrease the availability and increase the prices of components used in our customers' products. We may not be able to increase our product prices enough to offset these increased costs, in which case our profitability would be reduced.

We rely on a variety of common carriers to transport our raw materials and components from our suppliers to us, and to transport our products to our customers. The use of common carriers is subject to a number of risks, including increased costs due to rising energy prices and labor, vehicle and insurance costs, and hijacking and theft resulting in losses of shipments, delivery delays resulting from labor disturbances and strikes and other factors beyond our control. Although we attempt to mitigate our liability for any losses resulting from these risks through contracts with our customers, suppliers and insurance carriers, any costs or losses that cannot be mitigated could reduce our profitability, require us to manufacture replacement product or damage our relationships with our customers.

Unanticipated changes in our tax rates or exposure to additional tax liabilities could increase our taxes and decrease our net income; our projections of future taxable income that drove the release of our valuation allowance in prior years could prove to be incorrect, which could cause a charge to earnings; recent corporate tax reform measures have reduced the value of our deferred tax assets and could result in taxation of untaxed foreign earnings.

We are or may become subject to income, sales, value-added, goods and services, withholding and other taxes in the United States and various foreign jurisdictions. Significant judgment is required in determining our worldwide provision for taxes and, in the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. Our effective tax rates and liability for other taxes could increase as a result of changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in enacted tax laws, the effectiveness of our cash and tax management strategies, our ability to negotiate advance pricing agreements with foreign tax authorities, compliance with local trade laws and other factors. Recent international initiatives will require multinational enterprises, like ours, to report profitability on a country-by-country basis, which could increase scrutiny by foreign tax authorities. In addition, our tax determinations are regularly subject to audit by tax authorities. For example, we are currently undergoing audits of our tax returns for certain recent tax years in a number of jurisdictions, including the United States. Developments in these or future audits could adversely affect our tax provisions, including through the disallowance or reduction of deferred tax assets or the assessment of back taxes, interest and penalties, any of which could result in an increase to income tax expense and therefore a decrease in our net income.

Cancellations, reductions in production quantities, delays in production by our customers and changes in customer requirements could reduce our sales and net income.

We generally do not obtain firm, long-term purchase commitments from our customers and our bookings may generally be canceled prior to the scheduled shipment date. Although a customer is generally liable for raw materials we procure on their behalf, finished goods and work-in-process at the time of cancellation, the customer may fail to honor this commitment or we may be unable or, for other business reasons, choose not to enforce our contractual rights. Cancellations, reductions or delays of orders by customers could increase our inventory levels, lead to write-offs of inventory that we are not able to resell to the customer, reduce our sales and net income, delay or eliminate recovery of our expenditures for inventory purchased in preparation for customer orders and lower our asset utilization, all of which could result in lower gross margins and lower net income.

Our strategy to pursue higher margin business depends in part on the success of our Components, Products and Services (CPS) business, which, if not successful, could cause our future gross margins and operating results to be lower.

A key part of our strategy is to grow our CPS business, which includes printed circuit boards, backplane and cable assemblies and plastic injection molding, mechanical systems, memory, RF, optical and microelectronic solutions, defense and aerospace products and data storage solutions and design, engineering, logistics and repair services. A decrease in orders for these components, products and services can have a disproportionately adverse impact on our profitability since these components, products and services generally carry higher than average contribution margins than our core IMS business. In addition, in order to grow this portion of our business profitably, we must continue to make substantial investments in the development of our product development capabilities, research and development activities, test and tooling equipment and skilled personnel, all of which reduce our operating results in the short term. The success of our CPS business also depends on our ability to increase sales of our proprietary products, convince our customers to agree to purchase our components for use in the manufacture of their products, rather than directing us to buy them from third parties, and expand the number of our customers who contract for our design, engineering, logistics and repair services. We may face challenges in achieving commercially viable yields and difficulties in manufacturing components in the quantities and to the specifications and quality standards required by our customers, as well as in qualifying our components for use in our customers' designs. Our proprietary products and design, engineering, logistics and repair services must compete with products and services offered by established vendors which focus solely on development of similar technologies or the provision of similar services. Any of these factors could cause our CPS revenue and margins to be less than expected, which would have an overall adverse and potentially disproportionate effect on our revenues and profitability.

Our customers could experience credit problems, which could reduce our future revenues and net income.

Some companies in the industries for which we provide products have previously experienced significant financial difficulty, with a few filing for bankruptcy in the past. Such financial difficulty, if experienced by one or more of our customers, may negatively affect our business due to the decreased demand from these financially distressed customers, the lengthening of customer payment terms, the potential inability of these companies to make full payment on amounts owed to us or to purchase inventory we acquired to support their businesses. Customer bankruptcies also entail the risk of potential recovery by the bankruptcy estate of amounts previously paid to us that are deemed a preference under bankruptcy laws.

Consolidation in the electronics industry may adversely affect our business by increasing customer buying power and increasing prices we pay for components.

Consolidation in the electronics industry among our customers, our suppliers and/or our competitors may increase, which could result in a small number of very large electronics companies offering products in multiple sectors of the electronics industry. In addition, if one of our customers is acquired by another company that does not rely on us to provide EMS services, we may lose that customer's business. Similarly, consolidation among our suppliers could result in a sole or limited source for certain components used in our customers' products. Any such consolidation could cause us to be required to pay increased prices for such components, which could reduce our gross margin and profitability.

Cyberattacks and other disruptions of our IT network and systems could interrupt our operations, lead to loss of our customer and employee data and subject us to damages.

We rely on internal and cloud-based networks and systems furnished by third parties for worldwide financial reporting, inventory management, procurement, invoicing, employee payroll and benefits administration and email communications, among other functions. In addition, our 42Q manufacturing execution solutions software used by us and certain of our customers operates in the cloud. Despite our business continuity planning, including redundant data sites and network availability, both our internal and cloud-based infrastructure may be susceptible to outages due to fire, floods, power loss, telecommunications failures, terrorist attacks and similar events. In addition, despite the implementation of network security measures that we believe to be reasonable, both our internal and our cloud-based infrastructure may also be vulnerable to hacking, computer viruses, the installation of malware and similar disruptions either by third parties or employees with access to key IT infrastructure. Cybersecurity attacks can come in many forms, including distributed denial of service attacks, advanced persistent threat, phishing and business email compromise efforts. Hacking, malware and other cybersecurity attacks, if not prevented, could lead to the collection and disclosure of sensitive personal or confidential information relating to our customers, employees or others, exposing us to legal liability and causing us to suffer reputational damage. In addition, our SCI defense division is subject to U.S. government regulations requiring the safeguarding of certain unclassified government information and to report to the U.S. government certain cyber incidents that affect such information. The increasing sophistication of cyberattacks requires us to continually evaluate new technologies and processes intended to detect and prevent these attacks. Our insurance for cyber-attacks is limited. There can be no assurance that the security measures we choose to implement will be sufficient to protect the data we manage. If we and our cloud infrastructure vendors are not successful in preventing such outages and cyberattacks, our operations could be disrupted, we could incur losses, including losses relating to claims by our customers, employees or privacy regulators relating to loss of personal or confidential business information, the willingness of customers to do business with us may be damaged and, in the case of our defense business, we could be debarred from future participation in U.S. government programs.

Customer requirements to transfer business may increase our costs.

Our customers sometimes require that we transfer the manufacturing of their products from one of our facilities to another to achieve cost reductions, tariff reductions and other objectives. These transfers have resulted in increased costs to us due to facility downtime, less than optimal utilization of our manufacturing capacity and delays and complications related to the transition of manufacturing programs to new locations. These transfers, and any decision by a significant customer to terminate manufacturing services in a particular facility, could require us to close or reduce operations at certain facilities and, as a result, we may incur in the future significant costs for the closure of facilities, employee severance and related matters. We may be required to relocate additional manufacturing operations in the future and, accordingly, we may incur additional costs that decrease our net income. Any of these factors could reduce our revenues, increase our expenses and reduce our net income.

Recruiting and retaining our key personnel is critical to the continued growth of our business.

Our success depends upon the continued service of our key personnel, particularly our highly skilled sales and operations executives, managers and engineers with many years of experience in electronics and contracts manufacturing. Such individuals can be difficult to identify, recruit and retain and are heavily recruited by our competitors. Should any of our key employees choose to retire or terminate their employment with us, we will be required to replace them with new employees with the required experience. Should we be unable to recruit new employees to fill key positions with us, our operations, financial controls and growth prospects could be negatively impacted.

If we are unable to protect our intellectual property or if we infringe, or are alleged to infringe, upon the intellectual property of others, we could be required to pay significant amounts in costs or damages.

We rely on a combination of copyright, patent, trademark and trade secret laws and contractual restrictions to protect our intellectual property rights. However, a number of our patents covering certain aspects of our manufacturing processes or products have expired and will continue to expire in the future. Such expirations reduce our ability to assert claims against competitors or others who use or sell similar technology. Any inability to protect our intellectual property rights could diminish or eliminate the competitive advantages that we derive from our proprietary technology.

We are also subject to the risk that current or former employees violate the terms of their proprietary information agreements with us. Should a key current or former employee use or disclose any of our or our customers' proprietary information, we could become subject to legal action by our customers or others, our key technologies could become compromised and our ability to compete could be adversely impacted.

In addition, we may become involved in administrative proceedings, lawsuits or other proceedings if others allege that the products we manufacture for our customers or our own manufacturing processes and products infringe on their intellectual property rights. If successful, such claims could force our customers and us to stop importing or producing products or components of products that use the challenged intellectual property, to pay up to treble damages and to obtain a license to the relevant technology or to redesign those products or services so as not to use the infringed technology. The costs of defense and potential damages and/or impact on production of patent litigation could be significant and have a materially adverse impact on our financial results. In addition, although our customers typically indemnify us against claims that the products we manufacture for them infringe others’ intellectual property rights, there is no guaranty that these customers will have the financial resources to stand behind such indemnities should the need arise, nor is there any guaranty that any such indemnity could be fully enforced. We sometimes design products on a contract basis or jointly with our customers. In these situations, we may become subject to claims that products we design infringe third party intellectual property rights and may also be required to indemnify our customer against liability caused by such claims.

Any of these risks could cause a reduction in our revenue, an increase in our costs and a reduction in our net income and could damage our reputation with our customers.

We can experience losses due to foreign exchange rate fluctuations and currency controls, which could reduce our net income and impact our ability to repatriate funds.

Because we manufacture and sell the majority of our products abroad, our operating results can be negatively impacted due to fluctuations in foreign currency exchange rates, particularly in volatile currencies to which we are exposed, such as the Euro, Mexican peso, Malaysian ringgit, Chinese renminbi and Brazilian real. We use financial instruments, primarily short-term foreign currency forward contracts, to hedge our exposure to exchange rate fluctuations. However, the success of our foreign currency hedging activities in preventing foreign exchange losses depends largely upon the accuracy of our forecasts of future sales, expenses, capital expenditures and monetary assets and liabilities. As such, our foreign currency hedging program may not fully cover our exposure to exchange rate fluctuations. If our hedging activities are not successful, we may experience a reduction of our net income. In addition, certain countries in which we operate have adopted currency controls requiring that local transactions be settled only in local currency rather than in our functional currency, which is generally different than the local currency. Such controls could require us to hedge larger amounts of local currency than we otherwise would and/or prevent us from repatriating cash generated by our operations in such countries.

Allegations of failures to comply with domestic or international employment and related laws could result in the payment of significant damages, which would reduce our net income.

We are subject to a variety of domestic and foreign employment laws, including those related to safety, wages and overtime, discrimination, organizing, whistle-blowing, classification of employees, privacy and severance payments.

Enforcement activity relating to these laws can increase as a result of increased governmental scrutiny, media attention due to violations by other companies, changes in law, political and other factors. For example, in October 2018, a contractor who had been retained by the Company through a third-party temporary staffing agency from November 2015 to March 2016 filed a lawsuit against the Company in the Santa Clara County Superior Court on behalf of himself and all other similarly situated Company contractors and employees in California, alleging violations of California Labor Code provisions governing overtime, meal and rest periods, wages, wage statements and reimbursement of business expenses. Allegations that we have violated such laws could lead to fines from or settlements with federal, state or foreign regulatory authorities or damages payable to employees, which fines and damages could be substantial and which would reduce our net income.

We are subject to a number of U.S. governmental procurement rules and regulations and failure to comply with such rules and regulations could result in damages or reduction of future revenue.

We are subject to a number of laws and regulations relating to the award, administration and performance of U.S. government contracts and subcontracts, including Federal Acquisition Regulations and the Defense Federal Acquisition Regulations. Such laws and regulations govern, price negotiations, cost accounting standards, procurement practices and many other aspects of performance under government contracts and subcontracts. These rules are complex, our performance under them is subject to audit by the Defense Contract Audit Agency, the Office of Federal Contract Compliance Programs and other government regulators, and in most cases must be complied with by our suppliers. If an audit or investigation reveals a failure to comply with regulations, we could become subject to civil or criminal penalties and administrative sanctions, including government pre-approval of our government contracting activities, termination of the contract, payment of fines and suspension or debarment from doing further business with the U.S. government and could also be subject to claims for breach of contract by our customers. Any of these actions could increase our expenses, reduce our revenue and damage our reputation as a reliable government supplier.

We may not have sufficient insurance coverage for potential claims and losses, which could leave us responsible for certain costs and damages.

We carry various forms of business and liability insurance in types and amounts we believe are reasonable and customary for similarly situated companies in our industry. However, our insurance program does not generally cover failure to comply with typical customer warranties for workmanship, product and medical device liability, intellectual property infringement, product recall claims, certain natural disasters, such as earthquake, and environmental contamination. In addition, our policies generally have deductibles and/or limits or may be limited to certain lines or business or customer engagements that reduce the amount of our potential recoveries from insurance. As a result, not all of our potential business losses are covered under our insurance policies. Should we sustain a significant uncovered loss, our net income will be reduced. Additionally, if one or more counterparties to our insurance coverage were to fail, we would bear the entire amount of an otherwise insured loss.

Any failure to comply with applicable environmental laws could adversely affect our business by causing us to pay significant amounts for cleanup of hazardous materials or for damages or fines.

We are subject to various federal, state, local and foreign environmental laws and regulations, including those governing the use, generation, storage, discharge and disposal of hazardous substances and waste in the ordinary course of our manufacturing operations. If we violate environmental laws or if we own or operate, or owned or operated in the past, a site at which we or a predecessor company caused contamination, we may be held liable for damages and the costs of remedial actions. Although we estimate and regularly reassess our potential liability with respect to violations or alleged violations and accrue for such liability, our accruals may not be sufficient. Any increase in existing reserves or establishment of new reserves for environmental liability would reduce our net income. Our failure or inability to comply with applicable environmental laws and regulations could also limit our ability to expand facilities or could require us to acquire costly equipment or to incur other significant expenses to comply with these laws and regulations.

Partly as a result of certain of our acquisitions, we have incurred liabilities associated with environmental contamination. These liabilities include ongoing investigation and remediation activities at a number of current and former sites. The time required to perform environmental remediation can be lengthy and there can be no assurance that the scope, and therefore cost, of these activities will not increase as a result of the discovery of new contamination or contamination on adjoining landowner's properties or the adoption of more stringent regulatory standards covering sites at which we are currently performing remediation activities.

We cannot assure that past disposal activities will not result in liability that will materially affect us in the future, nor can we provide assurance that we do not have environmental exposures of which we are unaware and which could adversely affect our future operating results.

Over the years, environmental laws have become, and in the future may continue to become, more stringent, imposing greater compliance costs and increasing risks and penalties associated with violations. We operate in several environmentally sensitive locations and are subject to potentially conflicting and changing regulatory agendas of government authorities, business and environmental groups. Changes in or restrictions on discharge limits, emissions levels, permitting requirements and material storage or handling could require a higher than anticipated level of remediation activities, operating expenses and capital investment or, depending on the severity of the impact of the foregoing factors, costly plant relocation, any of which would reduce our net income.

We may not be successful in implementing and integrating strategic transactions or in divesting assets or businesses, which could harm our operating results; we could become required to book a charge to earnings should we determine that goodwill and other acquired assets are impaired.

From time to time, we may undertake strategic transactions that give us the opportunity to access new customers and new end markets, increase our proprietary product offerings, obtain new manufacturing and service capabilities and technologies, enter new geographic manufacturing locations, lower our manufacturing costs and increase our margins, and to further develop existing customer relationships. Strategic transactions involve a number of risks, uncertainties and costs, including integrating acquired operations, businesses and products, resolving quality issues involving acquired products, incurring severance and other restructuring costs, diverting management attention, maintaining customer, supplier or other favorable business relationships of acquired operations and terminating unfavorable commercial arrangements, losing key employees, integrating the systems of acquired operations into our management information systems and satisfying the liabilities of acquired businesses, including liability for past violations of law and material environmental liabilities. Any of these risks could cause our strategic transactions not to be ultimately profitable.

In addition, we have in the past recorded, and may be required to record in the future, goodwill and other intangible assets in connection with our acquisitions. We evaluate, at least on an annual basis, whether events or circumstances have occurred that indicate all, or a portion, of the carrying amount of our goodwill and other intangible assets may no longer be recoverable. Should we determine in the future that our goodwill or other intangible assets have become impaired, an impairment charge to earnings would become necessary, which could be significant. For example, during our fiscal 2018 annual goodwill impairment analysis, we fully impaired goodwill of $31 million associated with the acquisition of a storage software business we purchased in 2016.

We may be unable to generate sufficient liquidity to expand our operations, which may reduce the business our customers and vendors are able to do with us; we could experience losses if one or more financial institutions holding our cash or other financial counterparties were to fail; repatriation of foreign cash could increase our taxes.

Our liquidity is dependent on a number of factors, including profitability, business volume, inventory requirements, the extension of trade credit by our suppliers, the degree of alignment of payment terms from our suppliers with payment terms granted to our customers, investments in facilities and equipment, acquisitions, repayments of our outstanding indebtedness, stock repurchase activity, the amount available under our accounts receivable sales programs and availability under our revolving credit facility. In the event we need or desire additional liquidity to expand our business, make acquisitions or repurchase stock, there can be no assurance that such additional liquidity will be available on acceptable terms or at all. A failure to maintain adequate liquidity could cause our stock price to fall and reduce our customers' and vendors' willingness to do business with us.

A principal source of our liquidity is our cash and cash equivalents, which are held with various financial institutions. Although we distribute such funds among a number of financial institutions that we believe to be of high quality, there can be no assurance that one or more of such institutions will not become insolvent in the future, in which case all or a portion of our uninsured funds on deposit with such institutions could be lost. Similarly, if one or more counterparties to our foreign currency hedging instruments were to fail, we could suffer losses and our hedging of risk could become less effective.

Additionally, a majority of our worldwide cash reserves are generated by, and therefore held in, foreign jurisdictions. Some of these jurisdictions restrict the amount of cash that can be transferred to the U.S. or impose taxes and penalties on such transfers of cash. To the extent we have excess cash in foreign locations that could be used in, or is needed by, our U.S. operations, we may incur significant foreign taxes to repatriate these funds which would reduce the net amount ultimately available for such purposes.

Our Amended Cash Flow Revolver contains covenants that may adversely impact our business; the failure to comply with such covenants could cause us to be unable to borrow additional funds and cause our outstanding debt to become immediately payable.

Our Amended Cash Flow Revolver contains financial covenants and a number of restrictive covenants, including restrictions on incurring additional debt, making investments and other restricted payments, selling assets and paying dividends, subject to certain exceptions, with which we must comply. Collectively, these covenants could constrain our ability to grow our business through acquisition or engage in other transactions. In addition, such facility includes covenants requiring, among other things, that we file quarterly and annual financial statements with the SEC, comply with all laws, pay all taxes and maintain casualty insurance. If we are not able to comply with these covenants, for any reason, some or all of our outstanding debt could become immediately due and payable and the incurrence of additional debt under our revolving credit facility would not be allowed, any of which would have a material adverse effect on our liquidity and ability to continue to conduct our business.

If we are unable to maintain our technological and manufacturing process expertise, our business could be adversely affected.

Regular improvements to and refinements of our manufacturing processes are necessary to remain competitive in the marketplace. As a result, we are continually evaluating the cost-effectiveness and feasibility of new manufacturing processes. In some cases, we must make capital expenditures and incur engineering expense in order to qualify and validate any such new process in advance of booking new business that could utilize such processes. Such investments utilize cash and reduce our margins and net income. Any failure to adequately invest in manufacturing technology could reduce our competitiveness and, potentially, our future revenue and net income.

If we manufacture or design defective products, or if our manufacturing processes do not comply with applicable statutory and regulatory requirements and standards, we could be subject to claims, damages and fines and lose customers.

We manufacture products to our customers' specifications, and in some cases our manufacturing processes and facilities need to comply with various statutory and regulatory requirements and standards. For example, many of the medical products that we manufacture, as well as the facilities and manufacturing processes that we use to produce them, must comply with standards established by the U.S. Food and Drug Administration and products we manufacture for the automotive end market are generally subject to the ISO/TS 16949:2009 standard. In addition, our customers' products and the manufacturing processes that we use to produce them often are highly complex. As a result, products that we design or manufacture may at times contain design or manufacturing defects, and our manufacturing processes may be subject to errors or may not be in compliance with applicable statutory and regulatory requirements and standards. Defects in the products we design or manufacture may result in product recalls, warranty claims by customers, including liability for repair costs, delayed shipments to customers or reduced or canceled customer orders. The failure of the products that we design or manufacture or of our manufacturing processes and facilities to comply with applicable statutory and regulatory requirements and standards may subject us to legal fines or penalties, cause us to lose business and, in some cases, require us to shut down or incur considerable expense to correct a manufacturing program or facility. In addition, these defects may result in product liability claims against us. The magnitude of such claims may increase as we continue to expand our medical, automotive, defense and aerospace and oil and gas manufacturing services because defects in these types of products can result in death or significant injury to end users of these products or environmental harm. Even when our customers are contractually responsible for defects in the design of a product, we could nonetheless be named in a product liability suit over such defects and could be required to expend significant resources to defend ourselves. Additionally, insolvency of our customers may result in us being held ultimately liable for our customers’ design defects, which could significantly reduce our net income.

We are subject to risks associated with natural disasters and global events.

We conduct a significant portion of our activities, including manufacturing, administration and information technology management in areas that have experienced natural disasters, such as major earthquakes, hurricanes, floods and tsunamis. Our insurance coverage with respect to damages to our facilities or our customers' products caused by natural disasters is limited and is subject to deductibles and coverage limits and, as a result, may not be sufficient to cover all of our losses. For example, our policies have very limited coverage for damages due to earthquake. In addition, such coverage may not continue to be available at commercially reasonable rates and terms. In the event of a major earthquake or other disaster affecting one or more of our facilities, our operations and management information systems, which control our worldwide procurement, inventory management, shipping and billing activities, could be significantly disrupted. Such events could delay or prevent product manufacturing for an extended period of time. Any extended inability to continue our operations at affected facilities following such an event could reduce our revenue.

***Changes in financial accounting standards or policies have affected, and in the future may affect, our reported financial condition or results of operations; there are inherent limitations to our system of internal controls; changes in securities laws and regulations have increased, and are likely to continue to increase, our operating costs*.**

We prepare our consolidated financial statements in conformity with U.S. GAAP. Our preparation of financial statements in accordance with U.S. GAAP requires that we make estimates and assumptions that affect the recorded amounts of assets, liabilities and net income during the reporting period. A change in the facts and circumstances surrounding those estimates could result in a change to our estimates and could impact our future operating results.

These principles are subject to interpretation by the Financial Accounting Standards Board (FASB), the SEC and various bodies formed to interpret and create accounting policies. A change in those policies can have a significant effect on our reported results and may affect our reporting of transactions which are completed before a change is announced. For example, significant changes to the lease accounting rules have been enacted and will be effective for us in fiscal 2020. We could incur significant costs to implement these new rules, including costs to modify our IT systems or implement new IT solutions. In fiscal 2019, we implemented the new revenue recognition standard, which is complex and requires significant management judgment. Although we believe the judgments we applied in implementation of the new revenue recognition standard are appropriate, there can be no assurance that we will not be required to change our judgments relating to implementation of such standard in the future, whether as a result of new guidance or otherwise. A significant change in our accounting judgments could have a significant impact on our reported revenue, gross profits or balance sheets. In general, changes to accounting rules or challenges to our interpretation or application of the rules by regulators may have a material adverse effect on our reported financial results or on the way we conduct business.

Our system of internal and disclosure controls and procedures were designed to provide reasonable assurance of achieving their objectives. However, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been or will be detected. As a result, there can be no assurance that our system of internal and disclosure controls and procedures will be successful in preventing all errors, theft and fraud, or in informing management of all material information in a timely manner. For example, during the fourth quarter of 2018, we identified a material weakness in our internal control over financial reporting related to the failed operation of a management review control, which did not result in a restatement of previously-issued financial statements. This material weakness has been remediated as of September 28, 2019.

Finally, corporate governance, public disclosure and compliance practices continue to evolve based upon continuing legislative action, SEC rulemaking and stockholder activism. As a result, the number of rules and regulations applicable to us may increase, which could also increase our legal and financial compliance costs and the amount of time management must devote to compliance activities. Increasing regulatory burdens could also make it more difficult for us to attract and retain qualified members of our Board of Directors, particularly to serve on our Audit Committee, and qualified executive officers in light of an increase in actual or perceived workload and liability for serving in such positions.

The market price of our common stock is volatile and is impacted by factors other than our financial performance.

The stock market in recent years has experienced significant price and volume fluctuations that have affected our stock price. These fluctuations have often been unrelated to our operating performance. Factors that can cause such fluctuations include announcements by our customers, competitors or other events affecting companies in the electronics industry, currency fluctuations, general market fluctuations and macroeconomic conditions, any of which may cause the market price of our common stock to fluctuate.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

Facilities. Our customers sell their products throughout the world and therefore need to access manufacturing services on a global basis. We maintain extensive operations in lower cost locations including Latin America, Eastern Europe, China, India and Southeast Asia. To enhance our integrated manufacturing solutions offerings, we seek to locate our facilities either near our customers or their end markets in major centers for the electronics industry or, when appropriate, in lower cost locations. Many of our plants located near customers or their end markets are focused primarily on new product introduction and final system assembly and test, and plants located in lower cost areas are engaged primarily in higher volume, less complex component and subsystem manufacturing and assembly.

We continually evaluate our global manufacturing operations and adjust our facilities and operations to keep our manufacturing capacity in line with demand and our manufacturing strategy and to provide cost efficient services to our customers. Through this process, we have closed certain facilities not required to satisfy current demand levels.

As of September 28, 2019, the approximate square footage of our active manufacturing facilities by country was as follows:

	Approximate Square Footage
Argentina	1,335
Australia	42,334
Brazil	260,506
Canada	136,237
China	2,367,809
Columbia	2,721
Czech Republic	70,870
England	11,174
Finland	128,405
Germany	362,972
Hungary	499,661
India	379,115
Ireland	120,000
Israel	182,292
Malaysia	501,843
Mexico	2,422,217
Singapore	537,058
South Africa	3,810
Scotland	30,581
Sweden	102,526
Thailand	326,293
United States	2,673,027
Total	11,162,786

As of September 28, 2019, our active manufacturing facilities consist of nine million square feet in facilities that we own and two million square feet in leased facilities with lease terms expiring between 2020 and 2042.

We regularly evaluate our expected future facilities requirements and believe our existing facilities are adequate to meet our requirements for the next 12 months.

Certifications and Registrations. Certifications and registrations under industry standards are important to our business because many customers rely on them to confirm our adherence to manufacturing process and quality standards. Certain markets, such as telecommunications, medical, defense, aerospace, automotive and oil and gas, require adherence to industry-specific standards. Substantially all of our manufacturing facilities are certified to ISO 9001:2015, a standard published by the International Organization for Standardization. As part of the ISO 9001:2015 certification process, we have a highly developed quality management system and continually improve its effectiveness in accordance with its requirements.

We use this certification to demonstrate our ability to consistently provide product that meets customer and applicable regulatory requirements and enhance customer satisfaction through its effective application. ISO 9001:2015 certification is of particular importance to our customers throughout the world.

In addition to ISO 9001:2015, many of our facilities are TL 9000 6.0 certified. The TL 9000 quality system requirements and quality system metrics are designed specifically for the telecommunications industry to promote consistency and efficiency, reduce redundancy and improve customer satisfaction. Included in the TL 9000 system are performance-based metrics that quantify reliability and quality performance of the product. The majority of our facilities are also compliant with the standards set by Underwriters Laboratories (UL). These standards define requirements for quality, manufacturing process control and manufacturing documentation and are required by many OEMs in the communications sector of the electronics industry.

Our medical systems division has identified certain manufacturing facilities to be centers of excellence for medical products manufacturing. These facilities are ISO 13485:2016 certified and, where appropriate, FDA registered. All such facilities are fully compliant with the FDA's quality systems regulations.

Our defense and aerospace operations are headquartered in Huntsville, Alabama and are housed in a facility dedicated to meeting the specialized needs of our defense and aerospace customers. This defense and aerospace operation is AS9100 2016 certified. The defense and aerospace operation maintains other certifications in accordance with various U.S. military specifications, ANSI and other standards as appropriate for defense and aerospace suppliers. Other selected operations around the world are also AS9100 2016 certified.

Our automotive facilities are strategically located worldwide. Substantially all of our automotive facilities are certified to IATF16949:2016, the automotive industry standard.

Our oil and gas related manufacturing operations are, as applicable, certified to American Petroleum Institute (API) requirements.

Item 3. *Legal Proceedings*

Two of our subsidiaries, Sanmina-SCI do Brasil Technology Ltda. and Sanmina do Brasil Integration Ltda., are currently parties to nine administrative and judicial proceedings in the Federal Revenue Service of Brazil, the Chamber of Appeals of Administrative Court of Brazil, and the Higher Federal Court of Brazil. The cases were brought against the subsidiaries at various times between November 2006 and May 2013 by the Brazilian Federal Revenue Service. The claims allege that these subsidiaries failed to comply with certain bookkeeping and tax rules for certain periods between 2001 and 2011. The claims seek payment by the subsidiaries of social fund contributions and income and excise taxes allegedly owed by the subsidiaries, as well as fines. The subsidiaries made counterclaims against the Federal Revenue Service seeking recovery of certain income taxes and social fund contributions which they believe they overpaid. The administrative agencies and the court reached decisions in the cases against the subsidiaries between March 2007 and April 2014, all of which were appealed. Beginning in the second quarter of 2014 and continuing through the fourth quarter of 2017, the administrative agencies and court ruled on several of the subsidiaries' appeals, finding partially in favor of the subsidiaries in some cases and against them in others. In addition, one of the counterclaims against the Federal Revenue Service was dismissed in December 2017. The subsidiaries continue to appeal the remaining adverse determinations in the administrative proceedings and continue to pursue the remaining counterclaim against the Federal Revenue Service. The subsidiaries believe they have meritorious positions in these remaining matters.

In June 2008, we were named by the Orange County Water District in a suit alleging that our actions contributed to polluted groundwater managed by the plaintiff. The complaint seeks recovery of compensatory and other damages, as well as declaratory relief, for the payment of costs necessary to investigate, monitor, remediate, abate and contain contamination of groundwater within the plaintiff’s control. In April 2013, all claims against us were dismissed. The plaintiff appealed this dismissal and the appellate court reversed the judgment in August 2017. In November 2017, the California Supreme Court denied our petition to review this decision and, in December 2017, the Court of Appeal remanded the case back to the Superior Court for further proceedings. A trial currently is scheduled to commence on September 14, 2020. We intend to contest the plaintiff’s claims vigorously.

In addition, from time to time, we may be involved in routine legal proceedings, as well as demands, claims and threatened litigation that arise in the normal course of our business. The ultimate outcome of any litigation is uncertain and unfavorable outcomes could have a negative impact on our results of operations and financial condition. Regardless of outcome, litigation can have an adverse impact on us as a result of incurrence of defense costs, diversion of management resources and other factors. We record liabilities for legal proceedings when a loss becomes probable and the amount of loss can be reasonably estimated.

See also Note 9 of Notes to Consolidated Financial Statements.

Item 4. *Mine Safety Disclosures.*

Not applicable.

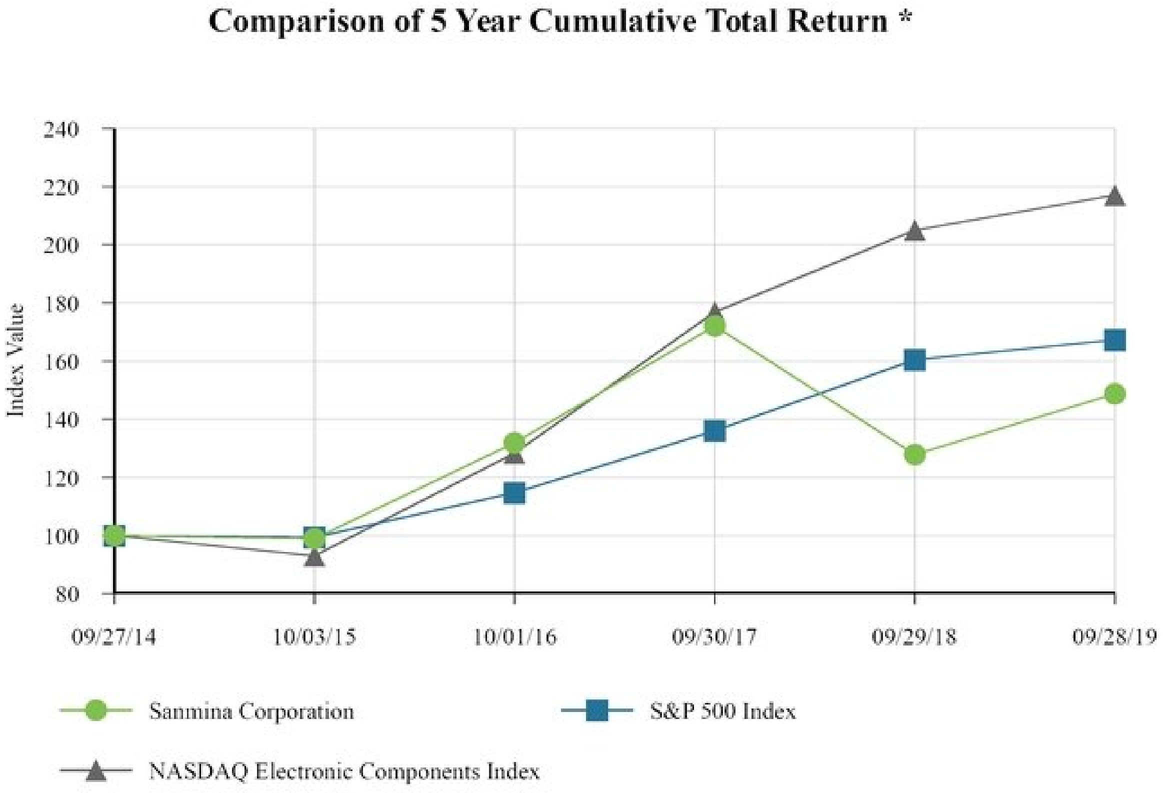
PART II

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

Market Information

Our common stock is traded on the Nasdaq Global Select Market under the symbol SANM. As of October 31, 2019, we had approximately 927 holders of record of our common stock.

The following graph compares the cumulative 5-year total stockholder return on our common stock relative to the cumulative total returns of the S&P 500 index and the NASDAQ Electronic Components index. An investment of $100 (with reinvestment of all dividends) is assumed to have been made in our common stock on September 27, 2014 and in each of such indices at month end starting on September 27, 2014 and its relative performance is tracked through September 28, 2019.



* $100 invested on 9/27/2014, including reinvestment of dividends, as applicable. Indexes calculated on a month-end basis.

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	9/27/2014	10/3/2015	10/1/2016	9/30/2017	9/29/2018	9/28/2019
Sanmina Corporation	100.00	98.94	131.81	171.99	127.78	148.70
S&P 500	100.00	99.39	114.72	136.07	160.44	167.27
NASDAQ Electronic Components	100.00	93.00	128.29	176.92	205.07	217.10

Sanmina's stock price performance included in this graph is not necessarily indicative of future stock price performance.

Stock Repurchases

In September 2017, our Board of Directors authorized us to repurchase up to $200 million of our common stock in the open market or in negotiated transactions off the market. This program has no expiration date. The Company did not repurchase any shares under its repurchase program during the fourth quarter of 2019. As of September 28, 2019, an aggregate of $101 million remains available under this repurchase program. Subsequent to the end of fiscal 2019, our Board of Directors authorized us to purchase an additional $200 million of our common stock on the same terms as the program approved in September 2017 which brought the total Board authorized amount to $301 million.

During 2019, we repurchased an aggregate of 0.3 million shares of our common stock for $7 million, an average price per share of $25.68 (excluding commissions).

Item 6. *Selected Financial Data*

The following selected financial data should be read in conjunction with “Item 7-Management's Discussion and Analysis of Financial Condition and Results of Operations” and “Item 8-Financial Statements and Supplementary Data,” included elsewhere in this Form 10-K.

FIVE YEAR SELECTED FINANCIAL HIGHLIGHTS

Consolidated Statements of Operations Data:

	Year Ended				
	September 28, 2019	September 29, 2018	September 30, 2017	October 1, 2016	October 3, 2015
	(In thousands, except per share data)				
Net sales	$ 8,233,859	$ 7,110,130	$ 6,868,619	$ 6,481,181	$ 6,374,541
Operating income	286,117	119,441	226,467	224,785	203,101
Income from continuing operations before income taxes	245,619	97,539	213,480	204,617	176,193
Provision for (benefit from) income taxes (1)	104,104	193,072	74,647	16,779	(201,068)
Net income (loss)	$ 141,515	$ (95,533)	$ 138,833	$ 187,838	$ 377,261
Net income (loss) per share:					
Basic	$ 2.05	$ (1.37)	$ 1.86	$ 2.50	$ 4.61
Diluted	$ 1.97	$ (1.37)	$ 1.78	$ 2.38	$ 4.41
Shares used in computing per share amounts:					
Basic	69,129	69,833	74,481	75,094	81,818
Diluted	71,678	69,833	78,128	78,787	85,641

(1) We released $96.2 million and $288.7 million of valuation allowance attributable to certain U.S. and foreign deferred tax assets in 2016 and 2015, respectively, upon our conclusion that it was more likely than not that we would be able to realize the benefit of a portion of our deferred tax assets in the future. Income tax expense in 2018 was unusually high due to a $161 million non-cash charge upon enactment of the U.S. Tax Cuts and Jobs Act.

Consolidated Balance Sheets Data:

	As of				
	September 28, 2019	September 29, 2018	September 30, 2017	October 1, 2016	October 3, 2015
	(In thousands)				
Cash and cash equivalents	$ 454,741	$ 419,528	$ 406,661	$ 398,288	$ 412,253
Net working capital (1)	$ 1,237,907	$ 612,532	$ 1,000,207	$ 974,389	$ 942,423
Total assets	$ 3,905,513	$ 4,085,133	$ 3,847,363	$ 3,625,222	$ 3,493,264
Long-term debt (excluding current portion)	$ 346,971	$ 14,346	$ 391,447	$ 434,059	$ 423,949
Stockholders' equity	$ 1,642,573	$ 1,472,844	$ 1,647,684	$ 1,609,803	$ 1,520,471

(1) The reduction in net working capital from 2017 to 2018 resulted primarily from the reclassification of our Secured Notes due in 2019 from long-term debt to current debt. The increase in net working capital from 2018 to 2019 resulted primarily from the issuance of a $375 million Term Loan due in 2023, the proceeds of which were used to repay the Secured Notes due in 2019.

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

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements relate to our expectations for future events and time periods. All statements other than statements of historical fact are statements that could be deemed to be forward-looking statements, including any statements regarding trends in future revenue or results of operations, gross margin, operating margin, expenses, earnings or losses from operations, cash flow, synergies or other financial items; any statements of the plans, strategies and objectives of management for future operations and the anticipated benefits of such plans, strategies and objectives; any statements regarding future economic conditions or performance; any statements regarding pending investigations, claims or disputes; any statements regarding the timing of closing of, future cash outlays for, and benefits of acquisitions; any statements regarding expected restructuring costs and benefits; any statements concerning the adequacy of our current liquidity and the availability of additional sources of liquidity; any statements regarding the impact of future potential tariffs on our business; any statements regarding the impact of changes in tax laws; any statements relating to the expected impact of accounting pronouncements not yet adopted; any statements of expectation or belief; and any statements of assumptions underlying any of the foregoing. Generally, the words "anticipate," "believe," "plan," "expect," "future," "intend," "may," "will," "should," "estimate," "predict," "potential," "continue" and similar expressions identify forward-looking statements. Our forward-looking statements are based on current expectations, forecasts and assumptions and are subject to risks and uncertainties, including those contained in Part I, Item 1A of this report. As a result, actual results could vary materially from those suggested by the forward looking statements. We undertake no obligation to publicly disclose any revisions to these forward-looking statements to reflect events or circumstances occurring subsequent to filing this report with the Securities and Exchange Commission.

Overview

We are a leading global provider of integrated manufacturing solutions, components, products and repair, logistics and after-market services. Our revenue is generated from sales of our products and services primarily to original equipment manufacturers (OEMs) that serve the industrial, medical, defense and aerospace, automotive, communications networks and cloud solutions industries.

Our operations are managed as two businesses:

1) Integrated Manufacturing Solutions (IMS). Our IMS segment consists of printed circuit board assembly and test, final system assembly and test, and direct-order-fulfillment.

2) Components, Products and Services (CPS). Components include interconnect systems (printed circuit board fabrication, backplane, cable assemblies and plastic injection molding) and mechanical systems (enclosures and precision machining). Products include memory from our Viking Technology division; enterprise solutions from our Viking Enterprise Solutions division; RF, optical and microelectronic; defense and aerospace products from SCI Technology; and cloud-based manufacturing execution software from our 42Q division. Services include design, engineering, logistics and repair services.

Our only reportable segment for financial reporting purposes is IMS, which represented approximately 80% of our total revenue in 2019. Our CPS business consists of multiple operating segments which do not meet the quantitative thresholds for being presented as reportable segments under the accounting rules for segment reporting. Therefore, financial information for these operating segments is presented in a single category entitled "Components, Products and Services".

All references in this section to years refer to our fiscal years ending on the Saturday nearest to September 30. Fiscal 2019, 2018 and 2017 were each 52 weeks.

Our strategy is to leverage our comprehensive product and service offerings, advanced technologies and global capabilities to further penetrate diverse end markets that we believe offer significant growth opportunities and have complex products that require higher value-added services. We believe this strategy differentiates us from our competitors and will help drive more sustainable revenue growth and provide opportunities for us to ultimately achieve operating margins that exceed industry standards.

There are many challenges to successfully executing our strategy. For example, we compete with a number of companies in each of our key end markets. This includes companies that are much larger than we are and smaller companies that focus on a particular niche. Although we believe we are well-positioned in each of our key end markets and seek to differentiate ourselves from our competitors, competition remains intense and profitably growing our revenues has been challenging. For example, gross margins of 6.4% and 10% in 2019 for our IMS and CPS businesses, respectively, were below our target model expectations at current revenue levels due to inefficiencies and other factors. We continue to address these challenges on both a short-term and long-term basis. For example, we closed several underperforming CPS plants in 2018.

Sales to our ten largest customers typically represent approximately 50% of our net sales. A single customer represented 10% or more of our net sales in 2019 and 2018 and two customers each represented 10% or more of our net sales in 2017.

We typically generate about 80% of our net sales from products manufactured in our foreign operations. The concentration of foreign operations has resulted primarily from a desire on the part of many of our customers to manufacture in lower cost locations in regions such as Asia, Latin America and Eastern Europe.

Historically, we have had substantial recurring sales to existing customers. We typically enter into supply agreements with our major OEM customers. These agreements generally have terms ranging from three to five years and cover the manufacture of a range of products. Under these agreements, a customer typically agrees to purchase its requirements for specific products in particular geographic areas from us. However, these agreements generally do not obligate the customer to purchase minimum quantities of products. In addition, some customer contracts contain cost reduction objectives, which can have the effect of reducing revenue from such customers.

Both the U.S. and China have recently imposed tariffs impacting certain products imported into such countries. Although our customers are generally liable to us for reimbursement of tariffs we pay on components imported for the manufacture of their products, there can be no assurance that we will be successful in recovering all of the tariffs that are owed to us. Unrecovered tariffs paid on behalf of our customers reduce our gross margins. Also, although we are required to pay tariffs upon importation of the components, we may not recover these amounts from customers until sometime later, which adversely impacts our operating cash flow in a given period. However, we currently do not expect the net impact of tariffs, after recovery from customers, to be material to us.

Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements which have been prepared in accordance with accounting principles generally accepted in the United States. We review the accounting policies used in reporting our financial results on a regular basis. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, net sales and expenses and related disclosure of contingent liabilities. On an ongoing basis, we evaluate the process used to develop estimates for certain reserves and contingent liabilities, including those related to product returns, accounts receivable, inventories, income taxes, warranty obligations, environmental matters, contingencies and litigation. We base our estimates on historical experience and various other assumptions that we believe are reasonable for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Our actual results may differ materially from these estimates.

We believe the following critical accounting policies reflect the more significant judgments and estimates used by us in preparing our consolidated financial statements:

Revenue Recognition. We derive revenue principally from sales of integrated manufacturing solutions, components and Company-proprietary products. Other sources of revenue include logistics and repair services; design, development and engineering services; defense and aerospace programs; and sales of raw materials to customers whose requirements change after we have procured inventory to fulfill the customer’s forecasted demand.

For purposes of determining when to recognize revenue, and in what amount, we apply a 5-step model: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when (or as) we satisfy a performance obligation. Each of these steps involves the use of significant judgments.

We recognize revenue for the majority of our contracts on an over time basis. This is due to the fact that 1) we do not have an alternative use for the end products we manufacture for our customers and have an enforceable right to payment, including a reasonable profit, for work-in-progress upon a customer’s cancellation of a contract for convenience or 2) our customer simultaneously receives and consumes the benefits provided by our services. For these contracts, revenue is recognized on an over time basis using the cost-to-cost method (ratio of costs incurred to date to total estimated costs at completion) which we believe best depicts the transfer of control to the customer. Revenue streams for which revenue is recognized on an over time basis include sales of vertically integrated manufacturing solutions (integrated manufacturing solutions and components); logistics and repair services; design, development and engineering services; and defense and aerospace programs.

For contracts for which revenue is required to be recognized at a point-in-time, we recognize revenue when we have transferred control of the related goods, which generally occurs upon shipment or delivery of the goods to the customer. Revenue streams for which revenue is recognized at a point-in-time include Company-proprietary products and sales of raw materials.

Accounts Receivable and Other Related Allowances— We estimate uncollectible accounts, product returns and other adjustments related to current period net sales to establish valuation allowances. In making these estimates, we analyze the creditworthiness of our customers, past experience, specific facts and circumstances, and the overall economic climate in the industries we serve. If actual uncollectible accounts, product returns or other adjustments differ significantly from our estimates, the amount of sales or operating expenses we report could be affected. The ultimate realization of our accounts receivable is a significant credit risk. This risk is mitigated by (i) making a significant portion of sales to financially sound companies, (ii) ongoing credit evaluation of our customers, (iii) frequent contact with our customers, especially our most significant customers, which enables us to monitor changes in their business operations and to respond accordingly and (iv) obtaining, in certain cases, a guaranty from a customer's parent entity when our customer is not the ultimate parent entity or a letter of credit from the customer's bank. To establish our allowance for doubtful accounts, we evaluate credit risk related to specific customers based on their financial condition and the current economic environment; however, we are not able to predict with absolute certainty whether our customers will become unable to meet their financial obligations to us. We believe the allowances we have established are adequate under the circumstances; however, a change in the economic environment or a customer's financial condition could cause our estimates of allowances, and consequently the provision for doubtful accounts, to change, which could have a significant adverse impact on our financial position and/or results of operations. Our allowance for product returns and other adjustments is primarily established using historical data.

Inventories— We state inventories at the lower of cost (first-in, first-out method) and net realizable value. Cost includes raw materials, labor and manufacturing overhead. We regularly evaluate the carrying value of our inventories and make provisions to reduce excess and obsolete inventories to their estimated net realizable values. The ultimate realization of inventory carrying amounts is affected by changes in customer demand for inventory that customers are not contractually obligated to purchase and inventory held for specific customers who are experiencing financial difficulties. Inventory write-downs are recorded based on forecasted demand, past experience with specific customers, the ability to redistribute inventory to other programs or return inventories to our suppliers, and whether customers are contractually obligated and have the ability to pay for the related inventory. Certain payments received from customers for inventories that have not been shipped to customers or otherwise disposed of are netted against inventory.

We generally procure inventory based on specific customer orders and forecasts. Customers generally have limited rights of modification (for example, rescheduling or cancellations) with respect to specific orders. Customer modifications of orders affecting inventory previously procured by us and our purchases of inventory beyond customer needs may result in excess and obsolete inventory. Although we may be able to use some excess inventory for other products we manufacture, a portion of this excess inventory may not be returnable to vendors or recoverable from customers. Write-offs or write-downs of inventory could be caused by:

- changes in customer demand for inventory, such as cancellation of orders, and our purchases of inventory beyond customer needs that result in excess quantities on hand that we are not able to return to the vendor, use to fulfill orders from other customers or charge back to the customer;
- financial difficulties experienced by specific customers for whom we hold inventory; and
- declines in the market value of inventory.

Long-lived Assets—We review property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. An asset group is the unit of accounting that represents the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets. An asset or asset group is considered impaired if its carrying amount exceeds the undiscounted future net cash flows the asset or asset group is expected to generate. If an asset or asset group is considered impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset or asset group exceeds its fair value. For asset groups for which a building is the primary asset, we estimate fair value primarily based on data provided by commercial real estate brokers. For other assets, we estimate fair value based on projected discounted future net cash flows, which requires significant judgment.

Goodwill— We test goodwill for impairment on an annual basis and whenever events or changes in circumstances indicate that the carrying amount of goodwill may not be recoverable, as assessed at a reporting unit level. If, based on a qualitative assessment, we determine it is more-likely-than-not that goodwill is impaired, we perform a quantitative assessment to determine whether the fair value of our reporting unit is less than its carrying value and, if so, we perform a further analysis to determine the amount, if any, of the impairment.

Income Taxes— We estimate our income tax provision or benefit in each of the jurisdictions in which we operate, including estimating exposures related to examinations by taxing authorities. We believe our accruals for tax liabilities are adequate for all open years based on our assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter. Although we believe our accruals for tax liabilities are adequate, tax regulations are subject to interpretation and the tax controversy process is inherently lengthy and uncertain; therefore, our assessments can involve a series of complex judgments about future events and rely heavily on estimates and assumptions. To the extent the probable tax outcome of these matters changes, such changes in estimate will impact our income tax provision in the period in which such determination is made. We only recognize or continue to recognize tax positions that meet a “more likely than not” threshold of being upheld. Interest and penalties related to unrecognized tax benefits are recognized as a component of income tax expense.

We must also make judgments regarding the realizability of deferred tax assets. The carrying value of our net deferred tax assets is based on our belief that it is more likely than not that we will generate sufficient future taxable income in certain jurisdictions to realize these deferred tax assets. We evaluate positive and negative evidence each reporting period when assessing the need for a valuation allowance. A valuation allowance is established for deferred tax assets if we believe realization of such assets is not more likely than not. Our judgments regarding future taxable income may change due to changes in market conditions, new or modified tax laws, tax planning strategies or other factors. If our assumptions, and consequently our estimates, change in the future, the valuation allowances we have established may be increased or decreased, resulting in a respective increase or decrease in income tax expense.

Our effective tax rate is highly dependent upon the amount and geographic distribution of our worldwide income or losses, the tax regulations, rates and holidays in each geographic region, the utilization of net operating losses, the availability of tax credits and carryforwards, and the effectiveness of our tax planning strategies.

Results of Operations

Years Ended September 28, 2019, September 29, 2018 and September 30, 2017.

The following table presents our key operating results.

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
	(In thousands)		
Net sales	$ 8,233,859	$ 7,110,130	$ 6,868,619
Gross profit	$ 591,938	$ 463,783	$ 519,911
Gross margin	7.2%	6.5%	7.6%
Operating expenses	$ 305,821	$ 344,342	$ 293,444
Operating income	$ 286,117	$ 119,441	$ 226,467
Operating margin	3.5%	1.7%	3.3%
Net income (loss) (1)	$ 141,515	$ (95,533)	$ 138,833

(1) Our net loss in 2018 includes the impact of the Tax Act, which increased income tax expense by approximately $161 million.

Net Sales

Net sales increased from $7.1 billion for 2018 to $8.2 billion for 2019, an increase of 15.8%. In general, this increase was driven primarily by stronger demand in each of our end markets and continued stabilization of lead times for supply-constrained parts, which allowed us to meet customer demand. Net sales increased from $6.9 billion for 2017 to $7.1 billion for 2018, an increase of 3.5%. Sales by end market were as follows:

	Year Ended			2019 vs. 2018		2018 vs. 2017	
	September 28, 2019	September 29, 2018	September 30, 2017	Increase/(Decrease)		Increase/(Decrease)	
	(Dollars in thousands)						
Industrial, Medical, Defense and Automotive	$ 4,572,006	$ 3,681,788	$ 3,396,130	$ 890,218	24.2%	$ 285,658	8.4 %
Communications Networks	2,906,575	2,684,609	2,650,850	221,966	8.3%	33,759	1.3 %
Cloud Solutions	755,278	743,733	821,639	11,545	1.6%	(77,906)	(9.5)%
Total	$ 8,233,859	$ 7,110,130	$ 6,868,619	$ 1,123,729	15.8%	$ 241,511	3.5 %

Comparison of 2019 to 2018 by End Market

In addition to the impact of continued stabilization of lead times for supply-constrained parts, sales to customers in our industrial, medical, defense and automotive markets increased primarily as a result of program ramps and new customer programs. Sales to customers in our communications networks end market increased primarily as a result of new program wins for optical, routing and 5G products.

Comparison of 2018 to 2017 by End Market

In 2018, sales to customers in our industrial, medical, defense, and automotive end market increased 8.4%, primarily as a result of increased demand and new program wins for medical products and certain programs ramping for automotive products, partially offset by decreased demand for industrial products. Sales to customers in our communications networks end market increased 1.3%, primarily as a result of new program wins and increased demand for existing wireless products. Sales to customers in our cloud solutions end market decreased 9.5%, primarily due to reduced demand from a storage customer.

Gross Margin

Gross margin was 7.2%, 6.5% and 7.6% in 2019, 2018 and 2017, respectively. The increase in gross margin from 2018 to 2019 was primarily due to increased revenue levels and improved operational efficiencies. IMS gross margin increased to 6.4% in 2019, from 6.0% in 2018, due primarily to increased revenue and inefficiencies in 2018 ramping certain new programs. CPS gross margin increased to 10.0% in 2019, from 8.1% in 2018, primarily due to operational improvements and continued benefits of certain plant closures during the past 18 months.

The decrease in gross margin from 2017 to 2018 was primarily due to a decline in our IMS gross margin, partially offset by a $4.8 million credit associated with a reduction in an accrual for contingent consideration related to an acquisition completed in a previous period. The contingent consideration accrual reversal is not allocated to our operating segments. IMS gross margin decreased from 7.2% in 2017, to 6.0% in 2018, due primarily to under absorption of labor and overhead costs caused by lower than anticipated revenue due to parts shortages, high fixed costs and yield issues associated with new program ramps, and unfavorable program mix. CPS gross margin decreased to 8.1% in 2018, from 8.9% in 2017, primarily due to increased inventory adjustments in our products group.

We have experienced fluctuations in gross margin in the past and may continue to do so in the future. Fluctuations in our gross margin may be caused by a number of factors, including:

- changes in customer demand and sales volumes for our vertically integrated system components and subassemblies;
- changes in the overall volume of our business, which affect the level of capacity utilization;
- changes in the mix of high and low margin products demanded by our customers;
- parts shortages and extended parts lead times caused by high demand or natural disasters, and related operational disruption and inefficiencies;
- greater competition in the EMS industry and pricing pressures from OEMs due to greater focus on cost reduction;
- provisions for excess and obsolete inventory, including those associated with distressed customers;
- levels of operational efficiency and production yields;
- wage inflation and rising materials costs;
- resolution of claims with our customers;
- our ability to pass tariffs through to our customers; and
- our ability to transition the location of and ramp manufacturing and assembly operations when desired or requested by a customer in a timely and cost-effective manner.

Selling, General and Administrative

Selling, general and administrative expenses were $260.0 million, $250.9 million and $251.6 million in 2019, 2018 and 2017, respectively. As a percentage of net sales, selling, general and administrative expenses were 3.2%, 3.5% and 3.7% for 2019, 2018 and 2017, respectively. The increase in 2019 in absolute dollars was due primarily to higher incentive compensation expense attributable to our improved financial performance in fiscal year 2019.

Research and Development

Research and development expenses were $27.6 million, $30.8 million and $33.7 million in 2019, 2018 and 2017, respectively. As a percentage of net sales, research and development expenses were 0.3%, 0.4% and 0.5% in 2019, 2018 and 2017, respectively. The decrease in absolute dollars from 2018 to 2019 and from 2017 to 2018 was primarily due to an increase in billable customer engineering projects that required our engineering resources.

Restructuring

Restructuring costs were $13.8 million, $29.1 million and $1.3 million in 2019, 2018 and 2017, respectively.

In the first quarter of 2018, we began implementing restructuring actions to address the closure and/or relocation of three of our manufacturing facilities. In addition, we are still in the process of completing restructuring actions under other plans.

The following table is a summary of restructuring costs associated with these plans:

	Year Ended	
	September 28, 2019	September 29, 2018
	(In thousands)	
Severance costs (approximately 2,900 employees)	$ 1,900	$ 26,425
Other exit costs (generally recognized as incurred)	3,247	4,984
Total	5,147	31,409
Severance reimbursement	—	(10,000)
Total - Q1 FY18 Plan	5,147	21,409
Costs incurred for other plans	8,606	7,737
Total - all plans	$ 13,753	$ 29,146

Q1 FY18 Plan

Actions under the Q1 FY18 plan began in the first quarter of 2018 and are expected to occur through calendar 2019. Cash payments of severance and other costs began in the second quarter of 2018 and are expected to occur through the end of calendar 2019. In connection with this plan, we entered into a contractual agreement with a third party pursuant to which up to $10 million of severance and retention costs incurred by us will be reimbursed. We recorded this amount as a reduction of restructuring costs in the second quarter of 2018 and, as of September 28, 2019, $5 million was included in accounts receivable on the consolidated balance sheets. Costs incurred for other exit costs consist primarily of costs to maintain vacant facilities that are owned and contract termination costs.

Other plans

Other plans include a number of plans for which costs are not expected to be material individually or in the aggregate.

All Plans

Our IMS segment incurred a benefit under all restructuring plans of $4 million during the year ended September 28, 2019, primarily as a result of recovery from a third party of certain environmental remediation costs. This compares to costs incurred of $12 million for the year ended September 29, 2018. Our CPS segment incurred costs under all restructuring plans of $18 million and $17 million for the years ended September 28, 2019 and September 29, 2018, respectively. As of September 28, 2019 and September 29, 2018, we had accrued liabilities of $5 million and $24 million, respectively, for restructuring costs (exclusive of long-term environmental remediation liabilities).

In addition to costs expected to be incurred under the Q1 FY18 plan, we expect to incur restructuring costs in future periods primarily for vacant facilities and former sites for which we are or may be responsible for environmental remediation.

On October 28, 2019, we adopted a Company-wide right-sizing plan. Under this plan, we expect to incur restructuring charges of approximately $10 million to $20 million, consisting primarily of cash severance costs, over the first half of 2020.

Goodwill Impairment

During our 2018 annual goodwill impairment analysis, we concluded that the fair value of one of our CPS operating segments was below its carrying value, resulting in an impairment charge of $31 million. The fair value of the reporting unit was estimated based on the present value of future discounted cash flows. We had no such charges in 2019 or 2017.

Interest and Other, net

Interest expense was $30.8 million, $27.7 million and $21.9 million in 2019, 2018 and 2017, respectively. Interest expense increased $3.0 million in 2019 primarily due to higher daily average borrowings on our revolving credit facility during the year driven by higher inventory levels early in the year. Interest expense increased $5.8 million in 2018 primarily due to higher daily average borrowings on our revolving credit facility during the year driven by higher inventory levels.

Other income (expense), net was $(10.8) million, $4.6 million and $7.7 million in 2019, 2018 and 2017, respectively. The following table summarizes the primary components of other income, net (in thousands):

	Year ended		
	September 28, 2019	September 29, 2018	September 30, 2017
Foreign exchange gains	$ 281	$ 766	$ 4,709
Other, net	(11,127)	3,798	2,973
Total	$ (10,846)	$ 4,564	$ 7,682

Other, net decreased from a $4 million gain in 2018 to an $11 million loss in 2019 due primarily to an increase in fees related to increased sales of accounts receivable during 2019 driven primarily by pressure from customers to extend their payment terms. We sold approximately $2.7 billion, of accounts receivable in 2019, compared to approximately $900 million in 2018.

Provision for Income Taxes

We recorded income tax expense of $104.1 million, $193.1 million and $74.6 million in 2019, 2018 and 2017, respectively. Our effective tax rate was 42.4%, 197.9% and 35.0% for 2019, 2018 and 2017, respectively. Income tax expense for 2019 is higher than the expected U.S. statutory rate primarily due to a tax-related restructuring transaction that resulted in deferred tax expense of $22 million and foreign operations that resulted in higher tax than the U.S. statutory rate.

Income tax expense for 2018 was $118.4 million higher than income tax expense for 2017, despite a decrease in pre-tax income of $115.9 million in 2018. This was primarily attributable to the impact of the Tax Act, which increased income tax expense $161 million because of a non-cash reduction in the carrying value of our net deferred tax assets, partially offset by a decrease in the US tax rate from 35% to 21%, and a $4.8 million discrete tax benefit resulting from a settlement with a foreign tax authority in the third quarter of 2018.

A valuation allowance is established or maintained when, based on currently available information and other factors, it is more likely than not that all or a portion of the deferred tax assets will not be realized. We regularly assess our valuation allowance against deferred tax assets on a jurisdiction by jurisdiction basis. We consider all available positive and negative evidence, including future reversals of temporary differences, projected future taxable income, tax planning strategies and recent financial results. Significant judgment is required in assessing our ability to generate revenue, gross profit, operating income and jurisdictional taxable income in future periods.

Liquidity and Capital Resources

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Net cash provided by (used in):			
Operating activities	$ 382,965	$ 156,424	$ 250,961
Investing activities	(127,641)	(116,178)	(107,898)
Financing activities	(220,218)	(28,335)	(135,493)
Effect of exchange rate changes	107	956	803
Increase in cash and cash equivalents	$ 35,213	$ 12,867	$ 8,373

Key Working Capital Management Measures

	As of	
	September 28, 2019	September 29, 2018
Days sales outstanding (1)	56	56
Contract asset days (2)	19	—
Inventory turns (3)	7.7	5.5
Days inventory on hand (4)	47	67
Accounts payable days (5)	70	75
Cash cycle days (6)	52	48

(1) Days sales outstanding (a measure of how quickly we collect our accounts receivable), or "DSO", is calculated as the ratio of average accounts receivable, net, to average daily net sales for the quarter.

(2) Contract asset days are calculated as the ratio of average contract assets to average daily net sales for the quarter. This is a new measure in the first quarter of 2019 due to our adoption of the new revenue accounting standard.

(3) Inventory turns (annualized) are calculated as the ratio of four times our cost of sales for the quarter to average inventory. The improvement in inventory turns in 2019 was primarily due to the adoption of ASC 606, a new revenue recognition standard, at the beginning of 2019 which resulted in the Company no longer capitalizing costs for work-in-progress and finished goods for the vast majority of the Company's revenue streams.

(4) Days inventory on hand is calculated as the ratio of average inventory for the quarter to average daily cost of sales for the quarter.

(5) Accounts payable days (a measure of how quickly we pay our suppliers), or "DPO", is calculated as the ratio of 365 days to accounts payable turns, in which accounts payable turns is calculated as the ratio of four times our cost of sales for the quarter to average accounts payable.

(6) Cash cycle days is calculated as days inventory on hand plus days sales outstanding minus accounts payable days.

Cash and cash equivalents were $455 million at September 28, 2019 and $420 million at September 29, 2018. Our cash levels vary during any given period depending on the timing of collections from customers and payments to suppliers, borrowings under credit facilities, sales of accounts receivable, repurchases of capital stock and other factors. Our working capital was approximately $1.2 billion and $0.6 billion at September 28, 2019 and September 29, 2018, respectively. The increase in net working capital in 2019 resulted primarily from net working capital being reduced in 2018 because our Secured Notes due in 2019 were classified as current debt in 2018.

Net cash provided by operating activities was $383 million, $156 million and $251 million for 2019, 2018 and 2017, respectively. Cash flows from operating activities consists of: (1) net income adjusted to exclude non-cash items such as depreciation and amortization, deferred income taxes and stock-based compensation expense and (2) changes in net operating assets, which are comprised of accounts receivable, contract assets, inventories, prepaid expenses and other assets, accounts payable and accrued liabilities. Our working capital metrics tend to fluctuate from quarter-to-quarter based on factors such as the linearity of our shipments to customers and purchases from suppliers, customer and supplier mix, and payment terms with customers and suppliers. These fluctuations can significantly affect our cash flows from operating activities.

During 2019, we generated $346 million of cash from earnings, excluding non-cash items, and $37 million of cash from the reduction of our net operating assets resulting primarily from a decrease in inventories of $121 million, a decrease in accounts receivable of $55 million and an increase in accrued liabilities of $54 million, partially offset by a decrease in accounts payable of $183 million and an increase in contract assets of $21 million. These changes in net operating assets exclude the impact of the initial adoption of ASC 606. Inventory decreased primarily due to improved availability of supply-constrained parts. The decrease in accounts receivable is attributable to a higher level of sales of accounts receivable. Accrued liabilities increased primarily due to a higher level of sales of accounts receivable for which we, as a servicer, collected on behalf of the financial institutions to which the receivables were sold, but had not yet remitted the collected funds to such financial institutions. Accounts payable decreased due primarily to an unfavorable shift in supplier payment terms mix from suppliers with whom we have longer payment terms to suppliers with whom we have shorter payment terms and an unfavorable shift in the linearity of material receipts. This shift resulted in DPO decreasing from 75 days at the end of 2018 to

70 days at the end of 2019. Contract assets recognized when the Company has recognized revenue, but has not issued an invoice to its customer for payment, increased in 2019 due primarily to certain customers delaying delivery of certain orders at the end of 2019.

Net cash used in investing activities was $128 million, $116 million and $108 million for 2019, 2018 and 2017, respectively. In 2019, we used $135 million of cash for capital expenditures and received proceeds of $8 million primarily from sales of certain properties. In 2018, we used $119 million of cash for capital expenditures, received proceeds of $5 million primarily from sales of certain properties and used $2 million for funding our deferred compensation plan.

Net cash used in financing activities was $220 million, $28 million and $135 million for 2019, 2018 and 2017, respectively. In 2019, we repurchased $13 million of common stock (including $6 million in settlement of employee tax withholding obligations), borrowed $215 million of cash under our Amended Cash Flow Revolver, repaid $378 million of long-term debt using $375 million of proceeds from the issuance of a term loan, received $14 million of proceeds from issuances of common stock pursuant to stock option exercises and incurred $3 million of debt issuance costs in connection with our revolving credit amendment. In 2018, we repurchased $158 million of common stock (including $12 million in settlement of employee tax withholding obligations), borrowed $130 million of cash under the Cash Flow Revolver, repaid $3 million of long-term debt and received $4 million of proceeds from issuances of common stock pursuant to stock option exercises.

Secured Debt. During the second quarter of 2017, we prepaid the balance of the amount due under our secured debt due 2017 for $40 million plus accrued interest.

Senior Secured Notes Due 2019 ("Secured Notes"). In 2014, we issued $375 million of Secured Notes that matured on June 1, 2019 and paid interest at an annual rate of 4.375%. During the third quarter of 2019, we repaid the Secured Notes upon maturity using the proceeds from the term loan provided for in the Amended Cash Flow Revolver. There was no gain or loss associated with the extinguishment of the Secured Notes.

Revolving Credit Facility. During the first quarter of 2019, we entered into a Fourth Amended and Restated Credit Agreement (the "Amended Cash Flow Revolver") that provided for a committed $375 million term loan ("Term Loan").

On April 5, 2019, we entered into an amendment to the Amended Cash Flow Revolver that increased the amount available under the facility from $500 million to $700 million upon satisfaction of certain conditions, including repayment in full of our Secured Notes.

On May 31, 2019, we drew down the Term Loan and used the proceeds to repay our Secured Notes as discussed above. As of September 28, 2019, costs incurred in connection with the amendment of the Amended Cash Flow Revolver and Term Loan are classified as long-term debt and are being amortized to interest expense over the life of the Term Loan using the effective interest method.

Following the satisfaction and discharge of the Indenture dated as of June 4, 2014, using the proceeds of the Term Loan, and the release of all liens securing the Secured Notes, our debt structure changed as follows, effective June 3, 2019: (i) revolving commitments under the Amended Cash Flow Revolver increased to a total of $700 million in revolving commitments, (ii) the accordion feature of the Amended Cash Flow Revolver was reset so that we can obtain, subject to the satisfaction of specified conditions, additional revolving commitments in an aggregate amount of up to $200 million and (iii) our and our subsidiary guarantors’ obligations under the Amended Cash Flow Revolver became secured by substantially all of the assets (excluding real property) of our company and the subsidiary guarantors, subject to certain exceptions.

Loans under the Amended Cash Flow Revolver bear interest, at our option, at either the LIBOR or a base rate, in each case plus a spread determined based on our credit rating. Interest on the loans is payable quarterly in arrears with respect to base rate loans and at the end of an interest period in the case of LIBOR loans. The outstanding principal amount of all loans under the Amended Cash Flow Revolver, including, the Term Loan, together with accrued and unpaid interest, is due on November 30, 2023 and we are required to repay a portion of the principal amount of the loan equal to 1.25% in quarterly installments.

As of September 28, 2019, no borrowings were outstanding under the Amended Cash Flow Revolver and, as of September 29, 2018, $215 million of borrowings were outstanding under the Amended Cash Flow Revolver. As of September 28, 2019, $8 million of letters of credit were outstanding under the Amended Cash Flow Revolver and $692 million was available to borrow.

Short-term Borrowing Facilities. As of September 28, 2019, certain of our foreign subsidiaries had a total of $69 million of short-term borrowing facilities, under which no borrowings were outstanding. These facilities expire at various dates through the first quarter of 2021.

Debt Covenants

The Amended Cash Flow Revolver requires us to comply with a minimum consolidated interest coverage ratio, measured at the end of each fiscal quarter, and at all times a maximum consolidated leverage ratio. The Amended Cash Flow Revolver contains customary affirmative covenants, including covenants regarding the payment of taxes and other obligations, maintenance of insurance, reporting requirements and compliance with applicable laws and regulations. Further, the Amended Cash Flow Revolver contains customary negative covenants limiting our ability and that of our subsidiaries to, among other things, incur debt, grant liens, make investments, make acquisitions, make certain restricted payments and sell assets, subject to certain exceptions.

As of September 28, 2019, we were in compliance with our covenants.

Other Liquidity Matters

Our Board of Directors has authorized us to repurchase shares of our common stock, subject to a dollar limitation. The timing of repurchases depend upon capital needs to support the growth of our business, market conditions and other factors. Although stock repurchases are intended to increase stockholder value, purchases of shares reduce our liquidity. We repurchased 0.3 million and 5.0 million shares of our common stock for $7 million and $146 million in the open market in 2019 and 2018, respectively. As of September 28, 2019, $101 million remains available under program authorized by the Board of Directors, none of which is subject to an expiration date. Subsequent to the end of 2019, our Board of Directors authorized us to purchase an additional $200 million of our common stock on the same terms as the program approved in September 2017 which brought the total Board authorized amount to $301 million. One of the objectives of our share repurchase plan is to offset the dilution that results from the issuance of shares under our equity incentive plans. For example, over the past 3 years, we issued 7 million shares under our equity incentive plans and repurchased 10 million shares under our share repurchase plan.

During 2018, we entered into a Receivables Purchase Agreement (the “RPA”) with certain third-party banking institutions for the sale of trade receivables generated from sales to certain customers, subject to acceptance by the banks that are party to the RPA. As of September 28, 2019, a maximum of $552 million of sold receivables can be outstanding at any point in time under this program, as amended, subject to limitations under our Amended Cash Flow Revolver. Additionally, the amount available under the RPA is uncommitted and, as such, is available at the discretion of our third-party banking institutions. On January 16, 2019, we entered into an amendment to our Amended Cash Flow Revolver which increased the percentage of our total accounts receivable that can be sold and outstanding at any time from 30% to 40%. Trade receivables sold pursuant to the RPA are serviced by us.

In addition to the RPA, we have the option to participate in trade receivables sales programs that have been implemented by certain of our customers, as in effect from time to time. We do not service trade receivables sold under these other programs.

The sale of receivables under all of these programs is subject to the approval of the banks or customers involved and there can be no assurance that we will be able to sell the maximum amount of receivables permitted by these programs when desired.

Under each of the programs noted above, we sell our entire interest in a trade receivable for 100% of face value, less a discount. For the years ended September 28, 2019 and September 29, 2018, we sold approximately $2.7 billion and approximately $900 million, respectively, of accounts receivable under these programs. Upon sale, these receivables are removed from the consolidated balance sheets and cash received is presented as cash provided by operating activities in the consolidated statements of cash flows. Discounts on sold receivables were not material for any period presented. As of September 28, 2019 and September 29, 2018, $241 million and $189 million, respectively, of accounts receivable sold under the RPA and subject to servicing by us remained outstanding and had not yet been collected. Our sole risk with respect to receivables we service is with respect to commercial disputes regarding such receivables. Commercial disputes include billing errors, returns and similar matters. To date, we have not been required to repurchase any receivable we have sold due to a commercial dispute. Additionally, we are required to remit amounts collected as servicer on a weekly basis to the financial institutions that purchased the receivables. As of September 28, 2019 and September 29, 2018, $76 million and $23 million, respectively, had been collected but not yet remitted. This amount is classified in accrued liabilities on the consolidated balance sheets.

We enter into forward interest rate swap agreements with independent counterparties to partially hedge the variability in cash flows due to changes in the benchmark interest rate (LIBOR) associated with anticipated variable rate borrowings. These interest rate swaps have a maturity date of December 1, 2023, and effectively converts a portion of our variable interest rate obligations under our Amended Cash Flow Revolver to fixed interest rate obligations. These swaps are accounted for as cash flow hedges under ASC Topic 815, Derivatives and Hedging. As of September 28, 2019 and September 29, 2018, interest rate swaps with an aggregate notional amount of $350 million and $50 million, respectively, were outstanding. The aggregate effective interest rate of these swaps as of September 28, 2019 was approximately 4.3%. As of September 28, 2019, due to a decline in interest rates since the time the swaps were put in place, these interest rate swaps had a negative value of $20 million, of which $4 million is included in accrued liabilities and the remaining amount is included in other long-term liabilities on the consolidated balance sheets.

In the ordinary course of business, we are or may become party to legal proceedings, claims and other contingencies, including environmental, warranty and employee matters. As of September 28, 2019, we had accrued liabilities of $36 million related to such matters. We cannot accurately predict the outcome of these matters or the amount or timing of cash flows that may be required to defend ourselves or to settle such matters or that these reserves will be sufficient to fully satisfy our contingent liabilities.

As of September 28, 2019, we had a liability of $106 million for uncertain tax positions. Our estimate of liabilities for uncertain tax positions is based on a number of subjective assessments, including the likelihood of a tax obligation being assessed, the amount of taxes (including interest and penalties) that would ultimately be payable, and our ability to settle any such obligations on favorable terms. Therefore, the amount of future cash flows associated with uncertain tax positions may be significantly higher or lower than our recorded liability and we are unable to reliably estimate when cash settlement may occur.

Our liquidity needs are largely dependent on changes in our working capital, including the extension of trade credit by our suppliers, investments in manufacturing inventory, facilities and equipment, repayments of obligations under outstanding indebtedness and repurchases of common stock. Our primary sources of liquidity as of September 28, 2019 consisted of (1) cash and cash equivalents of $455 million; (2) our Amended Cash Flow Revolver, under which $692 million, net of outstanding borrowings and letters of credit, was available; (3) our foreign short-term borrowing facilities of $69 million, all of which was available; (4) proceeds from the sale of accounts receivable under our receivables sales programs and (5) cash generated from operations. Subject to satisfaction of certain conditions, including obtaining additional commitments from existing and/or new lenders, we may increase the revolver commitments under the Amended Cash Flow Revolver by an additional $200 million.

We believe our existing cash resources and other sources of liquidity, together with cash generated from operations, will be sufficient to meet our working capital requirements through at least the next 12 months. Should demand for our services decrease significantly over the next 12 months, should we experience increases in our inventories, delinquent or uncollectible accounts receivable, or should the counterparties to our accounts receivable sales program not agree to fund our requests, our cash provided by operations could be adversely impacted.

As of September 28, 2019, 63% of our cash balance was held in the United States. Should we choose or need to remit cash to the United States from our foreign locations, we may incur tax obligations which would reduce the amount of cash ultimately available to the United States. We believe that cash held in the United States, together with liquidity available under our Amended Cash Flow Revolver and cash from foreign subsidiaries that could be remitted to the United States without tax consequences, will be sufficient to meet our United States liquidity needs for at least the next twelve months.

Contractual Obligations

The following is a summary of our long-term debt, including interest, and operating lease obligations as of September 28, 2019:

		Payments Due by Period			
Contractual Obligations	Total	Less than 1 year	1- 3 years	3-5 years	More than 5 years
			(In thousands)		
Long-term debt obligations, including current portion and interest	$ 390,038	$ 38,475	$ 37,500	$ 314,063	$ —
Operating lease obligations	72,707	18,472	27,284	9,880	17,071
Total contractual obligations	$ 462,745	$ 56,947	$ 64,784	$ 323,943	$ 17,071

We also have outstanding firm purchase orders with certain suppliers for the purchase of inventory, which are not included in the table above. These purchase orders are generally short-term in nature. Orders for standard, or catalog, items can typically be canceled with little or no financial penalty. Our policy regarding non-standard or customized items dictates that such items are only ordered specifically for customers who have contractually assumed liability for the inventory, although exceptions are made to this policy in certain situations. In addition, a substantial portion of catalog items covered by our purchase orders are procured for specific customers based on their purchase orders or a forecast under which the customer has contractually assumed liability for such material. Accordingly, our liability from purchase obligations under these purchase orders is not expected to be significant. Lastly, pursuant to arrangements under which vendors consign inventory to us, we may be required to purchase such inventory after a certain period of time. To date, we have not been required to purchase a significant amount of inventory pursuant to these time limitations.

As of September 28, 2019, we were unable to reliably estimate when cash settlements with taxing authorities may occur with respect to our unrecognized tax benefits of $106 million. Additionally, we have defined benefit pension plans with an underfunded amount of $44 million at September 28, 2019. We will be required to provide additional funding to these plans in the future if our returns on plan assets are not sufficient to meet our funding obligations. None of the amounts described in this paragraph are included in the table above.

Off-Balance Sheet Arrangements

As of September 28, 2019, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K promulgated by the SEC, that have or are reasonably likely to have a current or future effect on our financial condition, changes in our financial condition, revenues, or expenses, results of operations, liquidity, capital expenditures, or capital resources that is material to investors.

Quarterly Results (*Unaudited*)

The following tables contain selected unaudited quarterly financial data for each quarter of fiscal 2019 and 2018. In management's opinion, the unaudited data has been prepared on the same basis as the audited information and includes all adjustments (consisting only of normal recurring adjustments) necessary for a fair statement of the data for the periods presented. Our results of operations have varied and may continue to fluctuate significantly from quarter to quarter. The results of operations in any period should not be considered indicative of the results to be expected from any future period.

	Year ended September 28, 2019			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(In thousands, except per share data)			
Net sales	$ 2,188,018	$ 2,126,639	$ 2,026,995	$ 1,892,207
Gross profit	$ 149,337	$ 153,102	$ 147,794	$ 141,705
Gross margin	6.8%	7.2%	7.3%	7.5%
Operating income	$ 77,543	$ 78,115	$ 67,374	$ 63,085
Operating margin	3.5%	3.7%	3.3%	3.3%
Net income	$ 37,952	$ 40,885	$ 42,921	$ 19,757
Basic net income per share	$ 0.56	$ 0.59	$ 0.62	$ 0.28
Diluted net income per share	$ 0.54	$ 0.57	$ 0.60	$ 0.27

	Year ended September 29, 2018			
	First Quarter (1)	Second Quarter	Third Quarter	Fourth Quarter (2)
	(In thousands, except per share data)			
Net sales	$ 1,744,800	$ 1,675,629	$ 1,813,366	$ 1,876,335
Gross profit	$ 109,466	$ 114,698	$ 118,536	$ 121,083
Gross margin	6.3%	6.8%	6.5%	6.5%
Operating income	$ 13,788	$ 48,774	$ 47,060	$ 9,819
Operating margin	0.8%	2.9%	2.6%	0.5%
Net income (loss)	$ (154,910)	$ 24,632	$ 33,963	$ 782
Basic net income per share	$ (2.16)	$ 0.35	$ 0.49	$ 0.01
Diluted net income per share	$ (2.16)	$ 0.33	$ 0.47	$ 0.01

(1) Includes income tax expense of $162 million related to enactment of the Tax Act.

(2) Includes a goodwill impairment charge of $31 million and a $12.5 million pre-tax adjustment to correct errors that occurred from fiscal 2016 through the third quarter of fiscal 2018 with respect to the accounting for certain long-term government contracts in one of our CPS divisions.

Item 7A. *Quantitative and Qualitative Disclosures about Market Risk*

Interest Rate Risk

Our primary exposure to market risk for changes in interest rates relates to borrowings under our Amended Cash Flow Revolver as the interest rate we pay for borrowings is determined at the time of borrowing based on a floating index. Although we can elect to fix the interest rate at the time of borrowing, the facility does expose us to market risk for changes in interest rates. An immediate 10 percent change in interest rates would not have a significant impact on our results of operations.

Foreign Currency Exchange Risk

We transact business in foreign currencies. Our foreign exchange policy requires that we take certain steps to limit our foreign exchange exposures resulting from certain assets and liabilities and forecasted cash flows. However, our policy does not require us to hedge all foreign exchange exposures. Furthermore, our foreign currency hedges are based on forecasted transactions and estimated balances, the amount of which may differ from that actually incurred. As a result, we can experience foreign exchange gains and losses in our results of operations.

Our primary foreign currency cash flows are in certain Asian and European countries, Israel, Brazil and Mexico. We enter into short-term foreign currency forward contracts to hedge currency exposures associated with certain monetary assets and liabilities denominated in non-functional currencies. These contracts generally have maturities of up to two months, although we currently have a four-year contract that hedges a non-functional currency denominated note payable due in 2020. These forward contracts are not designated as part of a hedging relationship for accounting purposes. All outstanding foreign currency forward contracts are marked-to-market at the end of the period with unrealized gains and losses included in other income, net, in the consolidated statements of operations. As of September 28, 2019, we had outstanding foreign currency forward contracts to exchange various foreign currencies for U.S. dollars in the aggregate notional amount of $299 million.

We also utilize foreign currency forward contracts to hedge certain operational (“cash flow”) exposures resulting from changes in foreign currency exchange rates. Such exposures result from (1) forecasted sales denominated in currencies other than those used to pay for materials and labor, (2) forecasted non-functional currency labor and overhead expenses, (3) forecasted non-functional currency operating expenses, and (4) anticipated capital expenditures denominated in a currency other than the functional currency of the entity making the expenditures. These contracts may be up to twelve months in duration and are designated as cash flow hedges for accounting purposes. The effective portion of changes in the fair value of the contracts is recorded in stockholders' equity as a separate component of accumulated other comprehensive income and recognized in earnings when the hedged item affects earnings. We had forward contracts related to cash flow hedges in various foreign currencies in the aggregate notional amount of $107 million as of September 28, 2019.

The net impact of an immediate 10 percent change in exchange rates would not be material to our consolidated financial statements, provided we accurately forecast and estimate our foreign currency exposure. If such forecasts are materially inaccurate, we could incur significant gains or losses.

Item 8. *Financial Statements and Supplementary Data*

The information required by this item is included below and incorporated by reference from the financial statement schedule included in “Part IV-Item 15(a)(2)” and the selected quarterly financial data referred to in “Part II-Item 7-Management's Discussion and Analysis of Financial Condition and Results of Operations-Quarterly Results (Unaudited).”

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Sanmina Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Sanmina Corporation and its subsidiaries (the "Company") as of September 28, 2019 and September 29, 2018, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended September 28, 2019, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of September 28, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of September 28, 2019 and September 29, 2018**,** and the results of its operations and its cash flows for each of the three years in the period ended September 28, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 28, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for revenues from contracts with customers in 2019.

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 Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and 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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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 matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue recognition - Adoption of New Accounting Standard for Revenue from Contracts with Customers

As described in Note 2 to the consolidated financial statements, the Company adopted the new accounting standard for recognizing revenue from contracts with customers (the "new revenue accounting standard") as of the beginning of its first quarter of 2019 using the modified retrospective approach, whereby the cumulative effect of initially applying the guidance was recognized as an adjustment to beginning retained earnings at the date of adoption. This adjustment resulted in an increase to beginning retained earnings of $28 million. The adoption of the new revenue accounting standard resulted in a change to the manner in which the Company recognizes revenue for the majority of its revenue streams, including integrated manufacturing solutions, components, repair services and defense and aerospace programs. Prior to the adoption of the new revenue accounting standard, the Company generally recognized revenue from its integrated manufacturing solutions, the Company's largest revenue stream, upon shipment or delivery of a product to a customer. Under the new revenue accounting standard, the Company recognizes revenue from the sale of these products on an over time basis as the products are manufactured. For revenue streams for which revenue is being recognized on an over time basis under the new revenue accounting standard, work-in-progress and finished goods inventory were reduced to zero upon adoption and an associated contract asset was recorded to reflect amounts that would have been recognized as revenue prior to adoption. This adjustment resulted in recognition of a contract asset of $376 million and a decrease in inventory of $350 million as of the beginning of the first fiscal quarter of 2019.

The principal considerations for our determination that performing procedures relating to revenue recognition and the adoption of the new accounting standard for revenue from contracts with customers is a critical audit matter are there was a significant amount of judgment by management to (i) determine whether contracts with customers from the integrated manufacturing solutions segment should be recognized on an over time basis under the new revenue accounting standard, and (ii) determine the adjustments upon adoption for the integrated manufacturing solutions segment. This in turn, led to significant auditor effort and a high degree of subjectivity in applying procedures and evaluating the audit evidence obtained related to management's adoption of the new revenue accounting standard.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Company's adoption of the new revenue accounting standard, including controls over the determination of whether revenue from the integrated manufacturing solutions segment should be recognized over time as well as controls over the determination of the adjustments upon adoption for the integrated manufacturing solutions segment. These procedures also included, among others, evaluating management's process for determining the application of the new revenue accounting standard to the Company's revenue, including the integrated manufacturing solutions segment, evaluating the reasonableness of management's judgments and accounting conclusions and assessing the impacts of adoption identified by management. We examined revenue arrangements on a test basis, which included assessing the terms and conditions of the arrangement and testing management's application of the new revenue accounting standard. We also performed procedures to test the adjustments upon adoption.

/s/ PricewaterhouseCoopers LLP

San Jose, California
November 8, 2019

We have served as the Company's auditor since 2016.

SANMINA CORPORATION

CONSOLIDATED BALANCE SHEETS

	As of	
	September 28, 2019	September 29, 2018
	(In thousands, except par value)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 454,741	$ 419,528
Accounts receivable, net of allowances of $12,481 and $12,211 as of September 28, 2019 and September 29, 2018, respectively	1,128,379	1,177,219
Contract assets	396,300	—
Inventories	900,557	1,374,004
Prepaid expenses and other current assets	40,952	43,676
Total current assets	2,920,929	3,014,427
Property, plant and equipment, net	630,647	642,913
Deferred income tax assets, net	279,803	344,124
Other	74,134	83,669
Total assets	$ 3,905,513	$ 4,085,133
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,336,914	$ 1,547,399
Accrued liabilities	180,107	136,427
Accrued payroll and related benefits	127,647	124,748
Short-term debt, including current portion of long-term debt	38,354	593,321
Total current liabilities	1,683,022	2,401,895
Long-term liabilities:		
Long-term debt	346,971	14,346
Other	232,947	196,048
Total long-term liabilities	579,918	210,394
Commitments and Contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $.01 par value, authorized 5,000 shares, none issued and outstanding	—	—
Common stock, $.01 par value, authorized 166,667 shares; 105,551 and 103,128 shares issued and 69,720 and 67,777 shares outstanding as of September 28, 2019 and September 29, 2018, respectively	697	678
Treasury stock, 35,831 and 35,351 shares as of September 28, 2019 and September 29, 2018, respectively, at cost	(804,118)	(791,366)
Additional paid-in capital	6,266,812	6,222,310
Accumulated other comprehensive income	42,259	73,944
Accumulated deficit	(3,863,077)	(4,032,722)
Total stockholders' equity	1,642,573	1,472,844
Total liabilities and stockholders' equity	$ 3,905,513	$ 4,085,133

See accompanying notes to the consolidated financial statements.

SANMINA CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
	(In thousands, except per share amounts)		
Net sales	$ 8,233,859	$ 7,110,130	$ 6,868,619
Cost of sales	7,641,921	6,646,347	6,348,708
Gross profit	591,938	463,783	519,911
Operating expenses:			
Selling, general and administrative	260,032	250,924	251,568
Research and development	27,552	30,754	33,716
Restructuring costs	13,753	29,146	1,339
Goodwill impairment	—	30,610	—
Other	4,484	2,908	6,821
Total operating expenses	305,821	344,342	293,444
Operating income	286,117	119,441	226,467
Interest income	1,111	1,268	1,265
Interest expense	(30,763)	(27,734)	(21,934)
Other income (expense), net	(10,846)	4,564	7,682
Interest and other, net	(40,498)	(21,902)	(12,987)
Income before income taxes	245,619	97,539	213,480
Provision for income taxes	104,104	193,072	74,647
Net income (loss)	$ 141,515	$ (95,533)	$ 138,833
Net income (loss) per share:			
Basic	$ 2.05	$ (1.37)	$ 1.86
Diluted	$ 1.97	$ (1.37)	$ 1.78
Weighted-average shares used in computing per share amounts:			
Basic	69,129	69,833	74,481
Diluted	71,678	69,833	78,128

See accompanying notes to the consolidated financial statements.

SANMINA CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Net income (loss)	$ 141,515	$ (95,533)	$ 138,833
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(1,621)	(3,063)	588
Derivative financial instruments:			
Changes in unrealized gain (loss)	(21,508)	(982)	819
Amount reclassified into net income	1,955	859	(592)
Pension benefit plans:			
Changes in unrecognized net actuarial gain (loss) and unrecognized transition cost	(11,450)	(460)	8,833
Amortization of actuarial loss (gain) and transition cost	939	796	1,765
Total other comprehensive income (loss)	$ (31,685)	$ (2,850)	$ 11,413
Comprehensive income (loss)	$ 109,830	$ (98,383)	$ 150,246

See accompanying notes to the consolidated financial statements.

SANMINA CORPORATION

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock and Additional Paid-in Capital		Treasury Stock				
	Number of Shares	Amount	Number of Shares	Amount	Accumulated Other Comprehensive Income	Accumulated Deficit	Total
				(In thousands)			
BALANCE AT OCTOBER 1, 2016	98,141	$ 6,120,509	(25,110)	$ (456,796)	$ 65,381	$ (4,119,291)	$ 1,609,803
Issuances under stock plans	3,531	27,129	—	—	—	—	27,129
Stock-based compensation	—	37,450	—	—	—	—	37,450
Repurchases of treasury stock	—	—	(4,898)	(176,944)	—	—	(176,944)
Other comprehensive income	—	—	—	—	11,413	—	11,413
Net income	—	—	—	—	—	138,833	138,833
BALANCE AT SEPTEMBER 30, 2017	101,672	$ 6,185,088	(30,008)	$ (633,740)	$ 76,794	$ (3,980,458)	$ 1,647,684
Issuances under stock plans	1,456	4,407	—	—	—	—	4,407
Stock-based compensation	—	33,493	—	—	—	—	33,493
Repurchases of treasury stock	—	—	(5,343)	(157,626)	—	—	(157,626)
Other comprehensive loss	—	—	—	—	(2,850)	—	(2,850)
Cumulative effect of new accounting pronouncement	—	—	—	—	—	43,269	43,269
Net loss	—	—	—	—	—	(95,533)	(95,533)
BALANCE AT SEPTEMBER 29, 2018	103,128	$ 6,222,988	(35,351)	$ (791,366)	$ 73,944	$ (4,032,722)	$ 1,472,844
Issuances under stock plans	2,423	13,539	—	—	—	—	13,539
Stock-based compensation	—	30,844	—	—	—	—	30,844
Repurchases of treasury stock	—	138	(480)	(12,752)	—	—	(12,614)
Other comprehensive loss	—	—	—	—	(31,685)	—	(31,685)
Cumulative effect of new accounting pronouncement	—	—	—	—	—	28,130	28,130
Net income	—	—	—	—	—	141,515	141,515
BALANCE AT SEPTEMBER 28, 2019	105,551	$ 6,267,509	(35,831)	$ (804,118)	$ 42,259	$ (3,863,077)	$ 1,642,573

See accompanying notes to the consolidated financial statements.

SANMINA CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
	(In thousands)		
CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES:			
Net income (loss)	$ 141,515	$ (95,533)	$ 138,833
Adjustments to reconcile net income (loss) to cash provided by operating activities:			
Depreciation and amortization	116,949	118,820	118,751
Stock-based compensation expense	30,844	32,825	37,920
Deferred income taxes	54,668	173,591	37,892
Impairment of goodwill	—	30,610	—
Other, net	2,219	1,777	4,188
Changes in operating assets and liabilities, net of acquisitions:			
Accounts receivable	54,947	(69,076)	(136,072)
Contract assets	(20,814)	—	—
Inventories	121,383	(324,168)	(104,468)
Prepaid expenses and other assets	10,018	7,797	12,303
Accounts payable	(182,521)	268,421	130,648
Accrued liabilities	53,757	11,360	10,966
Cash provided by operating activities	382,965	156,424	250,961
CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES:			
Purchases of property, plant and equipment	(134,674)	(118,881)	(111,833)
Proceeds from sales of property, plant and equipment	7,532	4,722	3,935
Purchases of long-term investments	(499)	(2,019)	—
Cash used in investing activities	(127,641)	(116,178)	(107,898)
CASH FLOWS PROVIDED BY (USED IN) FINANCING ACTIVITIES:			
Proceeds from revolving credit facility borrowings	3,884,325	4,040,600	932,770
Repayments of revolving credit facility borrowings	(4,099,325)	(3,910,600)	(872,770)
Repayments of long-term debt	(378,416)	(3,416)	(43,416)
Proceeds from long-term debt	375,000	—	—
Debt issuance costs	(2,727)	—	—
Net proceeds from stock issuances	13,539	4,407	27,129
Repurchases of common stock	(12,614)	(157,625)	(176,944)
Other, net	—	(1,701)	(2,262)
Cash used in financing activities	(220,218)	(28,335)	(135,493)
Effect of exchange rate changes	107	956	803
Increase in cash and cash equivalents	35,213	12,867	8,373
Cash and cash equivalents at beginning of year	419,528	406,661	398,288
Cash and cash equivalents at end of year	$ 454,741	$ 419,528	$ 406,661
Cash paid during the year:			
Interest, net of capitalized interest	$ 30,143	$ 26,156	$ 17,983
Income taxes, net of refunds	$ 32,132	$ 34,819	$ 20,417
Unpaid purchases of property, plant and equipment at end of period	$ 27,279	$ 49,546	$ 49,831

See accompanying notes to the consolidated financial statements.

SANMINA CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Organization of Sanmina

Sanmina Corporation ("Sanmina," or the "Company") was incorporated in Delaware in 1989. The Company is a leading global provider of integrated manufacturing solutions, components, products and repair, logistics and after-market services. The Company provides these comprehensive solutions primarily to original equipment manufacturers (OEMs) that serve the industrial, medical, defense and aerospace, automotive, communications networks and cloud solutions industries.

The Company's operations are managed as two businesses:

1) Integrated Manufacturing Solutions (IMS). IMS is a single operating segment consisting of printed circuit board assembly and test, final system assembly and test, and direct-order-fulfillment.

2) Components, Products and Services (CPS). Components include interconnect systems (printed circuit board fabrication, backplane, cable assemblies and plastic injection molding) and mechanical systems (enclosures and precision machining). Products include memory from our Viking Technology division; enterprise solutions from our Viking Enterprise Solutions division; RF, optical and microelectronic; defense and aerospace products from SCI Technology; and cloud-based manufacturing execution software from the Company's 42Q division. Services include design, engineering, logistics and repair services.

The Company's only reportable segment is IMS, which represented approximately 80% of total revenue in 2019. The CPS business consists of multiple operating segments which do not meet the quantitative thresholds for being presented as reportable segments. Therefore, financial information for these operating segments will be presented in a single category entitled "Components, Products and Services".

Basis of Presentation

Fiscal Year. The Company operates on a 52 or 53 week year ending on the Saturday nearest September 30. Fiscal 2019, 2018 and 2017 were each 52 weeks. All references to years relate to fiscal years unless otherwise noted.

Principles of Consolidation. The consolidated financial statements include the Company's accounts and those of its subsidiaries. All intercompany balances and transactions have been eliminated.

Note 2. Summary of Significant Accounting Policies

Management Estimates and Uncertainties. The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Significant estimates made in preparing the consolidated financial statements relate to allowances for accounts receivable; provisions for excess and obsolete inventories, product returns, warranties, environmental matters, and legal exposures; determining the recoverability of claims made in connection with customer bankruptcies; determining liabilities for uncertain tax positions; determining the realizability of deferred tax assets; determining fair values of tangible and intangible assets for purposes of business combinations and impairment tests; determining fair values of contingent consideration and equity awards; and determining forfeiture rates for purposes of calculating stock compensation expense. Actual results could differ materially from these estimates.

Financial Instruments and Concentration of Credit Risk. Financial instruments consist primarily of cash and cash equivalents, accounts receivable, foreign currency forward contracts, interest rate swap agreement, accounts payable and debt obligations. With the exception of certain of the Company's debt obligations (refer to Note 5. Financial Instruments), the fair value of these financial instruments approximates their carrying amount as of September 28, 2019 and September 29, 2018 due to the nature or short maturity of these instruments, or the fact that the instruments are recorded at fair value on the consolidated balance sheets.

Accounts Receivable and Other Related Allowances. The Company had an allowance of $12 million as of September 28, 2019 and September 29, 2018 for uncollectible accounts, product returns and other net sales adjustments. One of the Company's most significant risks is the ultimate realization of its accounts receivable. This risk is mitigated by ongoing credit evaluations of customers and frequent contact with customers, especially the most significant customers, which enable the Company to monitor changes in its customers' business operations and respond accordingly. To establish the allowance for doubtful accounts, the Company estimates credit risk associated with accounts receivable by considering the creditworthiness of its customers, past experience, specific facts and circumstances, and the overall economic climate in industries that it serves. To establish the allowance for product returns and other adjustments, the Company primarily utilizes historical data.

Accounts Receivable Sales. During 2018, the Company entered into a Receivables Purchase Agreement (the “RPA”) with certain third-party banking institutions for the sale of trade receivables generated from sales to certain customers, subject to acceptance by the banks that are party to the RPA. Trade receivables sold pursuant to the RPA are serviced by the Company.

In addition to the RPA, the Company has the option to participate in trade receivables sales programs that have been implemented by certain of the Company's customers, as in effect from time to time. The Company does not service trade receivables sold under these other programs. Under each of the programs noted above, the Company sells its entire interest in a trade receivable for 100% of face value, less a discount. Accounts receivable balances sold are removed from the consolidated balance sheets and the related proceeds are reported as cash provided by operating activities in the consolidated statements of cash flows.

Inventories. Inventories are stated at the lower of cost (first-in, first-out method) and net realizable value. Cost includes labor, materials and manufacturing overhead.

Provisions are made to reduce excess and obsolete inventories to their estimated net realizable values. The ultimate realization of inventory carrying amounts is primarily affected by changes in customer demand. Inventory provisions are established based on forecasted demand, past experience with specific customers, the age and nature of the inventory, the ability to redistribute inventory to other programs or back to suppliers, and whether customers are contractually obligated and have the ability to pay for the related inventory. Certain payments received from customers for inventory held by the Company are recorded as a reduction of inventory.

Long-lived Assets. Property, plant and equipment are stated at cost or, in the case of property and equipment acquired through business combinations, at fair value as of the acquisition date. Depreciation is provided on a straight-line basis over 20 to 40 years for buildings and 3 to 15 years for machinery, equipment, furniture and fixtures. Leasehold improvements are amortized on a straight-line basis over the shorter of the lease term or useful life of the asset.

The Company reviews property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. An asset group is the unit of accounting which represents the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets. An asset or asset group is considered impaired if its carrying amount exceeds the undiscounted future net cash flows the asset or asset group is expected to generate. If an asset or asset group is considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the asset or asset group exceeds its fair value. For asset groups for which the primary asset is a building, the Company estimates fair value based on data provided by commercial real estate brokers. For other asset groups, the Company estimates fair value based on projected discounted future net cash flows.

Goodwill. Goodwill is tested for impairment on an annual basis and whenever events or changes in circumstances indicate that the carrying value of goodwill may not be recoverable, as assessed at a reporting unit level. If, based on a qualitative assessment, the Company determines it is more-likely-than-not that goodwill is impaired, the Company performs a quantitative assessment to determine whether the fair value of our reporting unit is less than its carrying value and, if so, an impairment adjustment must be recorded up to the carrying value of goodwill.

Foreign Currency Translation. For foreign subsidiaries using the local currency as their functional currency, assets and liabilities are translated to U.S. dollars at exchange rates in effect at the balance sheet date and income and expenses are translated at average exchange rates. The effects of these translation adjustments are reported in stockholders' equity as a component of accumulated other comprehensive income ("AOCI"). For all entities, remeasurement adjustments for non-functional currency monetary assets and liabilities are included in other income, net in the accompanying consolidated statements of operations. Remeasurement gains and losses arising from long-term intercompany loans denominated in a currency other than an entity's functional currency are recorded in AOCI if repayment of the loan is not anticipated in the foreseeable future.

Derivative Instruments and Hedging Activities. The Company conducts business on a global basis in numerous currencies and certain of the Company's outstanding debt has a variable interest rate. Therefore, the Company is exposed to movements in foreign currency exchange rates and interest rates. The Company uses derivatives, such as foreign currency forward contracts and interest rate swaps, to minimize the volatility of earnings and cash flows associated with changes in foreign currency exchange rates and interest rates.

The Company accounts for derivative instruments and hedging activities in accordance with ASC Topic 815, *Derivatives and Hedging,* which requires each derivative instrument to be recorded on the consolidated balance sheets at its fair value as either an asset or a liability. If a derivative is designated as a cash flow hedge, the effective portion of changes in the fair value of the derivative is recorded in stockholders' equity as a separate component of AOCI and is recognized in earnings when the hedged item affects earnings. Ineffective portions of changes in the fair value of cash flow hedges are immediately recognized in earnings. If a derivative is designated as a fair value hedge, changes in the fair value of the derivative and of the item being hedged are recognized in earnings in the current period.

Derivative instruments are entered into for periods of time consistent with the related underlying exposures and are not entered into for speculative purposes. At the inception of a hedge, the Company documents all relationships between derivative instruments and related hedged items, as well as its risk-management objectives and strategies for the hedging transaction.

The Company's foreign currency forward contracts and interest rate swaps potentially expose the Company to credit risk to the extent the counterparties may be unable to meet the terms of the agreement. The Company minimizes such risk by seeking high quality counterparties.

Revenue Recognition. The Company derives revenue principally from sales of integrated manufacturing solutions, components and Company-proprietary products. Other sources of revenue include logistics and repair services; design, development and engineering services; defense and aerospace programs; and sales of raw materials to customers whose requirements change after the Company has procured inventory to fulfill the customer’s forecasted demand.

For purposes of determining when to recognize revenue, and in what amount, the Company applies a 5-step model: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when (or as) the Company satisfies a performance obligation. Each of these steps involves the use of significant judgments.

The Company recognizes revenue for the majority of its contracts on an over time basis. This is due to the fact that 1) the Company does not have an alternative use for the end products it manufactures for its customers and has an enforceable right to payment, including a reasonable profit, for work-in-progress upon a customer’s cancelation of a contract for convenience or 2) the Company’s customer simultaneously receives and consumes the benefits provided by the Company’s services. For these contracts, revenue is recognized on an over time basis using the cost-to-cost method (ratio of costs incurred to date to total estimated costs at completion) which the Company believes best depicts the transfer of control to the customer. Revenue streams for which revenue is recognized on an over time basis include sales of vertically integrated manufacturing solutions (integrated manufacturing solutions and components); logistics and repair services; design, development and engineering services; and defense and aerospace programs.

For contracts for which revenue is required to be recognized at a point-in-time, the Company recognizes revenue when it has transferred control of the related goods, which generally occurs upon shipment or delivery of the goods to the customer. Revenue streams for which revenue is recognized at a point-in-time include Company-proprietary products and sales of raw materials.

Refer to Note 4 for further discussion.

Income taxes. The Company estimates its income tax provision or benefit in each of the jurisdictions in which it operates, including estimating exposures and making judgments regarding the realizability of deferred tax assets. The carrying value of the Company's net deferred tax assets is based on the Company's belief that it is more likely than not that the Company will generate sufficient future taxable income in certain jurisdictions to realize these deferred tax assets. A valuation allowance has been established for deferred tax assets which do not meet the “more likely than not” criteria discussed above.

The Company's tax rate is highly dependent upon the geographic distribution of its worldwide income or losses, the tax regulations and tax holidays in each geographic region, the availability of tax credits and carryforwards, including net operating losses, and the effectiveness of its tax planning strategies.

The Company makes an assessment of whether each income tax position is “more likely than not” of being sustained on audit, including resolution of related appeals or litigation, if any. For each income tax position that meets the “more likely than not” recognition threshold, the Company then assesses the largest amount of tax benefit that is greater than 50% likely of being realized upon effective settlement with the tax authority. Interest and penalties related to unrecognized tax benefits are recognized as a component of income tax expense.

Recent Accounting Pronouncements Adopted in Fiscal Year 2019

In March 2017, the FASB issued ASU 2017-07, "Compensation-Retirement Benefits (Topic 715)". This ASU requires the service costs component of net periodic pension costs to be presented in the same line item as other compensation costs and all other components of net periodic pension costs to be presented in the income statement as non-operating expenses. This ASU was effective for the Company at the beginning of fiscal 2019. The impact of adoption was insignificant.

In January 2017, the FASB issued ASU 2017-01, "Business Combinations (Topic 805)". This ASU provides guidance to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. This new standard was effective for the Company at the beginning of fiscal 2019. There was no impact upon adoption of this new standard.

In November 2016, the FASB issued ASU 2016-18, "Statement of Cash Flows (Topic 230)". This ASU requires that the statement of cash flows explains the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash or restricted cash equivalents. Companies will also be required to reconcile such total to amounts on the balance sheet and disclose the nature of the restrictions. This ASU was effective for the Company at the beginning of fiscal 2019, including interim periods within that annual period. There was no impact upon adoption of this new standard.

In October 2016, the FASB issued ASU 2016-16, "Intra-Entity Transfers of Assets Other Than Inventory (Topic 740)". This ASU simplifies the accounting for income tax consequences of intra-entity transfers of assets other than inventory by requiring recognition of current and deferred income tax consequences when such transfers occur. The new standard was effective for the Company at the beginning of fiscal 2019. There was no impact upon adoption of this new standard.

In May 2014, the FASB issued ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)" (commonly referred to as ASC 606) which requires an entity to recognize revenue when (or as) goods are transferred or services are provided to customers in an amount that reflects the consideration the entity expects to be entitled to in exchange for those goods or services.

The Company adopted ASC 606 as of the beginning of its first quarter of 2019 using the modified retrospective approach, whereby the cumulative effect of initially applying the guidance was recognized as an adjustment to beginning retained earnings at the date of adoption. This adjustment resulted in an increase to beginning retained earnings of $28 million.

The adoption of ASC 606 resulted in a change to the manner in which the Company recognizes revenue for the majority of its revenue streams, including integrated manufacturing solutions, components, repair services and defense and aerospace programs.

Prior to the adoption of ASC 606, the Company generally recognized revenue from its integrated manufacturing solutions, the Company’s largest revenue stream, upon shipment or delivery of a product to a customer. Under ASC 606, because the Company has no alternative use for the end products generated by its vertically integrated manufacturing services and has an enforceable right to payment for work-in-progress upon a customer’s cancellation of a contract for convenience, the Company recognizes revenue from the sale of these products on an over time basis as the products are manufactured. Accordingly, the Company will recognize revenue under these contracts earlier than under the previous accounting rules.

Additionally, prior to the adoption of ASC 606, revenue from repair services was generally recognized upon completion of the services. Under ASC 606, revenue for these services will be recognized as the services are performed since the Company’s customers simultaneously receive and consume the benefits provided by these services.

Lastly, prior to the adoption of ASC 606, revenue from defense and aerospace programs was recognized on a percentage-of-completion basis by applying the units-of-delivery method. Under ASC 606, revenue for the majority of these programs will be recognized on an over time basis using the cost-to-cost method since the Company has no alternative use for the end products manufactured under these programs and has an enforceable right to payment for work-in-progress upon a customer’s cancellation of a contract for convenience. Revenue for certain other programs will be recognized upon shipment or delivery of a product, which is when control of a product transfers to a customer.

The timing of recognition of revenue did not change for some of the Company’s revenue streams as a result of the adoption of ASC 606. These revenue streams include logistics services, for which revenue will continue to be recognized as the services are performed, Company proprietary products, for which revenue will continue to be recognized upon shipment or delivery of the product, and design, development and engineering services for which revenue will continue to be recognized as the services are performed.

For revenue streams for which revenue is being recognized on an over time basis under ASC 606, work-in-progress and finished goods inventory were reduced to zero upon the adoption of ASC 606 and an associated contract asset was recorded to reflect amounts that would have been recognized as revenue prior to the adoption of ASC 606. This adjustment resulted in recognition of a contract asset of $376 million and a decrease in inventory of $350 million as of the beginning of the first fiscal quarter of 2019. No other balance sheet line items, with the exception of beginning retained earnings as mentioned previously, were materially impacted upon the adoption of ASC 606.

Refer to Note 4 for additional information and disclosures related to the adoption of ASC 606.

Recent Accounting Pronouncements Not Yet Adopted

In August 2018, the FASB issued ASU 2018-15, "Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract." The new guidance aligns the requirements for capitalizing implementation costs incurred in a cloud-based hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). This ASU is effective for the Company at the beginning of fiscal 2021, including interim periods within that reporting period, although early adoption is permitted. The Company does not expect the impact of adoption to be significant.

In June 2018, the FASB issued ASU 2018-07 "Improvements to Non-employee Share-Based Payment Accounting (Topic 718)". The ASU expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from non-employees. The standard aligns measurement and classification guidance for share-based payments to non-employees with the guidance applicable to employees. This ASU is effective for the Company at the beginning of fiscal 2020, including interim periods within that reporting period. The Company does not expect the impact of adoption to be significant.

In February 2018, the FASB issued ASU 2018-02, "Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income", which allows companies to reclassify stranded tax effects resulting from the U.S. Tax Cuts and Jobs Act (H.R. 1) from accumulated other comprehensive income to retained earnings. The guidance also requires certain new disclosures regardless of the election. This ASU is effective for the Company at the beginning of fiscal 2020. The Company does not expect the impact of adoption to be significant.

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815): Targeted Improvements for Accounting For Hedging Activities", simplifying hedge accounting guidance and improving the financial reporting of hedging relationships by allowing an entity to better align its risk management activities and financial reporting for hedging relationships through changes to both designation and measurement for qualifying hedging relationships and the presentation of hedge results. This standard eliminates the requirement to separately measure and report hedge ineffectiveness, resulting in full recognition of the change in fair value that impacts earnings in the same income statement line item that is used to present the earnings effect of the hedged item. In addition, the guidance allows more flexibility in the requirements to qualify for and maintain hedge accounting. This ASU is effective for the Company at the beginning of fiscal 2020. The Company does not expect the impact of adoption to be significant.

In June 2016, the FASB issued ASU 2016-13 "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments", which replaces the existing incurred loss impairment methodology with an expected credit loss methodology and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. This new standard is effective for the Company at the beginning of fiscal 2021, including interim periods within that reporting period. The Company is currently evaluating the impact of adopting this new accounting standard.

In February 2016, the FASB issued ASU 2016-02, "Leases: Amendments to the FASB Accounting Standards Codification (Topic 842)". This ASU requires the Company to recognize on the balance sheet the assets and liabilities for the rights and obligations created by leases with terms of more than twelve months. This ASU also requires disclosures enabling the users of financial statements to understand the amount, timing and uncertainty of cash flows arising from leases. The new standard is effective for the Company at the beginning of fiscal 2020, including interim periods within that reporting period. In addition, the FASB provided a practical expedient transition method that allows entities to initially apply the requirements by recognizing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption, as opposed to applying the requirements retrospectively and providing comparative prior period financial statements. The Company has decided to apply the above practical expedient transition method. The Company adopted the new standard on September 29, 2019, the first day of fiscal 2020. The Company elected certain other transition options which, among other things, allowed the Company to carry forward its prior conclusions about lease identification and classification.

The Company expects adoption of the standard to result in recognition in the consolidated balance sheet of lease liabilities and right-to-use lease assets of approximately $55 million to $65 million as of September 29, 2019, based on the present value of committed lease payments. The adoption of the new standard is not expected to impact retained earnings or to have a material impact on the recognition, measurement or presentation of lease expenses within the consolidated statements of operations, consolidated statements of comprehensive income (loss) or consolidated statements of cash flows.

Note 3. Balance Sheet and Income Statement Details

Inventories

Components of inventories were as follows:

	As of	
	September 28, 2019	September 29, 2018
	(In thousands)	
Raw materials	$ 898,077	$ 1,139,585
Work-in-process	869	132,803
Finished goods	1,611	101,616
Total	$ 900,557	$ 1,374,004

The significant decrease in work-in-process and finished goods was due to the adoption of ASC 606 in the first quarter of 2019, as further discussed in Notes 2 and 4.

Property, Plant and Equipment, net

Property, plant and equipment consisted of the following:

	As of	
	September 28, 2019	September 29, 2018
	(In thousands)	
Machinery and equipment	$ 1,448,812	$ 1,476,903
Land and buildings	639,667	617,258
Leasehold improvements	44,015	56,190
Furniture and fixtures	23,619	23,911
Construction in progress	39,420	47,725
	2,195,533	2,221,987
Less: Accumulated depreciation and amortization	(1,564,886)	(1,579,074)
Property, plant and equipment, net	$ 630,647	$ 642,913

Depreciation expense was $115 million, $112 million and $111 million for 2019, 2018 and 2017, respectively.

Goodwill

Goodwill is included in other noncurrent assets on the consolidated balance sheets. The net carrying value of goodwill is as follows:

	As of	
	September 28, 2019	September 29, 2018
	(In thousands)	
Goodwill - beginning of year	$ 28,516	$ 59,126
Impairment	—	(30,610)
Goodwill - end of year	$ 28,516	$ 28,516

During the Company's annual goodwill impairment analysis in 2018, the Company concluded that the fair value of one of its CPS operating segments was below its carrying value, resulting in an impairment charge of $31 million. The fair value of the reporting unit was estimated based on the present value of future discounted cash flows.

Other Income (Expense), net

The following table summarizes the major components of other income (expense), net:

	Year ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Foreign exchange gains	$ 281	$ 766	$ 4,709
Other, net	(11,127)	3,798	2,973
Total	$ (10,846)	$ 4,564	$ 7,682

Other, net in 2019 is primarily fees incurred in connection with sales of accounts receivable.

Note 4. Revenue Recognition

The Company is a leading global provider of integrated manufacturing solutions, components, products and repair, logistics and after-market services. For purposes of determining when to recognize revenue, and in what amount, the Company applies a 5-step model: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when (or as) the Company satisfies a performance obligation. Each of these steps involves the use of significant judgments, as discussed below.

Step 1 - Identify the contract with a customer

A contract is defined as an agreement between two parties that creates enforceable rights and obligations. The Company generally enters into a master supply agreement (“MSA”) with its customers that provides the framework under which business will be conducted, and pursuant to which a customer will issue purchase orders or other binding documents to specify the quantity, price and delivery requirements for products or services the customer wishes to purchase. The Company generally considers its contract with a customer to be a firm commitment, consisting of the combination of an MSA and a purchase order or any other similar binding document.

Step 2 - Identify the performance obligations in the contract

A performance obligation is a promised good or service that is material in the context of the contract and is both capable of being distinct (customer can benefit from the good or service on its own or together with other readily available resources) and distinct within the context of the contract (separately identifiable from other promises). The Company reviews its contracts to identify promised goods or services and then evaluates such items to determine which of those items are performance obligations. The majority of the Company’s contracts have a single performance obligation since the promise to transfer an individual good or service is not separately identifiable from other promises in the contract. The Company’s performance obligations generally have an expected duration of one year or less.

Step 3 - Determine the transaction price

The Company's contracts with its customers may include certain forms of variable consideration such as early payment discounts, volume discounts and shared cost savings. The Company includes an estimate of variable consideration when determining the transaction price and the appropriate amount of revenue to be recognized. This estimate is limited to an amount which will not result in a significant reversal of revenue in a future period. Factors considered in the Company's estimate of variable consideration are the potential amount subject to these contract provisions, historical experience and other relevant facts and circumstances.

Step 4 - Allocate the transaction price to the performance obligations in the contract

A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. In the event that more than one performance obligation is identified in a contract, the Company is required to allocate a portion of the transaction price to each performance obligation. This allocation would generally be based on the relative standalone price of each performance obligation, which most often would represent the price at which the Company would sell similar goods or services separately.

Step 5 - Recognize revenue when (or as) a performance obligation is satisfied

The Company is required to assess whether control of a product or services promised under a contract is transferred to the customer at a point-in-time or over time as the product is being manufactured or the services are being provided. If the criteria in ASC 606 for recognizing revenue on an over time basis are not met, revenue must be recognized at the point-in-time determined by the Company at which its customer obtains control of a product or service.

The Company has determined that revenue for the majority of its contracts is required to be recognized on an over time basis. This determination is based on the fact that 1) the Company does not have an alternative use for the end products it manufactures for its customers and has an enforceable right to payment, including a reasonable profit, for work-in-progress upon a customer's cancelation of a contract for convenience or 2) the Company's customer simultaneously receives and consumes the benefits provided by the Company's services. For these contracts, revenue is recognized on an over time basis using the cost-to-cost method (ratio of costs incurred to date to total estimated costs at completion) which the Company believes best depicts the transfer of control to the customer. For contracts for which revenue is required to be recognized at a point-in-time, the Company recognizes revenue when it has transferred control of the related goods, which generally occurs upon shipment or delivery of the goods to the customer.

Contract Assets

A contract asset is recognized when the Company has recognized revenue, but has not issued an invoice to its customer for payment. Contract assets are classified separately on the consolidated balance sheets and transferred to accounts receivable when rights to payment become unconditional. Because of the Company's short manufacturing cycle times, the transfer from contract assets to accounts receivable generally occurs within the next fiscal quarter.

Other

Other than the impact upon adoption of ASC 606 at the beginning of the first quarter of 2019 (as discussed in Note 1), the application of ASC 606 during 2019 did not materially impact any financial statement line item.

Taxes assessed by governmental authorities that are both imposed on and concurrent with a specific revenue-producing transaction, and are collected by the Company from a customer, are excluded from revenue.

Shipping and handling costs associated with outbound freight after control of a product has transferred to a customer are accounted for as fulfillment costs and are included in cost of sales.

The Company has elected to apply the following practical expedients or policy elections under ASC 606:

- Upon adoption, the Company elected to apply the requirements of ASC 606 only to open contracts as of the adoption date and to not perform an assessment of the impact of contract modifications prior to the period of adoption.
- The promised amount of consideration under a contract will not be adjusted for the effects of a significant financing component because, at inception of a contract, the Company expects the period between when a good or service is transferred to a customer and when the customer pays for that good or service will generally be one year or less.

- The Company has elected to not disclose information about remaining performance obligations that have original expected durations of one year or less, which is substantially all of the Company's remaining performance obligations.
- Incremental costs of obtaining a contract will not be capitalized if the period over which such costs would be amortized to expense is less than one year.

Disaggregation of revenue

In the following table, revenue is disaggregated by segment, market sector and geography.

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Segments:			
IMS	$ 6,858,676	$ 5,814,591	$ 5,593,913
CPS	1,375,183	1,295,539	1,274,706
Total	$ 8,233,859	$ 7,110,130	$ 6,868,619
End Markets:			
Communications Networks	$ 2,906,575	$ 2,684,609	$ 2,650,850
Industrial, Medical, Automotive and Defense	4,572,006	3,681,788	3,396,130
Cloud Solutions	755,278	743,733	821,639
Total	$ 8,233,859	$ 7,110,130	$ 6,868,619
Geography:			
Americas (1)	$ 4,194,652	$ 3,600,967	$ 3,306,538
EMEA	1,051,192	841,961	810,332
APAC	2,988,015	2,667,202	2,751,749
Total	$ 8,233,859	$ 7,110,130	$ 6,868,619

(1) Mexico represents approximately 60% of the Americas revenue and the U.S. represents approximately 35%.

Prior to the adoption of ASC 606, approximately 98% of the Company's revenue was recognized at a point-in-time, which was generally upon delivery (transfer of the title and risks of ownership) of a product to a customer or completion of a service being provided to a customer. Under ASC 606, 95% or more of the Company's revenue is recognized on an over time basis, which is as products are manufactured or services are performed.

Note 5. Financial Instruments

Fair Value Measurements

Fair Value of Financial Instruments

The fair values of cash equivalents (generally 10% or less of cash and cash equivalents), accounts receivable, accounts payable and short-term debt approximate carrying value due to the short-term duration of these instruments. Additionally, the fair value of variable rate long-term debt approximates carrying value as of September 28, 2019.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company's primary financial assets and financial liabilities measured at fair value on a recurring basis are deferred compensation plan assets and defined benefit plan assets, which are both measured using Level 1 inputs. Other financial assets and financial liabilities measured at fair value on a recurring basis include foreign exchange contracts and interest rate swaps, neither of which were material as of September 28, 2019 or September 29, 2018.

Offsetting Derivative Assets and Liabilities

The Company has entered into master netting arrangements with each of its derivative counterparties that allows net settlement of derivatives assets and liabilities under certain conditions, such as multiple transactions with the same currency maturing on the same date. The Company presents its derivative assets and derivative liabilities on a gross basis in the consolidated balance sheets. The amount that the Company had the right to offset under these netting arrangements was not material as of September 28, 2019 or September 29, 2018.

Other non-financial assets, such as intangible assets, goodwill and other long-lived assets, are measured at fair value as of the date such assets are acquired or in the period an impairment is recorded.

Derivative Instruments

Foreign Exchange Rate Risk

The Company is exposed to certain risks related to its ongoing business operations. The primary risks managed by using derivative instruments is foreign currency exchange risk.

Forward contracts on various foreign currencies are used to manage foreign currency risk associated with forecasted foreign currency transactions and certain monetary assets and liabilities denominated in non-functional currencies. The Company's primary foreign currency cash flows are in certain Asian and European countries, Brazil, Israel and Mexico.

The Company had the following outstanding foreign currency forward contracts that were entered into to hedge foreign currency exposures:

	As of	
	September 28, 2019	**September 29, 2018**
Derivatives Designated as Accounting Hedges:		
Notional amount (in thousands)	$106,564	$116,992
Number of contracts	46	54
Derivatives Not Designated as Accounting Hedges:		
Notional amount (in thousands)	$299,127	$356,076
Number of contracts	43	56

The Company utilizes foreign currency forward contracts to hedge certain operational (“cash flow”) exposures resulting from changes in foreign currency exchange rates. Such exposures generally result from (1) forecasted non-functional currency sales (2) forecasted non-functional currency materials, labor, overhead and other expenses and (3) anticipated capital expenditures denominated in a currency other than the functional currency of the entity making the expenditures. These contracts are designated as cash flow hedges for accounting purposes and are generally one-to-two months in duration but, by policy, may be up to twelve months in duration.

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is recorded in Accumulated Other Comprehensive Income ("AOCI"), a component of equity, and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. The amount of gains (loss) recognized in Other Comprehensive Income ("OCI") on derivative instruments (effective portion), the amount of gain (loss) reclassified from AOCI into income (effective portion) and the amount of ineffectiveness were not material for any period presented herein. As of September 28, 2019, AOCI related to foreign currency forward contracts was not material.

The Company enters into short-term foreign currency forward contracts to hedge currency exposures associated with certain monetary assets and liabilities denominated in non-functional currencies. These contracts have maturities of up to two months and are not designated as accounting hedges. Accordingly, these contracts are marked-to-market at the end of each period with unrealized gains and losses recorded in other income, net, in the consolidated statements of operations. The amount of gains (losses) associated with these forward contracts were not material for any period presented herein. From an economic perspective, the objective of the Company's hedging program is for gains and losses on forward contracts to substantially offset gains and losses on the underlying hedged items. In addition to the contracts disclosed in the table above, the Company has numerous contracts that have been closed from an economic and financial accounting perspective and will settle early in the first month of the following quarter. Since these offsetting contracts do not expose the Company to risk of fluctuations in exchange rates, these contracts have been excluded from the above table.

In addition to the short-term contracts discussed above, the Company has a foreign currency forward contract that matures in 2020 and was entered into as a hedge of foreign currency exposure associated with a long-term promissory note issued in connection with a previous business combination.

Interest Rate Risk

The Company enters into forward interest rate swap agreements with independent counterparties to partially hedge the variability in cash flows due to changes in the benchmark interest rate (LIBOR) associated with anticipated variable rate borrowings. These interest rate swaps have a maturity date of December 1, 2023, and effectively converts a portion of the Company's variable interest rate obligations to fixed interest rate obligations under its Amended Cash Flow Revolver. These swaps are accounted for as cash flow hedges under ASC Topic 815, Derivatives and Hedging. As of September 28, 2019 and September 29, 2018, interest rate swaps with an aggregate notional amount of $350 million and $50 million, respectively, were outstanding. The aggregate effective interest rate of these swaps as of September 28, 2019 was approximately 4.3%. As of September 28, 2019, due to a decline in interest rates since the time the swaps were put in place, these interest rate swaps had a negative value of $20 million, of which $4 million is included in accrued liabilities and the remaining amount is included in other long-term liabilities on the consolidated balance sheets.

Note 6. Financial Instruments and Concentration of Credit Risk

Financial instruments that potentially subject the Company to credit risk consist primarily of cash, cash equivalents, trade accounts receivable, foreign currency forward contracts and interest rate swap agreement. The carrying value of assets such as cash, cash equivalents and accounts receivable is expected to approximate fair value due to the short duration of the assets. The Company maintains its cash and cash equivalents with recognized financial institutions that management believes to be of high credit quality. One of the Company's most significant credit risks is the ultimate realization of accounts receivable. This risk is mitigated by ongoing credit evaluations of, and frequent contact with, the Company's customers, especially its most significant customers, thus enabling it to monitor changes in business operations and respond accordingly. The Company generally does not require collateral for sales on credit. The Company considers these concentrations of credit risks when estimating its allowance for doubtful accounts. Foreign currency forward contracts and interest rate swap are maintained with high quality counterparties to reduce the Company's credit risk and are recorded on the Company's balance sheets at fair value.

One customer represented more than 10% of the Company's net sales in 2019 and 2018 and two customers each represented more than 10% of the Company's net sales in 2017. One customer represented 10% or more of the Company's gross accounts receivable as of September 28, 2019 and September 29, 2018.

Note 7. Debt

Long-term debt consisted of the following:

	As of	
	September 28, 2019	September 29, 2018
	(In thousands)	
Senior secured notes due 2019 ("Secured Notes")	$ —	$ 375,000
Term loan due 2023 ("Term Loan"), net of issuance costs	370,409	—
Non-interest bearing promissory notes	14,916	17,667
Total long-term debt	385,325	392,667
Less: Current portion of non-interest bearing promissory notes	14,916	3,321
Current portion of long-term debt	23,438	375,000
Long-term debt	$ 346,971	$ 14,346

Secured Notes. In 2014, the Company issued $375 million of senior secured notes due 2019 ("Secured Notes"). The Secured Notes were repaid upon maturity on June 1, 2019. There was no gain or loss associated with the extinguishment of the Secured Notes.

Non-interest Bearing Promissory Notes. On February 1, 2016, the Company completed an acquisition and financed $15 million of the purchase price with the acquiree using a four-year non-interest bearing promissory note with a discounted value of $12 million as of the acquisition date.

Revolving Credit Facility.

During the first quarter of 2019, the Company entered into a Fourth Amended and Restated Credit Agreement (the "Amended Cash Flow Revolver") that provided for a committed $375 million Term Loan.

On April 5, 2019, the Company entered into an amendment to the Amended Cash Flow Revolver that increased the amount available under the facility from $500 million to $700 million upon satisfaction of certain conditions, including repayment in full of the Company's Secured Notes.

On May 31, 2019, the Company drew down the Term Loan and used the proceeds to repay the Company's Secured Notes as discussed above. As of September 28, 2019, costs incurred in connection with the amendment of the Amended Cash Flow Revolver and Term Loan are classified as long-term debt and are being amortized to interest expense over the life of the Term Loan using the effective interest method.

Following the satisfaction and discharge of the Indenture dated as of June 4, 2014, using the proceeds of the Term Loan, and the release of all liens securing the Secured Notes, the Company's debt structure changed as follows, effective June 3, 2019: (i) revolving commitments under the Amended Cash Flow Revolver increased for a total of $700 million in revolving commitments, (ii) the accordion feature of the Amended Cash Flow Revolver was reset so that the Company can obtain, subject to the satisfaction of specified conditions, additional revolving commitments in an aggregate amount of up to $200 million, and (iii) the Company and its subsidiary guarantors' obligations under the Amended Cash Flow Revolver became secured by substantially all of the assets (excluding real property) of the Company and the subsidiary guarantors, subject to certain exceptions.

Loans under the Amended Cash Flow Revolver bear interest, at the Company's option, at either the LIBOR or a base rate, in each case plus a spread determined based on the Company's credit rating. Interest on the loans is payable quarterly in arrears with respect to base rate loans and at the end of an interest period in the case of LIBOR loans. The outstanding principal amount of all loans under the Amended Cash Flow Revolver, including, the Term Loan, together with accrued and unpaid interest, is due on November 30, 2023. The Company is required to repay a portion of the principal amount of the Term Loan equal to 1.25% in quarterly installments.

Maturities of the Term Loan as of September 28, 2019 by fiscal year are as follows:

	(In Thousands)
2020	23,438
2021	18,750
2022	18,750
2023	14,062
2024	300,000
	$ 375,000

Certain of the Company's domestic subsidiaries are required to be guarantors in respect of the Amended Cash Flow Revolver. The Company and the subsidiary guarantors' obligations under the Amended Cash Flow Revolver are secured by property of the Company and such guarantors, including, but not limited to cash, accounts receivables, inventory and the shares of the Company's subsidiaries, subject to limited exceptions.

The Amended Cash Flow Revolver requires the Company to comply with a minimum consolidated interest coverage ratio, measured at the end of each fiscal quarter, and at all times a maximum consolidated leverage ratio. The Amended Cash Flow Revolver contains customary affirmative covenants, including covenants regarding the payment of taxes and other obligations, maintenance of insurance, reporting requirements and compliance with applicable laws and regulations.

The Company enters into forward interest rate swap agreements with independent counterparties to partially hedge the variability in cash flows due to changes in the benchmark interest rate (LIBOR) associated with anticipated variable rate borrowings. These interest rate swaps have a maturity date of December 1, 2023, and effectively converts a portion of the Company's variable interest rate obligations to fixed interest rate obligations under its Amended Cash Flow Revolver. These swaps are accounted for as cash flow hedges under ASC Topic 815, Derivatives and Hedging. As of September 28, 2019 and September 29, 2018, interest rate swaps with an aggregate notional amount of $350 million and $50 million, respectively, were outstanding. The aggregate effective interest rate of these swaps as of September 28, 2019 was approximately 4.3%. As of September 28, 2019, due to a decline in interest rates since the time the swaps were put in place, these interest rate swaps had a negative value of $20 million, of which $4 million is included in accrued liabilities and the remaining amount is included in other long-term liabilities on the consolidated balance sheets.

As of September 28, 2019, no borrowings were outstanding under the Amended Cash Flow Revolver and, as of September 29, 2018, $215 million of borrowings were outstanding, under the Amended Cash Flow Revolver. As of September 28, 2019, $8 million of letters of credit were outstanding under the Amended Cash Flow Revolver and $692 million was available to borrow.

Foreign Short-term Borrowing Facilities. As of September 28, 2019, certain foreign subsidiaries of the Company had a total of $69 million of short-term borrowing facilities, under which no borrowings were outstanding. These facilities expire at various dates through the first quarter of 2021.

Debt Covenants

The Company's Amended Cash Flow Revolver requires the Company to comply with certain financial covenants. In addition, the Amended Cash Flow Revolver contains a number of restrictive covenants, including restrictions on incurring additional debt, making investments and other restricted payments, selling assets and paying dividends, subject to certain exceptions. The Company was in compliance with these covenants as of September 28, 2019.

Note 8. Accounts Receivable Sales Programs

During 2018, the Company entered into a Receivables Purchase Agreement (the “RPA”) with certain third-party banking institutions for the sale of trade receivables generated from sales to certain customers, subject to acceptance by the banks that are party to the RPA. On January 16, 2019, the Company entered into an amendment to its Amended Cash Flow Revolver which increased the percentage of its total accounts receivable that can be sold and outstanding at any time from 30% to 40%. Trade receivables sold pursuant to the RPA are serviced by the Company.

In addition to the RPA, the Company has the option to participate in trade receivables sales programs that have been implemented by certain of the Company's customers, as in effect from time to time. The Company does not service trade receivables sold under these other programs.

Under each of the programs noted above, the Company sells its entire interest in a trade receivable for 100% of face value, less a discount. For the years ended September 28, 2019 and September 29, 2018, the Company sold approximately $2.7 billion and approximately $900 million, respectively, of accounts receivable under these programs. Upon sale, these receivables are removed from the consolidated balance sheets and cash received is presented as cash provided by operating activities in the consolidated statements of cash flows. Discounts on sold receivables were not material for any period presented. As of September 28, 2019 and September 29, 2018, $241 million and $189 million, respectively, of accounts receivable sold under the RPA and subject to servicing by the Company remained outstanding and had not yet been collected. The Company's sole risk with respect to receivables it services is with respect to commercial disputes regarding such receivables. Commercial disputes include billing errors, returns and similar matters. To date, the Company has not been required to repurchase any receivable it has sold due to a commercial dispute. Additionally, the Company is required to remit amounts collected as servicer under the RPA on a weekly basis to the financial institutions that purchased the receivables. As of September 28, 2019 and September 29, 2018, $76 million and $23 million, respectively, had been collected but not yet remitted. This amount is classified in accrued liabilities on the consolidated balance sheets.

Note 9. Commitments and Contingencies

From time to time, the Company is a party to litigation, claims and other contingencies, including environmental and employee matters, which arise in the ordinary course of business. The Company records a contingent liability when it is probable that a loss has been incurred and the amount of loss is reasonably estimable in accordance with ASC Topic 450, *Contingencies,* or other applicable accounting standards. As of September 28, 2019 and September 29, 2018, the Company had reserves of $36 million and $35 million, respectively, for environmental matters, warranty, litigation, contingent consideration and other contingencies (excluding reserves for uncertain tax positions), which the Company believes are adequate. However, there can be no assurance that the Company's reserves will be sufficient to settle these contingencies. Such reserves are included in accrued liabilities and other long-term liabilities on the consolidated balance sheets.

Legal Proceedings

Environmental Matters

The Company is subject to various federal, state, local and foreign laws and regulations and administrative orders concerning environmental protection, including those addressing the discharge of pollutants into the environment, the management and disposal of hazardous substances, the cleanup of contaminated sites, the materials used in products, and the recycling, treatment and disposal of hazardous waste. As of September 28, 2019, the Company had been named in a lawsuit and several administrative orders alleging certain of its current and former sites contributed to groundwater contamination. One such order demands that the Company and other alleged defendants remediate groundwater contamination at two landfills located in Northern California to which the Company may have sent wastewater in the past. The Company continues to investigate the allegations contained in this order and has reserved its estimated exposure for this matter as of September 28, 2019. However, there can be no assurance that the Company's reserve will ultimately be sufficient.

In June 2008, the Company was named by the Orange County Water District in a suit alleging that its actions contributed to polluted groundwater managed by the plaintiff. The complaint seeks recovery of compensatory and other damages, as well as declaratory relief, for the payment of costs necessary to investigate, monitor, remediate, abate and contain contamination of groundwater within the plaintiff’s control. In April 2013, all claims against the Company were dismissed. The plaintiff appealed this dismissal and the appellate court reversed the judgment in August 2017. In November 2017, the California Supreme Court denied the Company’s petition to review this decision and, in December 2017, the Court of Appeal remanded the case back to the Superior Court for further proceedings. A trial currently is scheduled to commence on September 14, 2020. The Company intends to contest the plaintiff’s claims vigorously.

Other Matters

Two of the Company’s subsidiaries in Brazil are parties to a number of administrative and judicial proceedings for claims alleging that these subsidiaries failed to comply with certain bookkeeping and tax rules for certain periods between 2001 and 2011. These claims seek payment of social fund contributions and income and excise taxes allegedly owed by the subsidiaries, as well as fines. The subsidiaries believe they have meritorious positions in these matters and intend to continue to contest the claims.

In October 2018, a contractor who had been retained by the Company through a third party temporary staffing agency from November 2015 to March 2016 filed a lawsuit against the Company in the Santa Clara County Superior Court on behalf of himself and all other similarly situated Company contractors and employees in California, alleging violations of California Labor Code provisions governing overtime, meal and rest periods, wages, wage statements and reimbursement of business expenses. The operative amended complaint seeks certification of a class of all non-exempt employees, whether employed directly or through a temporary staffing agency, employed from four years before the filing of the initial complaint to the time of trial. Additionally, on November 1, 2019, another contractor retained through a temporary staffing agency filed a lawsuit against the Company in the Santa Clara County Superior Court. The complaint, which includes a single cause of action under California’s Private Attorneys General Act of 2004, alleges Labor Code violations substantially similar to those alleged in the October 2018 class action lawsuit and seeks penalties on behalf of the State of California and other “aggrieved employees” (defined to be current and former hourly, non-exempt employees employed by the Company between August 22, 2018 and the present). The Company continues to investigate plaintiffs' allegations and has not provided reserves for these matters as of September 28, 2019. The Company intends to defend vigorously these matters.

Other Contingencies

One of the Company's most significant risks is the ultimate realization of accounts receivable and customer inventory exposures. This risk is partially mitigated by ongoing credit evaluations of, and frequent contact with, the Company's customers, especially its most significant customers, thus enabling it to monitor changes in business operations and respond accordingly. Customer bankruptcies also entail the risk of potential recovery by the bankruptcy estate of amounts previously paid to the Company that are deemed a preference under bankruptcy laws.

Commitments - Operating Leases

The Company leases certain of its facilities and equipment under non-cancellable operating leases expiring at various dates through 2042. The Company is responsible for utilities, maintenance, insurance and property taxes under these leases. Future minimum lease payments, net of sublease income, under operating leases are as follows:

	(In thousands)
2020	$ 18,472
2021	15,916
2022	11,368
2023	5,887
2024	3,993
Thereafter	17,071
Total	$ 72,707

Rent expense, net of sublease income, under operating leases was $26 million, $27 million and $24 million for 2019, 2018 and 2017, respectively.

Note 10. Restructuring

In the first quarter of 2018, the Company began implementing restructuring actions to address the closure and/or relocation of three of its manufacturing facilities. In addition, the Company is still in the process of completing restructuring actions under other plans.

The following table is a summary of restructuring costs associated with these plans:

	Year Ended	
	September 28, 2019	September 29, 2018
	(In thousands)	
Severance costs (approximately 2,900 employees)	$ 1,900	$ 26,425
Other exit costs (generally recognized as incurred)	3,247	4,984
Total	5,147	31,409
Severance reimbursement	—	(10,000)
Total - Q1 FY18 Plan	5,147	21,409
Costs incurred for other plans	8,606	7,737
Total - all plans	$ 13,753	$ 29,146

Q1 FY18 Plan

Actions under the Q1 FY18 plan began in the first quarter of 2018 and are expected to occur through calendar 2019. Cash payments of severance and other costs began in the second quarter of 2018 and are expected to occur through the end of calendar 2019. In connection with this plan, the Company entered into a contractual agreement with a third party pursuant to which up to $10 million of severance and retention costs incurred by the Company will be reimbursed. The Company recorded this amount as a reduction of restructuring costs in the second quarter of 2018 and, as of September 28, 2019, $5 million was included in accounts receivable on the consolidated balance sheets. Costs incurred for other exit costs consist primarily of costs to maintain vacant facilities that are owned and contract termination costs.

Other plans

Other plans include a number of plans for which costs are not expected to be material individually or in the aggregate.

All Plans

The Company's IMS segment incurred a benefit under all restructuring plans of $4 million during the year ended September 28, 2019, primarily as a result of recovery from a third party of certain environmental remediation costs. This compares to costs incurred of $12 million for the year ended September 29, 2018. The Company's CPS segment incurred costs under all restructuring plans of $18 million and $17 million for the years ended September 28, 2019 and September 29, 2018, respectively. As of September 28, 2019 and September 29, 2018, the Company had accrued liabilities of $5 million and $24 million, respectively, for restructuring costs (exclusive of long-term environmental remediation liabilities).

In addition to costs expected to be incurred under the Q1 FY18 plan, the Company expects to incur restructuring costs in future periods primarily for vacant facilities and former sites for which the Company is or may be responsible for environmental remediation.

On October 28, 2019, the Company adopted a Company-wide right-sizing plan. Under this plan, the Company expects to incur restructuring charges of approximately $10 million to $20 million, consisting primarily of cash severance costs, over the first half of 2020.

Note 11. Income Taxes

Domestic and foreign components of income before income taxes were as follows:

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Domestic	$ 153,696	$ 16,215	$ 128,493
Foreign	91,923	81,324	84,987
Total	$ 245,619	$ 97,539	$ 213,480

The provision for income taxes consists of the following:

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Federal:			
Current	$ 868	$ (122)	$ (2,524)
Deferred	45,910	170,994	37,543
State:			
Current	2,747	32	1,648
Deferred	2,961	(3,672)	4,204
Foreign:			
Current	45,929	20,287	37,076
Deferred	5,689	5,553	(3,300)
Total provision for income taxes	$ 104,104	$ 193,072	$ 74,647

Impact of U.S. Tax Reform

On December 22, 2017, the U.S. Tax Cuts and Jobs Act (the “Tax Act”) was enacted into law. In accordance with ASC 740, *Income Taxes*, the Company is required to recognize the effect of the Tax Act in the period of enactment, which was the Company’s first quarter of fiscal 2018 that ended on December 30, 2017. The many changes in the Tax Act include a permanent reduction in the maximum federal corporate income tax rate from 35% to 21% effective as of January 1, 2018. Because of this reduction in rate, the Company was required to revalue its U.S. deferred tax assets and liabilities to the new rate in the Company's first quarter of 2018. The Tax Act also required a mandatory deemed repatriation of undistributed earnings and profits, at the rate of either 15.5% for cash or 8% for non-liquid assets.

The Tax Act also includes provisions for Global Intangible Low-Taxed Income (“GILTI”), which imposes taxes on foreign income in excess of a deemed return on tangible assets of foreign corporations. These new provisions were effective for the Company in fiscal year 2019. During the first quarter of 2019, the Company elected to record the effects of GILTI as a period cost.

The Company's provision for income taxes for 2019, 2018 and 2017 was $104 million (42% of income before taxes), $193 million (198% of income before taxes) and $75 million (35% of income before taxes), respectively. Income tax expense for 2019 is higher than the expected U.S. statutory rate primarily due to a tax-related restructuring transaction that resulted in deferred tax expense of $22 million and foreign operations that resulted in higher tax than the U.S. statutory rate.

During 2018, the Company recorded a net income tax expense for the impact of the Tax Act of $161 million, which was comprised of $175 million for remeasurement of the Company's U.S deferred tax assets, zero for the mandatory deemed repatriation of undistributed earnings and profits, and a tax benefit of $14 million for the conversion to a territorial system.

During the first quarter of 2017, the Company recorded a discrete tax benefit resulting from the merger of two foreign entities, the surviving entity of which was, and continues to be, included in the Company's U.S. federal consolidated tax group. This restructuring allowed the Company to recognize a U.S. deferred tax asset to reflect the federal deductibility of a foreign uncertain tax position that became recognizable upon the merger of the subsidiaries.

The tax effects of temporary differences that give rise to significant portions of deferred tax assets and liabilities are as follows:

	As of	
	September 28, 2019	September 29, 2018
	(In thousands)	
Deferred tax assets:		
U.S. net operating loss carryforwards	$ 184,188	$ 218,710
Foreign net operating loss carryforwards	117,403	129,866
Intangibles	19,422	15,099
Accruals not currently deductible	45,117	45,922
Property, plant and equipment	28,710	22,596
Tax credit carryforwards	13,601	13,825
Reserves not currently deductible	15,266	14,420
Stock compensation expense	10,249	13,645
Federal benefit of foreign operations	14,006	7,104
Other	5,889	5,934
Valuation allowance	(115,998)	(113,559)
Total deferred tax assets	337,853	373,562
Deferred tax liabilities on undistributed earnings	(18,690)	(23,986)
Deferred tax liabilities on branch operations	(34,378)	(10,906)
Other deferred tax liabilities	(9,456)	—
Net deferred tax assets	$ 275,329	$ 338,670
Recorded as:		
Non-current deferred tax assets	$ 279,803	$ 344,124
Non-current deferred tax liabilities	(4,474)	(5,454)
Net deferred tax assets	$ 275,329	$ 338,670

The Company offsets deferred tax assets and liabilities by tax-paying jurisdiction. The resulting net amounts by tax jurisdiction are then aggregated without further offset.

A valuation allowance is established or maintained when, based on currently available information and other factors, it is more likely than not that all or a portion of the deferred tax assets will not be realized. The Company regularly assesses its valuation allowance against deferred tax assets on a jurisdiction by jurisdiction basis. The Company considers all available positive and negative evidence, including future reversals of temporary differences, projected future taxable income, tax planning strategies and recent financial results. Significant judgment is required in assessing the Company's ability to generate revenue, gross profit, operating income and jurisdictional taxable income in future periods. The Company's valuation allowance as of September 28, 2019 relates primarily to foreign net operating losses, with the exception of $15 million related to U.S.

state net operating losses.

As of September 28, 2019, income taxes and foreign withholding taxes have not been provided for approximately $420 million of cumulative undistributed earnings of several non-U.S. subsidiaries. The Company intends to reinvest these earnings indefinitely in operations outside of the U.S. Determination of the amount of unrecognized deferred tax liabilities on these undistributed earnings is not practicable.

As of September 28, 2019, the Company has cumulative net operating loss carryforwards for federal, state and foreign tax purposes of $770 million, $407 million and $520 million, respectively. The federal and state net operating loss carryforwards begin expiring in 2025 and 2020, respectively, and expire at various dates through 2035. Certain foreign net operating losses start expiring in 2020. However, the majority of foreign net operating losses carryforward indefinitely. The Tax Reform Act of 1986 and similar state provisions impose restrictions on the utilization of net operating loss and tax credit carryforwards in the event of an “ownership change” as defined in the Internal Revenue Code. The utilization of certain net operating losses may be restricted due to changes in ownership and business operations. Prior to the adoption of ASU 2016-09, the Company was prohibited from recognizing a deferred tax asset for excess tax benefits related to stock and stock option plans that have not been realized through the reduction in income taxes payable. Such unrecognized deferred tax benefit as of September 30, 2017 was $124 million on a pre-tax basis and was recognized upon the Company’s adoption of ASU 2016-09, *Improvements to Employee Share-based Accounting,* in 2018 with a corresponding increase to retained earnings.

Following is a reconciliation of the statutory federal tax rate to the Company's effective tax rate:

	Year Ended		
	September 28, 2019	**September 29, 2018**	**September 30, 2017**
Federal tax at statutory tax rate	21.00%	24.50 %	35.00 %
Tax Act impact	—	165.16	—
Effect of foreign operations	9.30	7.92	1.89
Permanent items	0.40	(1.37)	2.10
Discrete charge for restructuring transaction	8.88	—	—
Discrete benefit of foreign restructuring	—	—	(4.92)
Other	0.61	0.49	(1.84)
State income taxes, net of federal benefit	2.19	1.24	2.72
Effective tax rate	42.38%	197.94 %	34.95 %

A reconciliation of the beginning and ending amount of total unrecognized tax benefits, excluding accrued penalties and interest, is as follows:

	Year Ended		
	September 28, 2019	**September 29, 2018**	**September 30, 2017**
		(In thousands)	
Balance, beginning of year	$ 60,787	$ 67,022	$ 55,773
Increase (decrease) related to prior year tax positions	(1,731)	(5,917)	1,670
Increase related to current year tax positions	8,902	8,392	9,741
Settlements	(626)	(7,648)	—
Decrease related to lapse of applicable statute of limitations	(655)	(1,062)	(162)
Balance, end of year	$ 66,677	$ 60,787	$ 67,022

The Company had reserves of $39 million and $38 million as of September 28, 2019 and September 29, 2018, respectively, for the payment of interest and penalties relating to unrecognized tax benefits. During 2019, the Company recognized a net income tax expense for interest and penalties of $1 million compared to a net income tax benefit of $3 million in 2018 and a net income tax expense of $4 million in 2017. The Company recognizes interest and penalties related to unrecognized tax benefits as a component of income tax expense. Should the Company be able to ultimately recognize all of these uncertain tax positions, it would result in a benefit to net income and a reduction of the effective tax rate.

The Company conducts business globally and, as a result, files income tax returns in the United States federal jurisdiction and various state and foreign jurisdictions. In the normal course of business, the Company is subject to examination by taxing authorities throughout the world. The Company is currently being audited by the Internal Revenue Service for tax years 2008 through 2010. To the extent the final tax liabilities are different from the amounts accrued, this would result in an increase or decrease in net operating loss carryforwards which would impact tax expense. Additionally, the Company is being audited by various state tax agencies and certain foreign countries. To the extent the final tax liabilities are different from the amounts accrued, the increases or decreases would be recorded as income tax expense or benefit in the consolidated statements of operations. Although the Company believes that the resolution of these audits will not have a material adverse impact on the Company's results of operations, the outcome is subject to uncertainty.

In general, the Company is no longer subject to United States federal or state income tax examinations for years before 2003, and to foreign examinations for years prior to 2003 in its major foreign jurisdictions. Although the timing of the resolution of audits is highly uncertain, it is reasonably possible that the balance of gross unrecognized tax benefits could significantly change in the next 12 months. However, given the number of years subject to audit and the number of matters being examined, the Company is unable to estimate the full range of possible adjustments to the balance of gross unrecognized tax benefits.

Note 12. Earnings Per Share

Basic and diluted earnings per share amounts are calculated by dividing net income by the weighted average number of shares of common stock outstanding during the period, as follows:

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
	(In thousands, except per share amounts)		
Numerator:			
Net income (loss)	$ 141,515	$ (95,533)	$ 138,833
Denominator:			
Weighted average common shares outstanding	69,129	69,833	74,481
Effect of dilutive stock options and restricted stock units	2,549	—	3,647
Denominator for diluted earnings per share	71,678	69,833	78,128
Net income (loss) per share:			
Basic	$ 2.05	$ (1.37)	$ 1.86
Diluted	$ 1.97	$ (1.37)	$ 1.78

Weighted-average dilutive securities that were excluded from the above calculation because their inclusion would have had an anti-dilutive effect under ASC Topic 260, *Earnings per Share*, due to application of the treasury stock method were not material.

Note 13. Stockholders' Equity

The Company's 2009 Stock Plan ("2009 Plan") expired as to future grants on January 26, 2019. Although the 2009 Plan expired, it will continue to govern all awards granted under it prior to its expiration date. On March 11, 2019, the Company's stockholders approved the Company's 2019 Equity Incentive Plan ("2019 Plan") and the reservation of 4 million shares of common stock for issuance thereunder, plus any shares subject to stock options or similar awards granted under the 2009 Plan that expire or otherwise terminate without having been exercised in full and shares issued pursuant to awards granted that are forfeited by the Company.

As of September 28, 2019, an aggregate of 9.5 million shares were authorized for future issuance under the Company's stock plans, of which 5.0 million of such shares were issuable upon exercise of outstanding options and delivery of shares upon vesting of restricted stock units and 4.5 million shares of common stock were available for future grant. Awards other than stock options and stock appreciation rights reduce common stock available for grant by 1.36 shares for every share of common stock subject to such an award. Awards under the 2019 Plan and 2009 Plan that expire or are cancelled without delivery of shares generally become available for issuance under the 2019 Plan. The 2019 Plan will expire as to future grants in December 2028.

Stock Repurchase Program

During the fourth quarter of 2017, the Board of Directors approved a $200 million stock repurchase plan. The timing of repurchases will depends upon capital needs to support the growth of the Company's business, market conditions and other factors. Although stock repurchases are intended to increase stockholder value by reducing the number of outstanding shares, repurchases of shares reduce the Company's liquidity. During 2019, 2018 and 2017, the Company repurchased 0.3 million shares, 5.0 million shares and 4.3 million of its common stock for $7 million, $146 million and $160 million (including commissions), respectively. As of September 28, 2019, $101 million remains available under the repurchase program authorized by the Board of Directors. Subsequent to the end of 2019, the Board of Directors authorized the Company to purchase an additional $200 million of its common stock on the same terms as the program approved in September 2017 which brought the total Board authorized amount to $301 million. One of the objectives of the Company's share repurchase plan is to offset the dilution that results from the issuance of shares under the Company's equity incentive plans. For example, over the past 3 years, the Company issued 7 million shares under its equity incentive plans and repurchased 10 million shares under its share repurchase plan.

In addition to the repurchases discussed above, the Company repurchased 207,000, 334,000 and 549,000 shares of its common stock during 2019, 2018, and 2017, respectively, in settlement of employee tax withholding obligations due upon the vesting of restricted stock units. The Company paid $6 million, $12 million and $17 million, respectively, in conjunction with these purchases.

Accumulated Other Comprehensive Income

Accumulated other comprehensive income, net of tax as applicable, consisted of the following:

	As of	
	September 28, 2019	**September 29, 2018**
	(In thousands)	
Foreign currency translation adjustments	$ 86,268	$ 87,889
Unrealized holding losses on derivative financial instruments	(19,888)	(335)
Unrecognized net actuarial loss and unrecognized transition cost for benefit plans	(24,121)	(13,610)
Total	$ 42,259	$ 73,944

Note 14. Business Segment, Geographic and Customer Information

ASC Topic 280, *Segment Reporting*, establishes standards for reporting information about operating segments, products and services, geographic areas of operations and major customers. Operating segments are defined as components of an enterprise for which separate financial information is available and evaluated regularly by the chief operating decision maker or decision making group in deciding how to allocate resources and in assessing performance.

The Company's operations are managed as two businesses:

1) Integrated Manufacturing Solutions (IMS). IMS is a reportable segment consisting of printed circuit board assembly and test, final system assembly and test, and direct order fulfillment.

2) Components, Products and Services (CPS). Components include interconnect systems (printed circuit board fabrication, backplane, cable assemblies and plastic injection molding) and mechanical systems (enclosures and precision machining). Products include memory from our Viking Technology division; enterprise solutions from our Viking Enterprise Solutions division; RF, optical and microelectronics; defense and aerospace products from SCI Technology; and cloud-based manufacturing execution software from the Company's 42Q division. Services include design, engineering, logistics and repair services.

The Company evaluated its operating segments to determine whether they can be aggregated into reportable segments. Factors considered in this evaluation were similarity of economic characteristics, products, production processes, type or classes of customers, distribution methods and regulatory environments. The Company determined that it has only one reportable segment - IMS, which generated approximately 80% of the Company's total revenue in 2019. The Company's CPS business consists of multiple operating segments which, based on this evaluation, do not meet the quantitative threshold for being presented as reportable segments. Therefore, financial information for these operating segments is presented in a single category entitled “Components, Products and Services".

The accounting policies for each segment are the same as those disclosed by the Company for its consolidated financial statements. Intersegment sales consist primarily of sales of components from CPS to IMS.

The Company's chief operating decision making group is the Chief Executive Officer and Chief Financial Officer and they allocate resources and assess performance of operating segments based on a measure of revenue and gross profit that excludes items not directly related to the Company's ongoing business operations. These items are typically either non-recurring or non-cash in nature.

Segment information is as follows:

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Gross sales:			
IMS	$ 6,907,129	$ 5,847,958	$ 5,645,499
CPS	1,555,117	1,458,754	1,422,264
Intersegment revenue	(228,387)	(196,582)	(199,144)
Net Sales	$ 8,233,859	$ 7,110,130	$ 6,868,619
Gross Profit:			
IMS	$ 444,168	$ 352,361	$ 404,350
CPS	156,221	117,835 (1)	127,154
Total	600,389	470,196	531,504
Unallocated items (2)	(8,451)	(6,413)	(11,593)
Total	$ 591,938	$ 463,783	$ 519,911
Depreciation and amortization:			
IMS	$ 81,997	$ 76,071	$ 74,769
CPS	25,632	30,048	31,109
Total	107,629	106,119	105,878
Unallocated corporate items (3)	9,320	12,701	12,873
Total	$ 116,949	$ 118,820	$ 118,751
Capital expenditures (receipt basis):			
IMS	$ 79,943	$ 87,421	$ 106,000
CPS	28,629	28,696	30,512
Total	108,572	116,117	136,512
Unallocated corporate items (3)	3,836	2,480	4,122
Total	$ 112,408	$ 118,597	$ 140,634

(1) During the fourth quarter of 2018, the Company recorded a $12.5 million pre-tax adjustment to correct errors that occurred from 2016 through the third quarter of 2018 with respect to the accounting for certain long-term contracts in one of the Company’s CPS divisions. These errors are immaterial to all prior periods. The impact of this out-of-period adjustment on the full year fiscal 2018 was $11 million which is also immaterial to 2018.

(2) For purposes of evaluating segment performance, management excludes certain items from its measures of revenue and gross profit. These items consist of stock-based compensation expense, amortization of intangible assets, charges or credits resulting from distressed customers and acquisition-related items.

(3) Primarily related to selling, general and administration functions.

Segment assets, consisting of accounts receivable, inventories and fixed assets, are substantially proportional to segment sales.

Information by geographic segment, determined based on the country in which a product is manufactured or a service is provided, was as follows:

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Net sales:			
Americas (1)	$ 4,194,652	$ 3,600,967	$ 3,306,538
EMEA	1,051,192	841,961	810,332
APAC	2,988,015	2,667,202	2,751,749
Total	$ 8,233,859	$ 7,110,130	$ 6,868,619

(1) Mexico represents approximately 60% of the Americas revenue and the U.S. represents approximately 35%.

Percentage of net sales represented by ten largest customers	54.2%	53.0%	52.9%
Number of customers representing 10% or more of net sales	1	1	2

	As of	
	September 28, 2019	September 29, 2018
	(In thousands)	
Property, plant and equipment, net:		
Americas	$ 369,985	$ 385,820
EMEA	72,040	72,051
APAC	188,622	185,042
Total	$ 630,647	$ 642,913

Note 15. Stock-Based Compensation

Stock-based compensation expense was attributable to:

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Stock options	$ 1,250	$ 1,779	$ 1,640
Restricted stock units, including performance-based awards	29,594	31,046	36,280
Total	$ 30,844	$ 32,825	$ 37,920

Stock-based compensation expense was recognized as follows:

	Year Ended		
	September 28, 2019	September 29, 2018	September 30, 2017
		(In thousands)	
Cost of sales	$ 9,757	$ 8,187	$ 8,959
Selling, general & administrative	20,807	25,206	28,169
Research & development	280	(568)	792
Total	$ 30,844	$ 32,825	$ 37,920

Restricted Stock Units

The Company grants restricted stock units to executive officers, directors and certain management employees. These units vest over periods ranging from one to four years or based upon achievement of specified performance criteria and are automatically exchanged for shares of common stock at the vesting date. Compensation expense associated with these units is recognized ratably over the vesting period.

Activity with respect to the Company's restricted stock units was as follows:

	Number of Shares	Weighted Grant-Date Fair Value Per Share ($)	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value ($)
	(In thousands)			(In thousands)
Outstanding as of October 1, 2016	3,998	19.57	1.35	110,183
Granted	1,378	34.11		
Vested/Forfeited/Cancelled	(2,017)	16.20		
Outstanding as of September 30, 2017	3,359	27.56	1.51	124,800
Granted	1,102	33.51		
Vested/Forfeited/Cancelled	(1,158)	25.31		
Outstanding as of September 29, 2018	3,303	30.33	1.21	97,913
Granted	1,843	25.09		
Vested/Forfeited/Cancelled	(1,993)	29.46		
Outstanding as of September 28, 2019	3,153	27.82	1.30	102,720
Expected to vest as of September 28, 2019	2,660	27.99	1.14	86,655

The fair value of restricted stock units that vested during the year was $29 million for 2019, $36 million for 2018 and $53 million for 2017. As of September 28, 2019, unrecognized compensation expense of $34 million is expected to be recognized over a weighted average period of 1.2 years. Additionally, as of September 28, 2019, unrecognized compensation expense related to performance-based restricted stock units for which achievement of vesting criteria is not currently considered probable was $7 million.

Note 16. Employee Benefit Plans

The Company has various defined contribution retirement plans that cover the majority of its domestic employees. These retirement plans permit participants to elect to have contributions made to the retirement plans in the form of salary deferrals. Under these retirement plans, the Company may match a portion of employee contributions. Amounts contributed by the Company were not material for any period presented herein.

The Company sponsors a deferred compensation plan for eligible employees that allows participants to defer payment of all or part of their compensation. Deferrals under this plan were $4 million and $5 million for 2019 and 2018, respectively. Assets associated with these plans were $36 million and $35 million as of September 28, 2019 and September 29, 2018, respectively. Liabilities associated with these plans were $36 million and $35 million as of September 28, 2019 and September 29, 2018, respectively. These amounts are recorded in other non-current assets and other long-term liabilities on the consolidated balance sheets.

Defined benefit plans covering certain employees in the United States and Canada were frozen in 2001. Employees who had not yet vested will continue to be credited with service until vesting occurs, but no additional benefits will accrue.

The Company also provides defined benefit pension plans in certain other countries. The assumptions used for calculating the pension benefit obligations for non-U.S. plans depend on the local economic environment and regulations. The measurement date for the Company's defined benefit plans is September 28, 2019.

The funded status and plan assets for the defined benefit plans and amount reported on the consolidated balance sheets were as follows:

	As of					
	September 28, 2019		September 29, 2018		September 30, 2017	
	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.
Plan Assets	$ 15,421	$ 23,877	$ 16,784	$ 26,114	$ 16,930	$ 26,993
Projected Benefit Obligation	24,221	58,842	22,586	50,930	24,743	48,873
Current Liabilities	$ —	$ 1,443	$ —	$ 1,430	$ —	$ 1,117
Non-current liabilities	8,800	33,522	5,802	23,386	7,813	20,763
Underfunded Status	$ 8,800	$ 34,965	$ 5,802	$ 24,816	$ 7,813	$ 21,880

The Company’s investment strategy is designed to help ensure that sufficient pension assets are available to pay benefits as they become due. Plan assets are invested in mutual funds that are valued using the NAV that is quoted in active markets (Level 1 input). These plans are managed consistent with regulations or market practices of the country in which the assets are invested. As of September 28, 2019 there were no significant concentrations of credit risk related to pension plan assets. All other amounts and assumptions were not material for any period presented herein.

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

None.

Item 9A. *Controls and Procedures*

(a) Evaluation of Disclosure Controls and Procedures

Our management is responsible for establishing and maintaining our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures will prevent all error and all fraud. Disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that their objectives are met. Further, the design of disclosure controls and procedures must reflect the fact that there are resource constraints, and the benefits of disclosure controls and procedures must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of disclosure controls and procedures can provide absolute assurance that all disclosure control issues and instances of fraud, if any, have been detected. Nonetheless, our Chief Executive Officer and Chief Financial Officer have concluded that, as of September 28, 2019, (1) our disclosure controls and procedures were designed to provide reasonable assurance of achieving their objectives, and (2) our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

(b) 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 Rule 13a-15(f) and 15d-15(f) under the Exchange Act). Our management, including our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our internal control over financial reporting as of September 28, 2019. In making this assessment, our management used the criteria established in *Internal Control-Integrated Framework (2013)*, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Our management has concluded that, as of September 28, 2019, our internal control over financial reporting was effective based on the COSO criteria.

The effectiveness of our internal control over financial reporting as of September 28, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears under Item 8.

(c) Remediation of Previously Identified Material Weakness

Management has concluded that the material weakness in internal control over financial reporting described in Part II, Item 9A, “Controls and Procedures”, in our Annual Report on Form 10-K for the year ended September 29, 2018 has been remediated as of September 28, 2019.

(d) Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended September 28, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. *Other Information*

None.

PART III

The information called for by Items 10, 11, 12, 13 and 14 of Part III are incorporated by reference from our definitive Proxy Statement to be filed in connection with our 2020 Annual Meeting of Stockholders pursuant to Regulation 14A, except that the information regarding our executive officers called for by Item 401(b) of Regulation S-K has been included in Part I of this report.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

(a) **(1)** ***Financial Statements.*** The following financial statements are filed under Item 8 hereof as part of this report:

	Page
Report of Independent Registered Public Accounting Firm	50
Financial Statements:	
Consolidated Balance Sheets, As of September 28, 2019 and September 29, 2018	52
Consolidated Statements of Operations, Years Ended September 28, 2019, September 29, 2018 and September 30, 2017	53
Consolidated Statements of Comprehensive Income (Loss), Years Ended September 28, 2019, September 29, 2018 and September 30, 2017	54
Consolidated Statements of Stockholders' Equity, Years Ended September 28, 2019, September 29, 2018 and September 30, 2017	55
Consolidated Statements of Cash Flows, Years Ended September 28, 2019, September 29, 2018 and September 30, 2017	56
Notes to Consolidated Financial Statements	57

(2) ***Financial Statement Schedules.*** The following financial statement schedule of Sanmina Corporation is filed as part of this report on Form 10-K immediately after the signature pages hereto and should be read in conjunction with our Financial Statements included in this Item 15:

Schedule II-Valuation and Qualifying Accounts, Years Ended September 28, 2019, September 29, 2018 and September 30, 2017

All other schedules are omitted because they are not applicable or the required information is shown in the Financial Statements or the notes thereto.

(3) **Exhibits.** Refer to Item 15(b) immediately below.

(b) Exhibits

Exhibit Number	Description
3.1(1)	Restated Certificate of Incorporation of the Registrant, dated January 31, 1996.
3.2(2)	Certificate of Amendment of the Restated Certificate of Incorporation of the Registrant, dated March 9, 2001.
3.3(3)	Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of the Registrant, dated May 31, 2001.
3.4(4)	Certificate of Amendment of the Restated Certificate of Incorporation of the Registrant, dated December 7, 2001.
3.5(5)	Amended and Restated Bylaws of the Registrant dated December 1, 2008.
3.6(6)	Certificate of Amendment of the Restated Certificate of Incorporation of the Registrant, as amended, dated July 27, 2009.
3.7(7)	Certificate of Ownership and Merger as filed with the Secretary of State of the State of Delaware and effective November 15, 2012.
3.8(8)	Certificate of Amendment of Amended and Restated Bylaws dated December 7, 2015
4.1(9)	Indenture, dated as of June 4, 2014, among Sanmina Corporation, certain subsidiaries of Sanmina Corporation as guarantors and U.S. Bank National Association as trustee.
4.5	Description of the Registrant's Securities (filed herewith)
10.1(10)*	Amended and Restated Sanmina-SCI Corporation Deferred Compensation Plan for Outside Directors.
10.2(11)*	Amended and Restated Sanmina-SCI Corporation Deferred Compensation Plan dated June 9, 2008.
10.3(12)*	Revised form of Officer and Director Indemnification Agreement.
10.4(13)*	2009 Incentive Plan, as amended on March 5, 2018.
10.5(14)*	Deferred Compensation Plan for Outside Directors amended and restated effective January 1, 2009.
10.6(15)*	Form of Stock Option Agreement for use under the 2009 Incentive Plan.
10.7(16)*	Form of Restricted Stock Unit Agreement for use under the 2009 Incentive Plan.
10.8(17)*	Form of Restricted Stock Agreement for use under the 2009 Incentive Plan.
10.9(18)*	Form of Change of Control Severance Benefit Agreement.
10.10(19)	Amendment to employment offer letter between Sanmina Corporation and Alan Reid dated March 12, 2010.
10.11(20)*	Form of Restricted Stock Unit Agreement under 2009 Incentive Plan for director grants.
10.12(21)	Purchase Agreement, dated as of May 20, 2014, by and among Sanmina Corporation, certain subsidiaries of Sanmina Corporation, as guarantors, and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the initial purchasers.
10.13(22)	Second Amendment to the Sanmina Corporation Deferred Compensation Plan adopted as of May 12, 2015.
10.14(23)	Third Amended and Restated Credit Agreement, dated as of February 1, 2018, by and among Sanmina Corporation, the lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent.
10.15(24)*	First Amendment to the Sanmina-SCI Corporation Deferred Compensation Plan.
10.16(25)*	Amendment No. 3 to Sanmina-SCI Corporation Deferred Compensation Plan.
10.17(26)*	First Amendment to the Sanmina-SCI Corporation Deferred Compensation Plan for Outside Directors.
10.18(27)*	Second Amendment to the Sanmina Corporation Deferred Compensation Plan for Outside Directors.
10.19(28)*	Fourth Amendment to the Sanmina Corporation Deferred Compensation Plan.
10.20(29)‡	Receivables Purchase Agreement among Sanmina Corporation, the sellers and buyers from time to time party thereto and the Bank of Tokyo-Mitsubishi UFG, Ltd., as administrative agent, dated March 26, 2018.
10.21(30) ‡	Joinder and Amendment No. 1 to the Receivables Purchase Agreement dated June 25, 2018 among Sanmina Corporation, MUFG Bank Ltd. (formerly known as The Bank of Tokyo-Mitsubishi UFG, Ltd.), Wells Fargo Bank N.A., Bank of the West and MUFG Bank Ltd., as administrative agent.

10.22(13)*	Fifth Amendment to Sanmina Corporation Deferred Compensation Plan.
10.23(13)*	Sixth Amendment to Sanmina Corporation Deferred Compensation Plan.
10.26(13)±	Joinder Agreement and Amendment No. 2 dated September 17, 2018 among Sanmina Corporation, Sanmina-SCI Systems Pte. Ltd., MUFG Bank Ltd., Wells Fargo Bank N.A., Bank of the West and MUFG Bank Ltd., as administrative agent.
10.27(23)‡	Amendment No. 3 dated December 21, 2018 among Sanmina Corporation, Sanmina-SCI Systems Pte. Ltd., MUFG Bank Ltd., Wells Fargo Bank N.A., Bank of the West and MUFG Bank Ltd., as administrative agent.
10.28(31)	Amendment No. 1 dated January 16, 2019 to Fourth Amended and Restated Credit Agreement, dated as of November 30, 2018, by and among Sanmina Corporation, the lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent.
10.29(31)*	2019 Equity Incentive Plan
10.30(31)*	Form of Restricted Stock Unit Award Agreement for use under 2019 Equity Incentive Plan
10.31(31)*	Form of Stock Option Award Agreement for use under 2019 Equity Incentive Plan
10.32(32)	Amendment No. 2 dated April 5, 2019 to the Fourth Amended and Restated Credit Agreement dated as of November 30, 2018, by and among Sanmina Corporation, the lenders from time to time party thereto and Bank of America, As Administrative Agent.
10.33(32) ±	Amendment No. 4 dated April 3, 2019 among Sanmina Corporation, Sanmina-SCI Systems Pte. Ltd., MUFG Bank Ltd., Wells Fargo Bank N.A., Bank of the West and MUFG Bank Ltd., as administrative agent.
10.34	Amended and Restated Security Agreement, dated as of June 3, 2019, among Sanmina Corporation, certain subsidiaries of Sanmina Corporation party thereto as grantors and Bank of America, N.A. as administrative agent (filed herewith)
14.1	Code of Business Conduct and Ethics of the Registrant (filed herewith)
21.1	Subsidiaries of the Registrant (filed herewith).
23.1	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm (filed herewith).
31.1	Certification of the Principal Executive Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Certification of the Principal Financial Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1(33)	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).
32.2(33)	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Compensatory plan in which an executive officer or director participates.

‡ Portions of this exhibit have been omitted pursuant to an order granting confidential treatment and this exhibit has been filed separately with the SEC.

± Portions of this exhibit have been omitted in accordance with Item 601(b)(10)(iv) of Regulation S-K under the Securities Act of 1933.

(1) Incorporated by reference to Exhibit 3.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended September 30, 1996, SEC File No. 000-21272, filed with the Securities and Exchange Commission ("SEC") on December 24, 1996.

(2) Incorporated by reference to Exhibit 3.1(a) to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2001, filed with the SEC on May 11, 2001.

(3) Incorporated by reference to Exhibit 3.1.2 to the Registrant's Registration Statement on Form S-4, filed with the SEC on August 10, 2001.

(4) Incorporated by reference to Exhibit 3.1.3 to the Registrant's Annual Report on Form 10-K for the fiscal year ended September 29, 2001, filed with the SEC on December 21, 2001.

(5) Incorporated by reference to Exhibit 3.2 to Registrant's Current Report on Form 8-K, filed with the SEC on December 5, 2008.

(6) Incorporated by reference to Exhibit 3.6 to Registrant's Current Report on Form 8-K, filed with the SEC on August 19, 2009.

(7) Incorporated by reference to Exhibit 3.7 to the Registrant's Annual Report on Form 10-K for the fiscal year ended September 29, 2012, filed with the SEC on November 21, 2012

(8) Incorporated by reference to Exhibit 3.8 to the Registrant's Current Report on Form 8-K filed with the SEC on December 11, 2015.

(9) Incorporated by reference to Exhibit 4.1 to Registrant's Current Report on Form 8-K filed with the SEC on June 5, 2014.

(10) Incorporated by reference to Exhibit 10.75 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 28, 2008, filed with the SEC on August 4, 2008.

(11) Incorporated by reference to Exhibit 10.74 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 28, 2008, filed with the SEC on August 4, 2008.

(12) Incorporated by reference to Exhibit 10.42 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 28, 2008, filed with the SEC on August 4, 2008.

(13) Incorporated by reference to Exhibit 10.4 to Registrant's Annual Report on Form 10-K for the fiscal year ended September 29, 2018 filed with the SEC on November 15, 2018.

(14) Incorporated by reference to Exhibit 10.40 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 28, 2009, filed with the SEC on May 5, 2009.

(15) Incorporated by reference to Exhibit 10.43 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 28, 2009, filed with the SEC on May 5, 2009

(16) Incorporated by reference to Exhibit 10.44 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 28, 2009, filed with the SEC on May 5, 2009

(17) Incorporated by reference to Exhibit 10.45 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 28, 2009, filed with the SEC on May 5, 2009

(18) Incorporated by reference to Exhibit 10.48 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended January 2, 2010, filed with the SEC on February 5, 2010.

(19) Incorporated by reference to Exhibit 10.48 to Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended December 28, 2013, filed with the SEC on January 31, 2014.

(20) Incorporated by reference to Exhibit 10.49 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 29, 2014 filed with the SEC on April 28, 2014.

(21) Incorporated by reference to Current Report on Form 8-K filed by the Registrant with the SEC on May 21, 2014.

(22) Incorporated by reference to Exhibit 10.30 to the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 27, 2015 filed with the SEC on July 24, 2015.

(23) Incorporated by reference to same numbered exhibit to the Registrant's Quarterly Report on Form 10-Q for the first fiscal quarter ended December 29, 2018 filed with the SEC on February 7, 2019.

(24) Incorporated by reference to Exhibit 10.28 to Registrant's Annual Report on Form 10-K for the fiscal year ended October 2, 2015, filed with the SEC on November 19, 2015.

(25) Incorporated by reference to Exhibit 10.29 to Registrant's Annual Report on Form 10-K for the fiscal year ended October 2, 2015, filed with the SEC on November 19, 2015.

(26) Incorporated by reference to Exhibit 10.30 to Registrant's Annual Report on Form 10-K for the fiscal year ended October 2, 2015, filed with the SEC on November 19, 2015.

(27) Incorporated by reference to Exhibit 10.31 to Registrant's Annual Report on Form 10-K for the fiscal year ended October 2, 2015, filed with the SEC on November 19, 2015.

(28) Incorporated by reference to Exhibit 10.32 to Registrant’s Annual Report on Form 10-K for the fiscal year ended September 30, 2017, filed with the SEC on November 13, 2017.

(29) Incorporated by reference to Exhibit 10.33 to the Registrant’s Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2018 filed with the SEC on May 2, 2018.

(30) Incorporated by reference to Exhibit 10.34 to the Registrant’s Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2018 filed with the SEC on August 3, 2018.

(31) Incorporated by reference to same number exhibit to the Registrant’s Quarterly Report on Form 10-Q for the fiscal quarter ended March 30, 2019 filed with the SEC on May 2, 2019.

(32) Incorporated by reference to same number exhibit to the Registrant’s Quarterly Report on Form 10-Q for the fiscal quarter ended June 29, 2019 filed with the SEC on August 1, 2019.

(33) This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference in any filings under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any filings.

(c) ***Financial Statement Schedules.*** See Item 15(a)(2) above.

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.

Sanmina Corporation
(Registrant)

By: /s/ Hartmut Liebel

Hartmut Liebel
Chief Executive Officer

Date: November 8, 2019

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.

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Hartmut Liebel and Kurt Adzema and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Signature	Title	Date
/s/ JURE SOLA Jure Sola	Executive Chairman and Director	November 8, 2019
/s/ HARTMUT LIEBEL Hartmut Liebel	Chief Executive Officer and Director (Principal Executive Officer)	November 8, 2019
/s/ KURT ADZEMA Kurt Adzema	Chief Financial Officer (Principal Financial Officer)	November 8, 2019
/s/ BRENT BILLINGER Brent Billinger	Controller (Principal Accounting Officer)	November 8, 2019
/s/ EUGENE A. DELANEY Eugene A. Delaney	Director	November 8, 2019
/s/ JOHN P. GOLDSBERRY John P. Goldsberry	Director	November 8, 2019
/s/ RITA S. LANE Rita S. Lane	Director	November 8, 2019
/s/ JOSEPH LICATA Joseph Licata	Director	November 8, 2019
/s/ KRISH PRABHU Krish Prabhu	Director	November 8, 2019
/s/ MARIO M. ROSATI Mario M. Rosati	Director	November 8, 2019
/s/ JACKIE M. WARD Jackie M. Ward	Director	November 8, 2019

FINANCIAL STATEMENT SCHEDULE

The financial statement Schedule II-VALUATION AND QUALIFYING ACCOUNTS is filed as part of this Form 10-K.

SANMINA CORPORATION
SCHEDULE II-VALUATION AND QUALIFYING ACCOUNTS

	Balance at Beginning of Period	Charged to Operations	Charges Utilized	Balance at End of Period
	(In thousands)			
Allowances for Doubtful Accounts, Product Returns and Other Net Sales Adjustments				
Fiscal year ended September 30, 2017	$ 15,081	$ (747)	$ —	$ 14,334
Fiscal year ended September 29, 2018	$ 14,334	$ (2,123)	$ —	$ 12,211
Fiscal year ended September 28, 2019	$ 12,211	$ 270	$ —	$ 12,481

Exhibit 4.5

DESCRIPTION OF THE REGISTRANT’S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of September 28, 2019, Sanmina Corporation (the “Company”) has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”): our Common Stock (as defined below).

Description of Common Stock

The following description of our Common Stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Amended and Restated Certificate of Incorporation, as amended (the “Certificate of Incorporation”), and our Amended and Restated Bylaws (the “Bylaws”), each of which is incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.5 is a part. We encourage you to read our Certificate of Incorporation, our Bylaws and the applicable provisions of Delaware law, for additional information.

Authorized Capital Shares

Our authorized capital shares consist of 166,666,666 shares of common stock, $0.01 par value per share (“Common Stock”), and 5,000,000 shares of preferred stock, $0.01 par value per share (“Preferred Stock”), 1,000,000 shares of which are designated as Series A Participating Preferred Stock. The outstanding shares of our Common Stock are fully paid and nonassessable.

The Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Company (the “Board of Directors”) is authorized to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock, and or within the limitations or restrictions stated in any resolution(s) of the Board of Directors originally fixing the number of shares of Preferred Stock constituting any series, to increase or decrease (but not below the number of any such series of Preferred Stock then outstanding) the number of shares of such series of Preferred Stock subsequent to the issue of shares of that series of Preferred Stock, to determine the designation of any series and to fix the number of shares of any series of Preferred Stock.

Voting Rights

The holders of outstanding shares of Common Stock shall have the right to vote on the election and removal of all of the members of the Board of Directors and on all other matters to be voted on by the stockholders of the Company. At every meeting with respect to matters on which the holders of outstanding shares of Common Stock are entitled to vote, the holders of outstanding shares of Common Stock shall be entitled to one vote per share and do not have cumulative voting rights.

Dividend Rights

Subject to the rights of holders of outstanding shares of Preferred Stock, if any, when, as and if dividends or distributions are declared on outstanding shares of Common Stock, whether payable in cash, in property or in securities of the Company, the holders of outstanding shares of Common Stock shall be entitled to share equally, share for share, in such dividends and distributions.

Liquidation Rights

Subject to the rights of holders of outstanding shares of Preferred Stock, if any, upon any liquidation, dissolution or winding up of the Company, whether voluntary or involuntary, the holders of outstanding shares of Common Stock shall be entitled to share equally, share for share, in the assets of the Company to be distributed among the holders of outstanding shares of Common Stock.

No Preemptive of Similar Rights

Our Common Stock has no sinking fund or redemption provisions or preemptive, conversion or exchange rights. Holders of Common Stock may act by written consent.

Listing

The Common Stock is traded on the Nasdaq Global Select Market under the symbol SANM.

EXHIBIT 10.34

AMENDED AND RESTATED SECURITY AGREEMENT

THIS AMENDED AND RESTATED SECURITY AGREEMENT dated as of June 3, 2019 (as amended, restated, supplemented or otherwise modified from time to time, this "Agreement"), is being entered into among **SANMINA CORPORATION**, a Delaware corporation (the "Borrower" and a "Grantor"), **EACH OF THE UNDERSIGNED SUBSIDIARIES OF THE BORROWER AND EACH OTHER PERSON THAT SHALL BECOME A PARTY HERETO BY EXECUTION OF A SECURITY JOINDER AGREEMENT** (each a " Guarantor" and a "Grantor" and, together with the Borrower, collectively, the "Grantors"), and **BANK OF AMERICA, N.A.**, as Administrative Agent (in such capacity, the "Administrative Agent") for each of the Secured Parties (as defined in the Credit Agreement referenced below).

RECITALS:

WHEREAS, pursuant to that certain Fourth Amended and Restated Credit Agreement dated as of November 30, 2018 (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), among the Borrower, the Administrative Agent, Bank of America, N.A., as Swing Line Lender and an Issuing Lender, and the lenders now or hereafter party thereto (the "Lenders") and the other Issuing Lenders now or hereafter party thereto, the Lenders are, among other things, providing a delayed draw term loan facility and a revolving credit facility to the Borrower;

WHEREAS, the Borrower, certain Subsidiaries of the Borrower party thereto (together with the Borrower, the "Existing Grantors") and the Administrative Agent have entered into that certain Security Agreement dated as of May 20, 2015 (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the "Existing Agreement"), pursuant to which the Existing Grantors have granted liens and security interests in certain of their respective assets to the Administrative Agent securing, among other things, the obligations under the Credit Agreement;

WHEREAS, on June 3, 2019, the Borrower borrowed the Term Loan and used the proceeds thereof, together with cash on hand to repay and satisfy in full the obligations under the Senior Notes (other than contingent obligations for which no claim has been made) and effected a satisfaction and discharge of the indenture for the Senior Notes, and the trustee and collateral agent for the Senior Notes released the liens and security interests securing the Senior Notes;

WHEREAS, the parties desire to amend and restate the Existing Security Agreement in connection with the compliance by the Grantors with Section 6.15 of the Credit Agreement following the repayment in full of the Senior Notes;

WHEREAS, a material part of the consideration given in connection with and as an inducement to the execution and delivery of the Credit Agreement by the Administrative Agent and the Lenders is the obligation of the Grantors to enter into this Agreement, and the Secured Parties are unwilling to extend and maintain the credit facilities provided under the Credit Agreement and the other Loan Documents unless the Grantors enter into this Agreement; and

WHEREAS, certain additional extensions of credit may be made from time to time for the benefit of the Grantors pursuant to certain Secured Cash Management Agreements and Secured Hedge Agreements.

AGREEMENT:

NOW, **THEREFORE**, in order to induce the Secured Parties to from time to time make and maintain extensions of credit under the Credit Agreement and under the Secured Cash Management Agreements and Secured Hedge Agreements, the parties hereto agree that the Existing Agreement is hereby amended and restated in this Agreement, with the effect that the Existing Agreement as so amended and restated is hereby continued into this Agreement, and this Agreement shall constitute neither a release nor novation of any liens and security interests arising under the Existing Agreement nor a refinancing of any indebtedness or obligations arising thereunder or under any related documents, but rather the liens and security interests in effect under the Existing Agreement shall continue in effect on the terms hereof, as follows:

1. Certain Definitions. All capitalized terms used but not otherwise defined herein shall have the meanings assigned thereto in the Credit Agreement. Terms used in this Agreement that are not otherwise expressly defined herein or in the Credit Agreement, and for which meanings are provided in the Uniform Commercial Code of the State of New York (the "UCC"), shall have such meanings unless the context requires otherwise. In addition, for purposes of this Agreement, the following terms have the following definitions:

"Excluded Assets" means (1) (x) any interests in real property held by a Grantor as a lessee under a lease and (y) any owned real property of any Grantor; (2) any lease, license, permit, contract or agreement to which a Grantor is party if the grant of security interest therein to the Administrative Agent shall constitute or result in a breach, termination or default under such lease, license, permit, contract or agreement, other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-407, 9-408 or 9-409 of the Uniform Commercial Code (or any successor provision or provisions) of any relevant jurisdiction or any other applicable law (including the Bankruptcy Code) or principles of equity; (3) any intent to use trademark application filed pursuant to Section 1(b) of the Lanham Act to the extent and until a statement of use or amendment to allege use is filed in connection therewith and accepted by the U.S. Patent and Trademark Office and only if inclusion of such intent to use application in the Collateral prior to such time would result in the cancellation or invalidation of the alleged trademark; (4) (i) any voting Equity Interests representing more than 65% of the outstanding voting Equity Interests of any Foreign Subsidiary or FSHCO and (ii) any Equity Interests in Sanmina-SCI Australia Holdings Pty Ltd.; (5) any motor vehicles and other assets subject to certificates of title; (6) assets and personal property for which a pledge thereof or a security interest therein is prohibited by applicable laws (including any legally effective requirement to obtain the consent of any governmental authority) after giving effect to the applicable anti-assignment provisions of the Uniform Commercial Code of any applicable jurisdiction; and (7) any specific assets that are subject to a Lien permitted by clause (b), (s), (t), (u), (v) or (aa) of Section 7.02 of the Credit Agreement to the extent that a Lien on such assets to secure the Secured Obligations is prohibited by or requires consent under the documentation relating to the obligations secured by such Lien.

"Excluded Deposit Account" means, collectively, all Deposit Accounts established or held (including sub-accounts) for the exclusive purpose of funding payroll, payroll or employment taxes or employee benefits, or a "zero balance account" or an account containing not more than $100,000 at any time unless such a Deposit Account is subject to a control agreement for the benefit of the Administrative Agent.

"Facility Termination Date" means the date as of which all of the following shall have occurred: (a) the Aggregate Commitments have terminated, (b) all Obligations have been paid in full (other than (x) contingent obligations for which no claim has been made and (y) obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements), and (c) all Letters of Credit have terminated or expired (other than Letters of Credit as to which other arrangements with respect thereto satisfactory to the Administrative Agent and the applicable Issuing Lender shall have been made).

"Qualifying Control Agreement" means an agreement reasonably satisfactory to the Administrative Agent among any Grantor, a banking institution holding such Grantor's funds, and the Administrative Agent with respect to collection and control of all deposits and balances held in a Deposit Account maintained by any Grantor with such banking institution granting control over such Deposit Accounts to the Administrative Agent.

"Secured Obligations" means (a) as to the Borrower, all of the Obligations, including, the payment and performance of the obligations and liabilities (whether now existing or hereafter arising) of each Loan Party under (i) the Credit Agreement and each of the other Loan Documents (including this Agreement) to which such Loan Party is now or hereafter becomes a party, and (ii) any Secured Cash Management Agreement and Secured Hedge Agreement to which such Loan Party is now or hereafter becomes a party and (b) as to each Guarantor, the payment and performance of its obligations and liabilities (whether now existing or hereafter arising) under (i) the Guaranty and each of the other Loan Documents (including this Agreement) to which it is now or hereafter becomes a party, and (ii) any Secured Cash Management Agreement and Secured Hedge Agreement to which it is now or hereafter becomes a party. Notwithstanding the foregoing, Secured Obligations shall exclude all Excluded Swap Obligations.

2. Grant of Security Interest. Each Grantor hereby grants as collateral security for the payment, performance and satisfaction of the Secured Obligations to the Administrative Agent for the benefit of the Secured Parties a continuing first priority security interest in and to all of the assets of such Grantor or in which such Grantor has or may have or acquire an interest or the power to transfer rights therein, whether now owned or existing or hereafter created, acquired or arising and wheresoever located (collectively, the "Collateral"), including the following:

(a) all Accounts, all Supporting Obligations, letters of credit, Letter-of-Credit Rights, Chattel Paper, Documents and Instruments;

(b) all Deposit Accounts and all amounts credited thereto;

(c) all Inventory;

(d) all Intercompany Debt at any time owing to such Grantor, and all of such Grantor's rights with respect thereto;

(e) all money and cash held or maintained by such Grantor at any time, whether or not in the possession or under the control of the Administrative Agent, a Lender, or a bailee or Affiliate of the Administrative Agent or a Lender, including any Cash Collateral;

(f) all Equipment;

(g) all General Intangibles (including Payment Intangibles);

(h) all Investment Property;

(i) all Commercial Tort Claims;

(j) all Goods;

(k) all Fixtures;

(l) all books and records (including customer lists, files, correspondence, tapes, computer programs, printouts and computer records) pertaining to the foregoing; and

(m) all accessions to, substitutions for, and all replacements, products, and cash and non-cash Proceeds of the foregoing, including Proceeds of and unearned premiums with respect to insurance policies, and claims against any Person for loss, damage or destruction of any Collateral.

3. Perfection. As of the date of execution of this Agreement or Security Joinder Agreement by each Grantor, as applicable (with respect to each Grantor, its "Applicable Date"), such Grantor shall have:

(a) if the Administrative Agent requests such Grantor to prepare such financing statements, furnished the Administrative Agent with duly authorized financing statements in form, number and substance suitable for filing in each Grantor's jurisdiction of organization or as otherwise required by the Uniform Commercial Code in such jurisdiction of organization, sufficient under Applicable Law, and satisfactory to the Administrative Agent in order that upon the filing of the same the Administrative Agent, for the benefit of the Secured Parties, shall have a duly perfected security interest in all Collateral in which a security interest can be perfected by the filing of such financing statements;

(b) to the extent expressly required by the terms hereof or of the Credit Agreement, or otherwise as the Administrative Agent may reasonably request, furnished the Administrative Agent with Qualifying Control Agreements or other control agreements (in form and substance reasonably satisfactory to Administrative Agent), and use commercially reasonable efforts to furnish to the Administrative Agent issuer acknowledgments of the Administrative Agent's interest in Letter-of-Credit Rights, and evidence of the placement of a restrictive legend on tangible chattel paper (and the tangible components of electronic Chattel Paper), and taken appropriate action acceptable to the Administrative Agent sufficient to establish the Administrative Agent's control of electronic Chattel Paper (and the electronic components of hybrid Chattel Paper), as appropriate, with respect to Collateral in which a security interest can be perfected only by control or such restrictive legending, in each case in form and substance reasonably acceptable to the Administrative Agent and sufficient under Applicable Law so that the Administrative Agent, for the benefit of the Secured Parties, shall have a security interest in all such Collateral perfected by control; and

(c) to the extent expressly required by the terms hereof or of the Credit Agreement, or otherwise as the Administrative Agent may reasonably request, delivered to the Administrative Agent or, if the Administrative Agent shall specifically consent in each instance, an agent or bailee of the Administrative Agent that has acknowledged such status in a properly executed control agreement (in form and substance reasonably satisfactory to Administrative Agent) possession of all Collateral with respect to which a security interest can be perfected only by possession, and including in the case of Instruments, Documents, and Investment Property that are in the form of certificated securities, duly executed endorsements or stock powers in blank, as the case may be, affixed thereto in form and substance acceptable to the Administrative Agent and sufficient under Applicable Law so that the Administrative Agent, for the benefit of the Secured Parties, shall have a security interest in all such Collateral perfected by possession;

with the effect that the Liens conferred in favor of the Administrative Agent shall be and remain duly perfected and of first priority subject only, to the extent applicable, to Permitted Liens. All financing statements (including all amendments thereto and continuations thereof), control agreements, certificates, acknowledgments, stock powers and other documents, electronic identification, restrictive legends, and instruments furnished in connection with the creation, enforcement, protection, perfection or priority of the Administrative Agent's security interest in Collateral, including such items as are described above in this Section 3, are sometimes referred to herein as "Perfection Documents". The delivery of possession of items of or evidencing Collateral, causing other Persons to execute and deliver Perfection Documents as appropriate, the filing or recordation of Perfection Documents, the establishment of control over items of Collateral, and the taking of such other actions as may be necessary or advisable in the determination of the Administrative Agent to create, enforce, protect, perfect, or establish or maintain the priority of, the security interest of the Administrative Agent for the benefit of the Secured Parties in the Collateral is sometimes referred to herein as "Perfection Action".

Notwithstanding anything to the contrary in this Agreement or any Loan Documents, no Grantor shall be required to take any action to perfect the security interest in Collateral under the laws of any jurisdiction outside the United States of America.

For the avoidance of doubt, (i) the grant of a security interest herein shall not be deemed to be an assignment of intellectual property rights owned by any Grantor and (ii) the security interest granted under this Agreement shall not extend to, and the definition of "Collateral" and definitions of and references to asset categories in the definition of Collateral and elsewhere in this Agreement or any agreement entered into or pursuant to this Agreement shall not include, Excluded Assets and, for the avoidance of doubt, no provision of this Agreement including, without limitation, any representation, warranty or covenant shall apply to any such Excluded Assets.

4. Maintenance of Security Interest; Further Assurances.

(a) Each Grantor will from time to time at its own expense, deliver Perfection Documents, and take such other or additional Perfection Action, as may be required by the terms of the Loan Documents or, subject to the limitations set forth in the Loan Documents, as the Administrative Agent may reasonably request in connection with the administration or enforcement of this Agreement or related to the Collateral or any part thereof in order to carry out the terms of this Agreement, to perfect, protect, maintain the priority of or enforce the Administrative Agent's security interest in the Collateral, subject only to Permitted Liens, or otherwise to better assure and confirm unto the Administrative Agent its rights, powers and remedies for the benefit of the Secured Parties hereunder. Without limiting the foregoing, but subject to the limitations set forth in the Loan Documents, each Grantor hereby irrevocably authorizes the Administrative Agent to file (with, or to the extent permitted by applicable law, without the signature of the applicable Grantor appearing thereon) financing statements (including amendments thereto and initial financing statements in lieu of continuation statements) or other Perfection Documents (including copies thereof) showing such Grantor as "debtor" at such time or times and in all filing offices as the Administrative Agent may from time to time determine to be necessary or advisable to perfect or protect the rights of the Administrative Agent and the Secured Parties hereunder, or otherwise to give effect to the transactions herein contemplated. Each Grantor hereby irrevocably ratifies and acknowledges the Administrative Agent's authority to have effected filings of Perfection Documents made by the Administrative Agent prior to its Applicable Date.

(b) With respect to any and all Collateral, each Grantor shall promptly pay upon written demand therefor by the Administrative Agent of all fees and expenses (including documentary stamp, excise or intangibles taxes) incurred in connection with the preparation, delivery, or filing of any Perfection Document or the taking of any Perfection Action to perfect, protect or enforce a security interest in Collateral in favor of the Administrative Agent for the benefit of the Secured Parties, subject only to Permitted Liens. All amounts not so paid when due shall constitute additional Secured Obligations and (in addition to other rights and remedies resulting from such nonpayment) shall bear interest from the date of demand until paid in full at the Default Rate.

(c) Each Grantor agrees to maintain among its books and records appropriate notations or evidence of, and to the extent required by GAAP to make or cause to be made appropriate disclosure upon its financial statements of, the security interest granted hereunder to the Administrative Agent for the benefit of the Secured Parties.

5. Receipt of Payment. In the event an Event of Default shall occur and be continuing and a Grantor (or any of its Affiliates, subsidiaries, stockholders, directors, officers, employees or agents) shall receive any proceeds of Collateral, including without limitation monies, checks, notes,

drafts or any other items of payment, each Grantor shall hold all such items of payment in trust for the Administrative Agent for the benefit of the Secured Parties, and as the property of the Administrative Agent for the benefit of the Secured Parties, separate from the funds and other property of such Grantor, and no later than the first Business Day following the receipt thereof, at the election of the Administrative Agent, such Grantor shall cause such Collateral to be forwarded to the Administrative Agent for its custody, possession and disposition on behalf of the Secured Parties in accordance with the terms hereof and of the other Loan Documents.

6. Preservation and Protection of Collateral.

(a) The Administrative Agent shall be under no duty or liability with respect to the collection, protection or preservation of the Collateral, or otherwise, beyond the use of reasonable care in the custody and preservation thereof while in its possession or as otherwise required by the UCC. Each Grantor shall be responsible for the safekeeping of its Collateral, and, except to the extent determined by a final nonappealable judgment of a court of competent jurisdiction to have resulted from the gross negligence or willful misconduct of the Administrative Agent, the Administrative Agent shall not have any responsibility for (i) any loss or damage thereto or destruction thereof occurring or arising in any manner or fashion from any cause, (ii) any diminution in the value thereof or (iii) any act or default of any carrier, warehouseman, bailee or forwarding agency thereof or other Person in any way dealing with or handling such Collateral.

(b) Each Grantor agrees to (i) keep and maintain its tangible personal property Collateral as required pursuant to Section 6.13 of the Credit Agreement, (ii) to pay when due all taxes, charges and assessments against the Collateral as required pursuant to Section 6.06 of the Credit Agreement and (iii) promptly upon a Senior Officer or other executive officer of Borrower obtaining knowledge thereof, to cause to be terminated and released all Liens (other than Permitted Liens) on the Collateral. Upon the failure of any Grantor to so pay or contest such taxes, charges, or assessments, or cause such Liens to be terminated, the Administrative Agent at its option may pay or contest any of them or amounts relating thereto (the Administrative Agent having the sole right to determine the legality or validity and the amount necessary to discharge such taxes, charges, Liens or assessments) but shall not have any obligation to make any such payment or contest. All sums so disbursed by the Administrative Agent, including all reasonable and documented out-of-pocket fees and expenses of counsel (collectively, "Attorneys' Costs"), court costs, reasonable expenses and other charges related thereto, shall be payable on demand by the applicable Grantor to the Administrative Agent and shall be additional Secured Obligations secured by the Collateral, and any amounts not so paid on demand (in addition to other rights and remedies resulting from such nonpayment) shall bear interest from the date of demand until paid in full at the Default Rate.

7. Status of Grantors and Collateral Generally. Each Grantor represents and warrants to, and covenants with, the Administrative Agent for the benefit of the Secured Parties, with respect to itself and the Collateral as to which it has or acquires any interest, that:

(a) It is at its Applicable Date (or as to Collateral acquired after its Applicable Date will be upon the acquisition of the same) and, except as permitted by the Credit Agreement and subsection (b) of this Section 7, will continue to be, the owner of the Collateral, free and clear of all Liens, other than the security interest hereunder in favor of the Administrative Agent for the benefit of the Secured Parties and Permitted Liens, and that it will at its own cost and expense defend such Collateral and any products and proceeds thereof against all claims and demands of all Persons (other than holders of Permitted Liens) to the extent of their claims permitted under the Credit Agreement at any time claiming the same. Upon the failure of any Grantor to so defend, the Administrative Agent may do so at its option but shall not have any obligation to do so. All sums so disbursed by the Administrative Agent, including reasonable and documented Attorneys' Costs, court costs, expenses and other charges related thereto, shall be payable on demand by the applicable Grantor to the Administrative Agent and shall be additional Secured Obligations secured by the Collateral, and any amounts not so paid on demand (in addition to other rights and remedies resulting from such nonpayment) shall bear interest from the date of demand until paid in full at the Default Rate.

(b) It shall not (i) sell, assign, transfer, lease, license or otherwise dispose of any of, or grant any option with respect to, the Collateral, except as permitted under the Credit Agreement or (ii) create or suffer to exist any Lien upon or with respect to any of the Collateral except for the security interests created by this Agreement and Permitted Liens.

(c) It has full power, legal right and lawful authority to enter into this Agreement (and any Security Joinder Agreement applicable to it) and to perform its terms, including the grant of the security interests in the Collateral herein provided for.

(d) No authorization, consent, approval or other action by, and no notice to or filing with, any Governmental Authority or any other Person which has not been given or obtained, as the case may be, is required either (i) for the grant by such Grantor of the security interests granted hereby or for the execution, delivery or performance by such Grantor of this Agreement (or any Security Joinder Agreement) by such Grantor, or (ii) for the perfection of or the exercise by the Administrative Agent, on behalf of the Secured Parties, of its rights and remedies hereunder, except for action required by the Uniform Commercial Code to perfect and exercise remedies with respect to the security interest conferred hereunder.

(e) No effective financing statement or other Perfection Document similar in effect, nor any other Perfection Action, covering all or any part of the Collateral purported to be granted or taken by or on behalf of such Grantor (or by or on behalf of any other Person and which remains effective as against all or any part of the Collateral) has been filed in any recording office, delivered to another Person for filing (whether upon the occurrence of a contingency or otherwise), or otherwise taken, as the case may be, except such as pertain to Permitted Liens and such as may have been filed for the benefit of, delivered to, or taken in favor of, the Administrative Agent for the benefit of the Secured Parties in connection with the security interests conferred hereunder.

(f) Schedule 7(f) to the Disclosure Letter contains true and complete information as to each of the following: (i) the exact legal name of each Grantor as it appears in its Organic Documents as of its Applicable Date and at any time during the five (5) year period ending as of its Applicable Date (the "Covered Period"), (ii) the jurisdiction of formation and form of organization of each Grantor, and the identification number of such Grantor in its jurisdiction of formation (if any) as of its Applicable Date and at any time during the Covered Period, (iii) each address of the chief executive office of each Grantor as of its Applicable Date and at any time during the Covered Period, (iv) all trade names or trade styles used by such Grantor as of its Applicable Date and at any time during the Covered Period, (v) the address of each location of such Grantor at which any tangible personal property Collateral (including Account Records and Account Documents) is located at its Applicable Date or has been located at any time during the Covered Period, (vi) with respect to each location described in clause (v) that is not owned beneficially and of record by such Grantor, the name and address of the owner thereof and such owner's relationship to such Grantor (e.g. lessor, warehousemen) as of its Applicable Date and (vii) the name of each Person other than such Grantor and the address of such Person at which any tangible personal property Collateral of such Grantor is held under any warehouse, consignment, bailment or other arrangement as of its Applicable Date. No Grantor shall change its name, change its jurisdiction of formation (whether by reincorporation, merger or otherwise), or change the location of its chief executive office, except in each case upon giving not less than thirty (30) days' prior written notice to the Administrative Agent (or such shorter period of time as may be agreed by the Administrative Agent) and taking or causing to be taken at such Grantor's expense all such Perfection Action, including the delivery of such Perfection Documents, as may be reasonably requested by the Administrative Agent to perfect or protect, or maintain the perfection and priority of, the Lien of the Administrative Agent for the benefit of the Secured Parties in the Collateral contemplated hereunder.

(g) No Grantor shall engage in any consignment transaction in respect of any of the Collateral with a book or replacement value in excess of $5,000,000 as consignor, without prior notice to the Administrative Agent in each instance.

(h) No Grantor shall cause or permit any of the tangible personal property Collateral with a book or replacement value in excess of $5,000,000 (i) to be evidenced by any document of title (except for shipping documents as necessary or customary to effect the receipt of raw materials or components or the delivery of inventory to customers, in each case in the Ordinary Course of Business) or (ii) to be in the possession, custody or control of any warehouseman or other bailee without prior notice to the Administrative Agent in each instance.

(i) No tangible personal property Collateral, other than Inventory in transit, is or shall be located at any location that is leased in the United States by such Grantor from any other Person other than Inventory the value of which, when aggregated with all other Inventory kept at any location which is leased by all Grantors in the United States, is less than $5,000,000, unless (i) such location and lessor is set forth on Schedule 7(f) to the Disclosure Letter or such Grantor provides not less than thirty (30) days' prior written notice thereof to the Administrative Agent (or such shorter period of time as may be agreed by the Administrative Agent), (ii) to the extent requested by the Administrative Agent for locations not set forth on Schedule 7(f) to the Disclosure Letter and disclosed to the Administrative Agent after the date hereof, such Grantor has used commercially reasonable efforts to obtain from such lessor an acknowledgment of the Lien in favor of the Administrative Agent for the benefit of the Secured Parties conferred hereunder and a waiver of its statutory and consensual liens and rights with respect to such Collateral in form and substance reasonably acceptable to the Administrative Agent and delivered in writing to the Administrative Agent prior to any Collateral being located at any such location, and (iii) subject to the limitations set forth herein, such Grantor shall have caused at its expense to be prepared and executed such additional Perfection Documents and to be taken such other Perfection Action as the Administrative Agent may deem necessary or advisable to carry out the transactions contemplated by this Agreement.

8. [Reserved.]

9. Specific Collateral.

(a) Accounts. With respect to the Accounts of such Grantor whether now existing or hereafter created or acquired and wheresoever located, each Grantor represents, warrants and covenants to the Administrative Agent for the benefit of the Secured Parties that:

(i) Each Grantor shall keep accurate and complete in all material respects records of its Accounts ("Account Records") and from time to time upon the reasonable request of the Administrative Agent such Grantor shall provide the Administrative Agent with a schedule of Accounts in form and substance acceptable to the Administrative Agent describing all Accounts created or acquired by such Grantor ("Schedule of Accounts"); provided, however, that such Grantor's failure to provide any such Schedule of Accounts shall not affect or limit the Administrative Agent's security interest or other rights in and to any Accounts for the benefit of the Secured Parties. If reasonably requested by the Administrative Agent, each Grantor shall furnish the Administrative Agent with copies of proof of delivery and other documents relating to the Accounts so scheduled, including without limitation repayment histories and present status reports (collectively, "Account Documents") and such other matter and information relating to the status of then existing Accounts as the Administrative Agent shall request.

(ii) All Account Records and Account Documents are and shall at all times be located only at such Grantor's current chief executive office as set forth on Schedule 7(f) to the Disclosure Letter, such other locations as are specifically identified on Schedule 7(f) to the Disclosure Letter as an "Account Documents location," or as to which such Grantor has given prior written notice to the Administrative Agent.

(iii) The Accounts are genuine, are in all respects what they purport to be, are not evidenced by an instrument or document or, if evidenced by an instrument or document, are only evidenced by one original instrument or document.

(iv) The Accounts cover bona fide sales, leases, licenses or other dispositions of property usually dealt in by such Grantor, or the rendition by such Grantor of services, to an Account Debtor in the Ordinary Course of Business.

(v) The amounts of the face value of any Account shown or reflected on any Schedule of Accounts, invoice statement, or certificate delivered to the Administrative Agent, are actually owing to such Grantor and are not contingent for any reason and there are no setoffs, discounts, allowances, claims, counterclaims or disputes of any kind or description in an amount greater than $5,000,000 in the aggregate, or greater than $1,000,000 individually, known to be existing or asserted with respect thereto and such Grantor has not made any agreement with any Account Debtor thereunder for any deduction therefrom, except as may be stated in the Schedule of Accounts and reflected in the calculation of the face value of each respective invoice related thereto.

(vi) Except for conditions generally applicable to such Grantor's industry and markets, there are no facts, events, or occurrences known to such Grantor pertaining particularly to any Accounts which are reasonably expected to materially impair in any way the validity, collectibility or enforcement of Accounts that would reasonably be likely, in the aggregate, to be of material economic value, or in the aggregate materially reduce the amount payable thereunder from the amount of the invoice face value shown on any Schedule of Accounts, or on any certificate, contract, invoice or statement delivered to the Administrative Agent with respect thereto.

(vii) The property or services giving rise thereto are not, and were not at the time of the sale or performance thereof, subject to any Lien, claim, encumbrance or security interest, except those of the Administrative Agent for the benefit of Secured Parties and Permitted Liens.

(b) Inventory. With respect to its Inventory whether now existing or hereafter created or acquired and wheresoever located, each Grantor represents, warrants and covenants to the Administrative Agent for the benefit of the Secured Parties that:

(i) Each Grantor shall keep accurate and complete in all material respects records of its Inventory, and shall furnish to the Administrative Agent from time to time upon the reasonable request of the Administrative Agent, a current schedule of Inventory ("Schedule of Inventory") based upon its most recent physical inventory and its daily inventory records.

(ii) All Inventory in the United States, other than Inventory in transit and Inventory having a value of less than $5,000,000 in the aggregate, is and shall at all times be located only at such Grantor's locations as set forth on Schedule 7(f) attached hereto or at such other locations as to which such Grantor has given prior written notice to the Administrative Agent. No Grantor shall, other than Inventory in transit and in the Ordinary Course of Business in connection with its sale, lease, license or other dispositions of Collateral in accordance with Section 7.05 of the Credit Agreement, remove any Inventory having an aggregate value in excess of that stated in the preceding sentence from such locations.

(c) Deposit Accounts. With respect to its Deposit Accounts (other than any Excluded Deposit Account) whether now existing or hereafter created or acquired and wheresoever located, each Grantor represents, warrants and covenants to the Administrative Agent for the benefit of the Secured Parties that:

(i) Schedule 9(c) to the Disclosure Letter contains a true and complete description of each Deposit Account (other than any Excluded Deposit Account) of such Grantor.

(ii) Except with the express prior written consent of the Administrative Agent in each instance, all Deposit Accounts (other than any Excluded Deposit Account) shall be maintained at all times with depositary institutions as to which the Administrative Agent shall have received a Qualifying Control Agreement. Without limiting the generality of the foregoing, no Grantor shall cause, or permit (x) any deposit to be evidenced by a certificate of deposit unless such certificate of deposit is a negotiable instrument and immediately upon receipt thereof such certificate shall have been delivered to the Administrative Agent, together with a duly executed undated assignment in blank affixed thereto, or (y) any Deposit Account (other than any Excluded Deposit Account) not listed on Schedule 9(c) to the Disclosure Letter to be opened or maintained except in each case upon giving not less than thirty (30) days' prior written notice to the Administrative Agent (or such shorter period of time as may be agreed by the Administrative Agent) and taking or causing to be taken at such Grantor's expense all such Perfection Action, including the delivery of such Perfection Documents, as may be reasonably requested by the Administrative Agent to perfect or protect, or maintain the perfection and priority of, the Lien of the Administrative Agent for the benefit of the Secured Parties in such Deposit Account contemplated hereunder.

(d) Instruments. With respect to its Instruments constituting Collateral whether now existing or hereafter created or acquired and wheresoever located, each Grantor represents, warrants and covenants to the Administrative Agent for the benefit of the Secured Parties that:

(i) Each Grantor shall promptly (and in any event within 30 days after the acquisition by the Grantor thereof) deliver to the Administrative Agent the originals of all Instruments constituting Collateral having a face amount payable in excess of $2,500,000, in each case together with duly executed undated endorsements in blank affixed thereto and such other documentation and information as may be necessary to enable the Administrative Agent to realize upon such Instruments in accordance with their respective terms or transfer such Instruments as may be permitted under the Loan Documents or by Applicable Law; provided that if the aggregate face amount of all Instruments not required to be delivered pursuant to the foregoing sublcause (B) exceeds $7,500,000, then the Grantors shall be required to deliver Instruments and related endorsements in accordance with such subclause (B) in an amount equal to such excess.

(ii) Other than in the Ordinary Course of Business and as the applicable Grantor may determine in its reasonable business judgment, no Grantor shall amend, modify, waive or terminate any provision of, or fail to exercise promptly and diligently each material right or remedy conferred under or in connection with, any Instrument constituting Collateral, in any case in such a manner as could reasonably be expected to materially adversely affect the value of such affected Instrument as Collateral.

10. Insurance Requirements. Each Grantor shall maintain insurance covering the Collateral in accordance with the provisions of Section 6.07 of the Credit Agreement. From time to time upon request, the Grantors shall deliver to the Administrative Agent copies of its insurance policies. Unless the Administrative Agent shall agree otherwise, each policy relating to the Collateral shall include satisfactory endorsements (a) showing the Administrative Agent as additional insured or lender loss payee, as applicable and (b) requiring 30 days' prior written notice to the Administrative Agent in the event of cancellation of the policy for any reason whatsoever. If any Grantor fails to provide and pay for any insurance, the Administrative Agent may, at its option, but shall not be required to, procure the insurance and charge the Grantors therefor. Each Grantor agrees to deliver to the Administrative Agent, promptly as rendered, copies of all reports made to insurance companies for claims in respect of the Collateral in excess of $5,000,000. While no Event of Default exists, the Grantors may settle, adjust or compromise any insurance claim. If an Event of Default exists, only the Administrative Agent shall be authorized to settle, adjust and compromise such claims. Notwithstanding anything to the contrary in this Agreement, the other Loan Documents or the terms of the insurance policies and endorsements obtained pursuant to this Section 10, if an Event of Default exists, Administrative Agent shall only be entitled to receive insurance proceeds in respect of the Collateral.

11. Rights and Remedies Upon Event of Default. Upon and during the continuance of an Event of Default, the Administrative Agent shall have the following rights and remedies on behalf of the Secured Parties in addition to any rights and remedies set forth elsewhere in this Agreement or the other Loan Documents, all of which may be exercised with or, if allowed by law, without notice to a Grantor:

(a) All of the rights and remedies of a secured party under the UCC or under other Applicable Law, all of which rights and remedies shall be cumulative, and none of which shall be exclusive, to the extent permitted by law, in addition to any other rights and remedies contained in this Agreement or any other Loan Document;

(b) The right to foreclose the Liens and security interests created under this Agreement by any available judicial procedure or without judicial process;

(c) The right to (i), to the extent permitted by law, enter upon the premises of a Grantor through self-help and without judicial process, without first obtaining a final judgment or giving such Grantor notice or opportunity for a hearing on the validity of the Administrative Agent's claim and without any obligation to pay rent to such Grantor, or any other place or places where any Collateral is located and kept, and remove the Collateral therefrom to the premises of the Administrative Agent or any agent of the Administrative Agent, for such time as the Administrative Agent may desire, in order effectively to collect or liquidate the Collateral (subject, in the case of any premises that are leased, to any applicable landlord waiver agreements that may be entered into by the Administrative Agent related to such premises), (ii) require such Grantor or any bailee or other agent of such Grantor to assemble the Collateral and make it available to the Administrative Agent at a place to be designated by the Administrative Agent that is reasonably convenient to both parties, and (iii) notify any or all Persons party to a control agreement or who otherwise have possession of or control over any Collateral of the occurrence of an Event of Default and other appropriate circumstances, and exercise control over and take possession or custody of any or all Collateral in the possession, custody or control of such other Persons;

(d) The right to (i) exercise all of a Grantor's rights and remedies with respect to the collection of any Collateral consisting of Accounts, Chattel Paper, Instruments, Supporting Obligations and General Intangibles (collectively, "Payment Collateral"), including the right to demand payment thereof and enforce payment, by legal proceedings or otherwise; (ii) settle, adjust, compromise, extend or renew all or any Payment Collateral or any legal proceedings pertaining thereto; (iii) discharge and release all or any Payment Collateral; (iv) take control, in any manner, of any item of payment or proceeds referred to in Section 5 above; (v) prepare, file and sign a Grantor's name on any proof of claim in bankruptcy, notice of Lien, assignment or satisfaction of Lien or similar document in any action or proceeding adverse to any obligor under any Payment Collateral or otherwise in connection with any Payment Collateral; (vi) endorse the name of a Grantor upon any chattel paper, document, instrument, invoice, freight bill, bill of lading or similar document or agreement relating to any Collateral; (vii) to the extent permitted by the applicable user agreement or license, use the information recorded on or contained on a Grantor's internet website or otherwise in any data processing equipment and computer hardware and software relating to any Collateral to which a Grantor has access; (viii) open such Grantor's mail relating to Payment Collateral and collect any and all amounts due to such Grantor from any Account Debtors or other obligor in respect of Payment Collateral; (ix) notify any or all Account Debtors or other obligor on any Payment Collateral that such Payment Collateral has been assigned to the Administrative Agent for the benefit of the Secured Parties and that Administrative Agent has a security interest therein for the benefit of the Secured Parties; each Grantor hereby agrees that any such notice, in the Administrative Agent's sole discretion, may (but need not) be sent on such Grantor's stationery, in which event such Grantor shall co-sign such notice with the Administrative Agent if requested to do so by the Administrative Agent; and (x) do all acts and things and execute all documents necessary, in Administrative Agent's sole discretion, to collect the Payment Collateral; and

(e) The right to sell all or any Collateral in its then existing condition, or after any further manufacturing or processing thereof, at such time or times, at public or private sale or sales, with such notice as may be required by law, in lots or in bulk, for cash or on credit, with or without representations and warranties, all as the Administrative Agent, in its sole discretion, may deem advisable. The Administrative Agent shall have the right to conduct such sales on a Grantor's premises or elsewhere and shall have the right to use a Grantor's premises without charge for such sales for such time or times as the Administrative Agent may see fit. The Administrative Agent may, if it deems it reasonable, postpone or adjourn any sale of the Collateral from time to time by an announcement at the time and place of such postponed or adjourned sale, and such sale may, without further notice, be made at the time and place to which it was so adjourned. Each Grantor agrees that the Administrative Agent has no obligation to preserve rights to the Collateral against prior parties or to marshal any Collateral for the benefit of any Person. The Administrative Agent for the benefit of the Secured Parties is hereby granted (to the extent grantable by such Grantor without breaching or violating any agreement applicable thereto) an irrevocable fully paid non-exclusive license (subject, in the case of trademarks, to sufficient rights to quality control and inspection in favor of such Grantor to avoid risk of invalidation of such trademarks, and, in the case of trade secrets, to an obligation of the Administrative Agent to take reasonable steps under the circumstances to keep the trade secrets confidential to avoid the risk of invalidation of such trade secrets) or other right (including each Grantor's rights under any license or any franchise agreement), each of which shall remain in full force and effect until the Facility Termination Date, to use, without charge, each of the labels, patents, copyrights, names, trade secrets, trade names, trademarks and advertising matter, or any property of a similar nature owned or licensed by any Grantor, as it pertains to the Collateral, in completing production of, advertising for sale and selling any Collateral. If any of the Collateral shall require repairs, maintenance, preparation or the like, or is in process or other unfinished state, the Administrative Agent shall have the right, but shall not be obligated, to perform such repairs, maintenance, preparation, processing or completion of manufacturing for the purpose of putting the same in such saleable form as the Administrative Agent shall deem appropriate, but the Administrative Agent shall have the right to sell or dispose of the Collateral without such processing and no Grantor shall have any claim against the Administrative Agent for the value that may have been added to such Collateral with such processing. In addition, each Grantor agrees that in the event notice is necessary under applicable law, written notice mailed to such Grantor in the manner specified herein ten (10) days prior to the date of public sale of any of the Collateral or prior to the date after which any private sale or other disposition of the Collateral will be made shall constitute commercially reasonable notice to such Grantor. To the extent permitted by law, all notice is hereby waived with respect to any of the Collateral which threatens to decline speedily in value or is of a type customarily sold on a recognized market. The Administrative Agent may purchase all or any part of the Collateral at public or, if permitted by law, private sale, free from any right of redemption which is hereby expressly waived to the extent permitted by law by such Grantor and, in lieu of actual payment of such purchase price, may set off the amount of such price against the Secured Obligations.

The net cash proceeds resulting from the collection, liquidation, sale, or other disposition of the Collateral shall be applied first to the expenses (including all Attorneys' Costs) of retaking, holding, storing, processing and preparing for sale, selling, collecting, liquidating and the like, and then to the satisfaction of all Secured Obligations in accordance with the terms of Section 8.03 of the Credit Agreement. Each Grantor shall be liable to the Administrative Agent, for the benefit of the Secured Parties, and shall pay to the Administrative Agent, for the benefit of the Secured Parties, on demand any deficiency which may remain after such sale, disposition, collection or liquidation of the Collateral (it being understood that no Grantor shall be liable with respect to any such remaining Secured Obligations that constitute Excluded Swap Obligations in respect of such Grantor).

12. Attorney-in-Fact. Each Grantor hereby appoints the Administrative Agent as such Grantor's attorney-in-fact for the purposes of carrying out the provisions of this Agreement and taking any action and executing any instrument which the Administrative Agent may reasonably deem necessary or advisable to accomplish the purposes hereof, which appointment is irrevocable and coupled with an interest; provided that the Administrative Agent shall have and may exercise rights under this power of attorney only upon the occurrence and during the continuance of an Event of Default and, subject to reinstatement pursuant to Section 13 below, such power of attorney shall terminate on the Facility Termination Date. Without limiting the generality of the foregoing, upon the occurrence and during the continuance of an Event of Default, the Administrative Agent shall have the right and power to: (a) ask, demand, collect, sue for, recover, compromise, receive and

give acquittance and receipts for moneys due and to become due under or in respect of any of the Collateral; (b) receive, endorse and collect any drafts or other instruments, documents and chattel paper in connection with the foregoing clause (a); (c) endorse such Grantor's name on any checks, notes, drafts or any other payment relating to or constituting proceeds of the Collateral which comes into the Administrative Agent's possession or the Administrative Agent's control, and deposit the same to the account of the Administrative Agent, for the benefit of the Secured Parties, on account and for payment of the Secured Obligations; (d) file any claims or take any action or institute any proceedings that the Administrative Agent may deem necessary or desirable for the collection of any of the Collateral or otherwise to enforce the rights of the Administrative Agent, for the benefit of the Secured Parties, with respect to any of the Collateral; and (e) execute, in connection with any sale or other disposition of Collateral provided for herein, any endorsement, assignments, or other instruments of conveyance or transfer with respect thereto.

13. Reinstatement. The granting of a security interest in the Collateral and the other provisions hereof shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any of the Secured Obligations is rescinded or must otherwise be returned by any Secured Party or is repaid by any Secured Party in whole or in part in good faith settlement of a pending or threatened avoidance claim, whether upon the insolvency, bankruptcy or reorganization of any Grantor or any other Loan Party or otherwise, all as though such payment had not been made. The provisions of this Section 13 shall survive repayment of all of the Obligations and the termination or expiration of this Agreement in any manner, including but not limited to termination upon occurrence of the Facility Termination Date.

14. Certain Waivers by the Grantors. Each Grantor waives to the extent permitted by Applicable Law (a) any right to require any Secured Party or any other obligee of the Secured Obligations to (i) proceed against any Person or entity, including without limitation any Loan Party, (ii) proceed against or exhaust any Collateral or other collateral for the Secured Obligations, or (iii) pursue any other remedy in its power, (b) any defense arising by reason of any disability or other defense of any other Person, or by reason of the cessation from any cause whatsoever of the liability of any other Person or entity, (c) any right of subrogation, and (d) any right to enforce any remedy which any Secured Party or any other obligee of the Secured Obligations now has or may hereafter have against any other Person and any benefit of and any right to participate in any collateral or security whatsoever now or hereafter held by the Administrative Agent for the benefit of the Secured Parties. Each Grantor authorizes each Secured Party and each other obligee of the Secured Obligations without notice (except notice required by applicable law) or demand and without affecting its liability hereunder or under the Loan Documents from time to time to: (i) take and hold security, other than the Collateral herein described, for the payment of such Secured Obligations or any part thereof, and exchange, enforce, waive and release the Collateral herein described or any part thereof or any such other security; and (ii) upon the occurrence and during the continuance of an Event of Default, apply such Collateral or other security and direct the order or manner of sale thereof as such Secured Party or obligee in its discretion may determine.

The Administrative Agent may at any time deliver (without representation, recourse or warranty) the Collateral or any part thereof to a Grantor and the receipt thereof by such Grantor shall be a complete and full acquittance for the Collateral so delivered, and the Administrative Agent shall thereafter be discharged from any liability or responsibility therefor.

15. Continued Powers. Until the Facility Termination Date shall have occurred, the power of sale and other rights, powers and remedies granted to the Administrative Agent for the benefit of the Secured Parties hereunder shall continue to exist and may be exercised by the Administrative Agent at any time and from time to time irrespective of the fact that any of the Secured Obligations or any part thereof may have become barred by any statute of limitations or that any part of the liability of any Grantor may have ceased.

16. Other Rights. The rights, powers and remedies given to the Administrative Agent for the benefit of the Secured Parties by this Agreement shall be in addition to all rights, powers and remedies given to the Administrative Agent or any other Secured Party under any Loan Document or by virtue of any statute or rule of law. Any forbearance or failure or delay by the Administrative Agent in exercising any right, power or remedy hereunder shall not be deemed to be a waiver of such right, power or remedy, and any single or partial exercise of any right, power or remedy hereunder shall not preclude the further exercise thereof; and every right, power and remedy of the Secured Parties shall continue in full force and effect until such right, power or remedy is specifically waived in accordance with the terms of the Credit Agreement.

17. Anti-Marshaling Provisions. The right is hereby given by each Grantor to the Administrative Agent, for the benefit of the Secured Parties, to make releases (whether in whole or in part) of all or any part of the Collateral agreeable to the Administrative Agent without notice to, or the consent, approval or agreement of other parties and interests, including junior lienors, which releases shall not impair in any manner the validity of or priority of the Liens and security interests in the remaining Collateral conferred hereunder, nor release any Grantor from personal liability for the Secured Obligations. Notwithstanding the existence of any other security interest in the Collateral held by the Administrative Agent, for the benefit of the Secured Parties, the Administrative Agent shall have the right to determine the order in which any or all of the Collateral shall be subjected to the remedies provided in this Agreement. Each Grantor hereby waives any and all right to require the marshaling of assets in connection with the exercise of any of the remedies permitted by Applicable Law or provided herein or in any other Loan Document.

18. Entire Agreement. This Agreement and each Security Joinder Agreement, together with the Credit Agreement and other Loan Documents, constitute and express the entire understanding among the parties hereto with respect to the subject matter hereof, and supersede all prior negotiations, agreements and understandings, inducements, commitments or conditions, express or implied, oral or written, except as contained in the Loan Documents. The express terms hereof control and supersede any course of performance or usage of the trade inconsistent with any of the terms hereof. Neither this Agreement nor any Security Joinder Agreement nor any portion or provision hereof or thereof may be changed, altered, modified, supplemented, discharged, canceled, terminated, or amended orally or in any manner other than as provided in the Credit Agreement.

19. Third Party Reliance. Each Grantor hereby consents and agrees that all issuers of or obligors in respect of any Collateral, and all securities intermediaries, warehousemen, bailees, public officials and other Persons having any interest in, possession of, control over or right, privilege, duty or discretion in respect of, any Collateral shall be entitled to accept the provisions hereof and of the Security Joinder Agreements as conclusive evidence of the right of the Administrative Agent, on behalf of the Secured Parties, to exercise its rights hereunder or thereunder with respect to the Collateral, notwithstanding any other notice or direction to the contrary heretofore or hereafter given by any Grantor or any other Person to any of such Persons.

20. Binding Agreement; Assignment. This Agreement and each Security Joinder Agreement, and the terms, covenants and conditions hereof and thereof, shall be binding upon and inure to the benefit of the parties hereto and thereto, and to their respective successors and assigns, except that no Grantor shall be permitted to assign this Agreement, any Security Joinder Agreement or any interest herein or therein or, except as expressly permitted herein or in the Credit Agreement, in the Collateral or any part thereof or interest therein. Without limiting the generality of the foregoing sentence of this Section 20, any Lender may assign to one or more Persons, or grant to one or more Persons participations in or to, all or any part of its rights and obligations under the Credit Agreement (to the extent permitted by the Credit Agreement); and to the extent of any such assignment or participation such other Person shall, to the fullest extent permitted by law, thereupon become vested with all the benefits in respect thereof granted to such Lender herein or otherwise, subject however, to the provisions of the Credit Agreement, including Article IX thereof (concerning the Administrative Agent) and Section 10.06 thereof (concerning assignments and participations). All references herein to the Administrative Agent shall include any successor thereof.

21. Bank Products. No Cash Management Bank or Hedge Bank that obtains the benefit of this Agreement shall have any right to notice of any action or to consent to, direct or object to any action hereunder or otherwise in respect of the Collateral (including the release or impairment of any Collateral) (or to notice of or to consent to any amendment, waiver or modification of the provisions hereof) other than in its capacity as a Lender and, in such case, only to the extent expressly provided in the Loan Documents. Notwithstanding any other provision of this Agreement to the contrary, the Administrative Agent shall not be required to verify the payment of, or that other satisfactory arrangements have been made with respect to, the Secured Obligations arising under Bank Products unless the Administrative Agent has received written notice of such Obligations, together with such supporting documentation as the Administrative Agent may request, from the applicable Cash Management Bank or Hedge Bank, as the case may be. Each Secured Party not a party to the Credit Agreement that obtains the benefit of this Agreement shall be deemed to have acknowledged and accepted the appointment of the Administrative Agent pursuant to the terms of the Credit Agreement, and that with respect to the actions and omissions of the Administrative Agent hereunder or otherwise relating hereto that do or may affect such Secured Party, the Administrative Agent and each of its Related Parties shall be entitled to all the rights, benefits and immunities conferred under Article IX of the Credit Agreement.

22. Severability. If any provision of this Agreement is held to be illegal, invalid or unenforceable, (a) the legality, validity and enforceability of the remaining provisions of this Agreement shall not be affected or impaired thereby and (b) the parties shall endeavor in good faith

negotiations to replace the illegal, invalid or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the illegal, invalid or unenforceable provisions. The invalidity of a provision in a particular jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

23. Counterparts. This Agreement may be executed in any number of counterparts each of which when so executed and delivered shall be deemed an original, and it shall not be necessary in making proof of this Agreement to produce or account for more than one such counterpart executed by the Grantor against whom enforcement is sought. Without limiting the foregoing provisions of this Section 23, the provisions of Section 10.10 of the Credit Agreement shall be applicable to this Agreement.

24. Termination. Subject to the provisions of Section 13, (i) this Agreement and each Security Joinder Agreement, and all obligations of the Grantors hereunder (excluding those obligations and liabilities that expressly survive such termination) shall terminate without delivery of any instrument or performance of any act by any party on the Facility Termination Date and (ii) this Agreement and any applicable Security Joinder Agreement, and all obligations of a Grantor hereunder (excluding those obligations and liabilities that expressly survive such termination) shall terminate as to such Grantor upon the release of such Grantor as a Guarantor by the Administrative Agent. In connection with any Asset Disposition or other transfer or disposition of Collateral permitted under the Credit Agreement, the security interest granted hereby in such Collateral shall automatically terminate upon consummation of such Asset Disposition or other transfer or disposition without delivery of any instrument or performance of any act by any party. Upon any such termination of this Agreement or release of Collateral in connection with any Asset Dispositions or other transfers or dispositions permitted under the Credit Agreement, the Administrative Agent shall, at the request and sole expense of the applicable Grantors, promptly deliver to the applicable Grantors such termination statements and take such further actions as such Grantors may reasonably request to terminate of record, or otherwise to give appropriate notice of the termination of, any Lien conferred hereunder.

25. Notices. Any notice required or permitted hereunder shall be given, (a) with respect to each Grantor, at the address of the Borrower indicated in Schedule 10.02 of the Credit Agreement and (b) with respect to the Administrative Agent or any other Secured Party, at the Administrative Agent's address indicated in Schedule 10.02 of the Credit Agreement. All such addresses may be modified, and all such notices shall be given and shall be effective, as provided in Section 10.02 of the Credit Agreement for the giving and effectiveness of notices and modifications of addresses thereunder.

26. Joinder. Each Person that shall at any time execute and deliver to the Administrative Agent a Security Joinder Agreement substantially in the form attached hereto as Exhibit A shall thereupon irrevocably, absolutely and unconditionally become a party hereto and obligated hereunder as a Grantor and shall have thereupon pursuant to Section 2 granted a security interest in and collaterally assigned to the Administrative Agent for the benefit of the Secured Parties all Collateral in which it has at its Applicable Date or thereafter acquires any interest or the power to transfer, and all references herein and in the other Loan Documents to the Grantors or to the parties

to this Agreement shall be deemed to include such Person as a Grantor hereunder. Each Security Joinder Agreement shall be accompanied by the Supplemental Schedules referred to therein, appropriately completed with information relating to the Grantor executing such Security Joinder Agreement and its property. Each of the applicable Schedules attached hereto shall be deemed amended and supplemented without further action by such information reflected on the Supplemental Schedules.

27. Rules of Interpretation. The rules of interpretation contained in Section 1.02 of the Credit Agreement shall be applicable to this Agreement and each Security Joinder Agreement and are hereby incorporated by reference. All representations and warranties contained herein shall survive the delivery of documents and any extension of credit referred to herein or secured hereby.

28. Governing Law; Jurisdiction; Etc. THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK. Without limiting the general applicability of the foregoing and the terms of the other Loan Documents to this Agreement and the parties hereto, the terms of Sections 10.14 and 10.15 of the Credit Agreement are incorporated herein by reference, *mutatis mutandis*, with each reference to the "Borrower" therein (whether express or by reference to the Borrower as a "party" thereto) being a reference to the Pledgors, and the parties hereto agree to such terms.

29. Acknowledgement Regarding Any Supported QFCs. To the extent that the Loan Documents provide support, through a guarantee or otherwise, for any Hedging Agreement or any other agreement or instrument that is a QFC (such support, "QFC Credit Support", and each such QFC, a "Supported QFC"), the parties acknowledge and agree as follows with respect to the resolution power of the Federal Deposit Insurance Corporation under the Federal Deposit Insurance Act and Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act (together with the regulations promulgated thereunder, the "U.S. Special Resolution Regimes") in respect of such Supported QFC and QFC Credit Support (with the provisions below applicable notwithstanding that the Loan Documents and any Supported QFC may in fact be stated to be governed by the laws of the State of New York and/or of the United States or any other state of the United States):

(a) In the event a Covered Entity that is party to a Supported QFC (each, a "Covered Party") becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer of such Supported QFC and the benefit of such QFC Credit Support (and any interest and obligation in or under such Supported QFC and such QFC Credit Support, and any rights in property securing such Supported QFC or such QFC Credit Support) from such Covered Party will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if the Supported QFC and such QFC Credit Support (and any such interest, obligation and rights in property) were governed by the laws of the United States or a state of the United States. In the event a Covered Party or a BHC Act Affiliate of a Covered Party becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under the Loan Documents that might otherwise apply to such Supported QFC or any QFC Credit Support that may be exercised against such Covered Party are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if the Supported QFC and the Loan Documents were governed by the laws of the United States or a state of the United States. Without limitation of the foregoing, it is understood and agreed that rights and remedies of the parties with respect to a

Defaulting Lender shall in no event affect the rights of any Covered Party with respect to a Supported QFC or any QFC Credit Support.

(b) As used in this Section 29, the following terms have the following meanings:

"BHC Act Affiliate" of a party means an "affiliate" (as such term is defined under, and interpreted in accordance with, 12 U.S.C. 1841(k)) of such party.

"Covered Entity" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

"Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

"QFC" has the meaning assigned to the term "qualified financial contract" in, and shall be interpreted in accordance with, 12 U.S.C. 5390(c)(8)(D).

[Signature pages follow.]

IN WITNESS WHEREOF, the parties have duly executed and delivered this Security Amended and Restated Agreement on the day and year first written above.

GRANTORS:

SANMINA CORPORATION
CERTAINSOURCE TECHNOLOGY GROUP, INC.
CST REAL ESTATE LLC
HADCO CORPORATION
HADCO SANTA CLARA, INC.
PRIMARY SOURCING CORP.
SCI TECHNOLOGY, INC.
SENSORWISE, INC.

By: /s/ Christopher K. Sadeghian
Name: Christopher K. Sadeghian
Title: Secretary

ADMINISTRATIVE AGENT:

BANK OF AMERICA, N.A., as Administrative Agent

By:/s/ Christine Trotter____
Name: Christine Trotter
Title: Assistant Vice President

Exhibit 14.1

SANMINA CORPORATION

CODE OF BUSINESS CONDUCT AND ETHICS

(as revised on December 3, 2018)

I. INTRODUCTION

This Code of Business Conduct and Ethics helps ensure compliance with legal requirements and our standards of business conduct, and it applies to all worldwide employees (including executive officers) of Sanmina Corporation and its wholly-owned subsidiaries (collectively, the “Company”) and to members of its Board of Directors. All Company employees are expected to read and understand this Code of Business Conduct and Ethics, uphold these standards in day-to-day activities, comply with all applicable policies and procedures, and ensure that all agents and contractors are aware of, understand and adhere to these standards.

Because the principles described in this Code of Business Conduct and Ethics are general in nature, you should also review all applicable Company policies and procedures for more specific instruction, and contact the Human Resources Department or Legal Department if you have any questions.

Nothing in this Code of Business Conduct and Ethics, in any company policies and procedures, or in other related communications (verbal or written) creates or implies an employment contract or term of employment.

We are committed to continuously reviewing and updating our policies and procedures. Therefore, this Code of Business Conduct and Ethics is subject to modification. This Code of Business Conduct and Ethics supersedes all other such codes, policies, procedures, instructions, practices, rules or written or verbal representations to the extent they are inconsistent.

Please sign the acknowledgment form at the end of this Code of Business Conduct and Ethics and return the form to the Human Resources Manager at your facility indicating that you have received, read, understand and agree to comply with the Code of Business Conduct and Ethics. The signed acknowledgment form will be located in your personnel file. As part of the Company’s ongoing compliance process, officers and other appropriate personnel will be asked to periodically complete online training regarding the principles contained in the Code of Business Conduct and Ethics. In addition, periodically, you may be asked to participate in seminars, training meetings and similar activities related to reinforcing your understanding of this Code of Business Conduct and Ethics and its applicability to the Company’s business.

II. COMPLIANCE IS EVERYONE'S BUSINESS

Ethical business conduct is critical to our business. As an employee, your responsibility is to respect and adhere to these practices. Many of these practices reflect legal or regulatory requirements. Violations of these laws and regulations can create significant liability for you, the Company, its directors, officers, and other employees.

Part of your job and ethical responsibility is to help enforce this Code of Business Conduct and Ethics. You should be alert to possible violations and report possible violations to the Human Resources Department or the Legal Department. Violations can be reported as follows:

General Counsel
Sanmina Corporation
2700 North First Street
San Jose, CA 95134
Phone: (408) 964-3500
Fax: (408) 964-3888

The Company maintains an anonymous Open Door Hotline. The Hotline provides a method for employees to confidentially report suspected violations of this Code of Business Conduct and Ethics, either by toll-free phone access or web access. Employees and stakeholders may use this Hotline for reporting, among other things, matters pertaining to accounting, internal accounting controls, or auditing matters. This Hotline is operated by a third-party service provider to ensure anonymity. Employees can access the Hotline as follows:

Telephone (from the United States/Canada): 1-866-879-0424
Please go to www.opendoor.ethicspoint.com for the current list of international numbers.

Internet: www.opendoor.ethicspoint.com

If you believe that, based on the nature of the suspected improprieties and the persons you believe to be involved, reporting violations to the Human Resources Department or the Legal Department would be ineffective, you may report such violations to the Chairperson of the Audit Committee or to the Chairperson of the Nominating and Governance Committee. Reports can be made to the Chairperson of the Audit Committee or the Chairperson of the Nominating and Governance Committee as follows:

Chairperson of the Audit Committee
Sanmina Corporation
2700 North First Street
San Jose, CA 95134
Phone: (408) 964-3850

Chairperson of the Nominating and Governance Committee
Sanmina Corporation
2700 North First Street
San Jose, CA 95134
Phone: (408) 964-3390

The Company will promptly and thoroughly investigate all credible allegations of breaches of this Code of Business Conduct and Ethics as appropriate under the circumstances. You must cooperate in any internal or external investigations of possible violations.

You should know that reprisal, threats, retribution or retaliation against any person who has in good faith reported a violation or a suspected violation of law, this Code of Business Conduct and Ethics or other Company policies, or against any person who is assisting in any investigation or process with respect to such a violation, is both a violation of Company policy and is prohibited by a variety of state and federal civil and criminal laws including the Sarbanes-Oxley Act of 2002. Accordingly, the Company will not permit the making of any reprisal, threats, retribution or retaliation or similar actions against any person making a good faith report of a suspected violation of law, this Code of Business Conduct and Ethics or other Company policies.

Violations of law, this Code of Business Conduct and Ethics or other Company policies or procedures by Company employees can lead to disciplinary action up to and including termination.

In trying to determine whether any given action is appropriate, use the following test. Imagine that the words you are using or the action you are taking is going to be fully disclosed in the media with all the details, including your photo. If you are uncomfortable with the idea of this information being made public, perhaps you should think again about your words or your course of action.

In all cases, if you are unsure about the appropriateness of an event or action, please seek assistance in interpreting the requirements of these practices by contacting the Legal Department.

III. YOUR RESPONSIBILITIES TO THE COMPANY AND ITS STOCKHOLDERS

A. General Standards of Conduct

The Company expects all employees, agents and contractors to exercise good judgment to ensure the safety and welfare of employees, agents and contractors and to maintain a cooperative, efficient, positive, harmonious and productive work environment and business organization. These standards apply while working on our premises or remotely, at offsite locations where our business is being conducted, at Company-sponsored business and social events, or at any other place where you are a representative of the Company. Employees, agents or contractors who engage in misconduct or whose performance is unsatisfactory may be subject to corrective action, up to and including termination. You should review our employment handbook for more detailed information.

B. Applicable Laws

All Company employees, agents and contractors must comply with all applicable laws, regulations, rules and regulatory orders. Company employees located outside of the United States must comply with laws, regulations, rules and regulatory orders of the United States, including the Foreign Corrupt Practices Act and the U.S. Export Control Act, in addition to applicable local laws. Each employee, agent and contractor must acquire appropriate knowledge of the requirements relating to his or her duties sufficient to enable him or her to recognize potential dangers and to know when to seek advice from the Legal Department on specific Company policies and procedures. Violations of laws, regulations, rules and orders may subject the employee, agent or contractor to individual criminal or civil liability, as well as to discipline by the Company. Such individual violations may also subject the Company to civil or criminal liability or the loss of business.

C. Conflicts of Interest

Each of us has a responsibility to the Company, our stockholders and each other. Although this duty does not prevent us from engaging in personal transactions, investments and relationships, it does require that we avoid situations where a conflict of interest might occur or appear to occur. The Company is subject to scrutiny from customers, suppliers, governmental agencies and other institutions. We should always strive to avoid even the appearance of impropriety.

What constitutes a conflict of interest? A conflict of interest exists where the interests or benefits of one person (including an employee) or entity conflict with the interests or benefits of the Company. Examples include:

(i) **Employment/Outside Employment**. In consideration of your employment with the Company, you are expected to devote your full attention to the business interests of the Company. You are prohibited from engaging in any activity that interferes with your performance or responsibilities to the Company or is otherwise in conflict with or prejudicial to the Company. Our policies prohibit any employee from accepting simultaneous full-time or part-time employment with another company without obtaining the consent of both your immediate supervisor and the General Counsel of the Company. If you have any questions on this requirement, you should contact your supervisor or the Legal Department.

(ii) **Outside Directorships**. The Company views serving on the Board of Directors or in a similar capacity with any entity as a potential conflict of interest. Therefore, prior to accepting any such appointment, you must obtain the consent of both your immediate supervisor and the General Counsel of the Company. Such approval may be conditioned upon the completion of specified actions. Also, any compensation you receive for such service should be commensurate to your responsibilities.

(iii) **Business Interests**. You must disclose to your manager any interest that you have that may conflict with the business of the Company. This can be an ownership interest in a company that does or is proposing to do business with the Company. “Interest” is construed broadly and includes any ownership position, director or officer position or familial relationship with an owner, director or officer. Therefore, if you are considering investing in a Company customer, supplier, developer or competitor, you must first take great care to ensure that these investments do not compromise your responsibilities to the Company. Many factors should be considered in determining whether a conflict exists, including the size and nature of the investment; your ability to influence the Company’s decisions; your access to confidential information of the Company or of the other company; and the nature of the relationship between the Company and the other company. Therefore, while owning a few hundred shares of a publicly traded “tier-one” competitor or supplier will not, by itself, violate Company policy, ownership of five or ten percent of the outstanding shares of a small privately-held supplier to the Company could constitute a violation of Company policy and must be disclosed.

(iv) **Family and Personal Relationships**. Family and personal relationships among employees can also present a conflict of interest. For that reason, you may not cause to become employed, or conduct Company business with a relative or significant other or with a business in which a relative or significant other is an officer, director or investor without prior disclosure to the Chief Financial Officer of the Company. If such transactions involve the Company's directors or executive officers, they must be disclosed in advance to the Chief Financial Officer and be reviewed by the Company's Audit Committee. Relatives include spouse, sister, brother, daughter, son, mother, father, grandparents, aunts, uncles, nieces, nephews, cousins, step relationships, and in-laws. Significant others include persons living in a spousal (including same sex) or familial fashion with an employee. Any dealings with a relative, significant other or business in which a relative or significant other is associated must be conducted in such a way that no preferential treatment is given to them.

Similarly, the Company discourages the employment of relatives, significant others and employees involved in a romantic relationship with each other in positions or assignments within the same department. Furthermore, no manager shall have a romantic relationship with another employee in their reporting line or for whom such manager can directly or indirectly influence the employment or compensation of such employee. The purpose of this policy is to prevent the organizational impairment, conflicts of interest and risks of sexual harassment that are a potential outcome of the employment of relatives, significant others or romantic partners, especially in a supervisor/subordinate relationship.

(v) **Other Situations**. Because other conflicts of interest may arise, it would be impractical to attempt to list all possible situations. If a proposed transaction or situation raises any questions or doubts in your mind, you should consult the Legal Department.

D. Corporate Opportunities

Employees, officers and directors may not exploit for their own personal gain opportunities that are discovered through the use of corporate property, information or position unless the opportunity is disclosed fully in writing to the Company’s Board of Directors and the Board of Directors declines to pursue such opportunity.

E. Payments or Gifts

Under no circumstances may employees, agents, contractors, vendors or consultants: (i) accept any offer, payment, promise to pay, or authorization to pay any money, gift, or anything of value from customers or suppliers, or (ii) offer to pay, make payment, promise to pay, or issue authorization to pay any money, gift, or anything of value to customers or suppliers in a manner that is intended, directly or indirectly, to influence any business decision or to cause any action or failure to act that would constitute the commitment of fraud. Inexpensive gifts, infrequent business meals, celebratory events and entertainment, provided that they are not excessive or create an appearance of impropriety, do not violate this policy. Questions regarding whether a particular payment or gift violates this policy are to be directed to Human Resources or the Legal Department.

F. Protecting the Company's Confidential Information

The Company's confidential information is a valuable asset. The Company’s confidential information includes, but is not limited to, product architectures; source codes; product plans and road maps; names and lists of customers, dealers, and employees; and financial information. This information is the property of the Company and may be protected by patent, trademark, copyright and trade secret laws. All confidential information must be used for Company business purposes only. Every employee, agent and contractor must safeguard it. **THIS RESPONSIBILITY INCLUDES NOT DISCLOSING THE COMPANY CONFIDENTIAL INFORMATION SUCH AS INFORMATION REGARDING THE COMPANY'S PRODUCTS OR BUSINESS OVER THE INTERNET UNLESS YOU HAVE CONFIRMED THAT A NONDISCLOSURE AGREEMENT IS IN PLACE AND THAT THE ELECTRONIC COMMUNICATIONS ARE APPROPRIATELY SAFEGUARDED.** This responsibility includes the safeguarding, securing and proper disposal of confidential information in accordance with the Company's policy on Maintaining and Managing Records set forth in Section III (L) of this Code of Business Conduct and Ethics. This obligation extends to confidential information of third parties, which the Company has rightfully received under Non-Disclosure Agreements. See the Company's policy dealing with Handling the Confidential Information of Others set forth in Section III (G) of this Code of Business Conduct and Ethics.

(i) **Proprietary Information and Inventions Agreement**. When you joined the Company, you signed an agreement to protect and hold confidential the Company's proprietary information. This agreement remains in effect for as long as you work for the Company and after you leave the Company. Under this agreement, you may not disclose the Company's confidential information to anyone or use it to benefit anyone other than the Company without the prior written consent of an authorized Company officer.

(ii) **Disclosure of Company Confidential Information**. To further the Company's business, from time to time our confidential information may be disclosed to potential business partners. However, such disclosure should never be done without carefully considering its potential benefits and risks. If you determine in consultation with your manager and other appropriate Company management that disclosure of confidential information is necessary, you must then contact the Legal Department to ensure that an appropriate written nondisclosure agreement is signed prior to the disclosure. The Company has standard nondisclosure agreements suitable for most disclosures. You must not sign a third party's nondisclosure agreement or accept changes to the Company's standard nondisclosure agreements without review and approval by the Company's Legal Department; provided, however, that this prohibition shall not apply to a document which you are required to sign in order to gain access to a particular location (e.g., the electronic document that certain companies require you to sign in order to get a badge). In addition, all Company materials that contain Company confidential information, including presentations, must be reviewed and approved by either an individual having the title of Vice President or higher or the Company's Legal Department prior to publication or use. Furthermore, any employee publication or publicly made statement that might be perceived or construed as attributable to the Company, made outside the scope of his or her employment with the Company, must be reviewed and approved in writing in advance by the Company's Legal Department and must include the Company's standard disclaimer that the publication or statement represents the views of the specific author and not of the Company.

(iii) **Requests by Regulatory Authorities**. The Company and its employees, agents and contractors must cooperate with appropriate government inquiries and investigations. In this context, however, it is important to protect the legal rights of the Company with respect to its confidential information. All government requests for information, documents or investigative interviews must be referred to the Company's Legal Department. No financial information may be disclosed without the prior written approval of the Chief Financial Officer.

(iv) **Company Spokespeople**. Specific policies have been established regarding who may communicate information to the press and the financial analyst community on behalf of the Company. All inquiries or calls from the press and financial analysts for statements, comments or information on behalf of the Company should be referred to the Chief Financial Officer or Investor Relations Department. The Company has designated its CEO, CFO and Investor Relations Department as official Company spokespeople for financial matters. The Company has designated its Investor Relations Department as official Company spokespeople for marketing, technical and other such information. These designees are the only people who may communicate with the press on behalf of the Company.

G. Handling the Confidential Information of Others

The Company has many kinds of business relationships with many companies and individuals. Sometimes, they will volunteer confidential information about their products or business plans to induce the Company to enter into a business relationship. At other times, we may request that a third party provide confidential information to permit the Company to evaluate a potential business relationship with that party. Whatever the situation, we must take special care to handle the confidential information of others responsibly. We handle such confidential information in accordance with our agreements with such third parties. See also the Company's policy on Maintaining and Managing Records in Section III (L) of this Code of Business Conduct and Ethics.

(i) **Appropriate Nondisclosure Agreements**. Confidential information may take many forms. An oral presentation about a company's product development plans may contain protected trade secrets. A customer list or employee list may be a protected trade secret. A demo of an alpha version of a company's new software may contain information protected by trade secret and copyright laws.

You should never accept information offered by a third party that is represented as confidential, or which appears from the context or circumstances to be confidential, unless an appropriate nondisclosure agreement has been signed with the party offering the information. **THE LEGAL DEPARTMENT CAN PROVIDE NONDISCLOSURE AGREEMENTS TO FIT ANY PARTICULAR SITUATION, AND WILL COORDINATE APPROPRIATE EXECUTION OF SUCH AGREEMENTS ON BEHALF OF THE COMPANY.** Even after a nondisclosure agreement is in place, you should accept only the information necessary to accomplish the purpose of receiving it, such as a decision on whether to proceed to negotiate a deal. If more detailed or extensive confidential information is offered and it is not necessary, for your immediate purposes, it should be refused.

(ii) **Need-to-Know**. Once a third party's confidential information has been disclosed to the Company, we have an obligation to abide by the terms of the relevant nondisclosure agreement and limit its use to the specific purpose for which it was disclosed and to disseminate it only to other Company employees with a need to know the information. Every employee, agent and contractor involved in a potential business relationship with a third party must understand and strictly observe the restrictions on the use and handling of confidential information. When in doubt, consult the Legal Department.

(iii) **Notes and Reports**. When reviewing the confidential information of a third party under a nondisclosure agreement, it is natural to take notes or prepare reports summarizing the results of the review and, based partly on those notes or reports, to draw conclusions about the suitability of a business relationship. Notes or reports, however, can include confidential information disclosed by the other party and so should be retained only long enough to complete the evaluation of the potential business relationship. Subsequently, they should be either destroyed or turned over to the Legal Department for safekeeping or destruction. The Legal Department will make a judgment as to whether such notes can be destroyed or whether they should be retained in accordance with the Company’s records retention policies. Such notes should be treated just as any other disclosure of confidential information is treated: marked as confidential and distributed only to those Company employees with a need to know.

(iv) **Competitive Information**. You should never attempt to obtain a competitor's confidential information by improper means, and you should especially never contact a competitor regarding their confidential information. While the Company may, and does, employ former employees of competitors, we recognize and respect the obligations of those employees not to use or disclose the confidential information of their former employers.

H. Obligations Under Securities Laws -"Insider" Trading

Obligations under the U.S. securities laws apply to everyone. In the normal course of business, officers, directors, employees, agents, contractors and consultants of the Company may come into possession of significant, sensitive information. This information is the property of the Company -- you have been entrusted with it. You may not profit from it by buying or selling securities yourself, or passing on the information to others to enable them to profit or for them to profit on your behalf. The purpose of this policy is both to inform you of your legal responsibilities and to make clear to you that the misuse of sensitive information is contrary to Company policy and U.S. securities laws.

Insider trading is a crime, penalized by fines of up to $5,000,000 and 20 years in jail for individuals. In addition, the SEC may seek the imposition of a civil penalty of up to three times the profits made or losses avoided from the trading. Insider traders must also disgorge any profits made, and are often subjected to an injunction against future violations. Finally, insider traders may be subjected to civil liability in private lawsuits.

Employers and other controlling persons (including supervisory personnel) are also at risk under U.S. securities laws. Controlling persons may, among other things, face penalties of the greater of $5,000,000 or three times the profits made or losses avoided by the trader if they recklessly fail to take preventive steps to control insider trading.

Thus, it is important both to you and the Company that insider-trading violations not occur. You should be aware that stock market surveillance techniques are becoming increasingly sophisticated, and the chance that U.S. federal or other regulatory authorities will detect and prosecute even small-level trading is significant. Insider trading rules are strictly enforced, even in instances when the financial transactions seem small. You should contact the Legal Department if you are unsure as to whether or not you are free to trade.

The Company has imposed a trading blackout period on members of the Board of Directors, executive officers and certain designated employees who, as a consequence of their position with the Company, are more likely to be exposed to material nonpublic information about the Company. These directors, executive officers and employees generally may not trade in Company securities during the blackout period.

For more details, and to determine if you are restricted from trading during trading blackout periods, you should review the Company’s Insider Trading Policy. You can request a copy of this policy from the Legal Department. You should take a few minutes to read the Insider Trading Policy carefully, paying particular attention to the specific policies and the potential criminal and civil liability and/or disciplinary action for insider trading violations. Employees, agents and contractors of the Company who violate such policy are also subject to disciplinary action by the Company, which may include termination of employment or of business relationship. All questions regarding the Company's Insider Trading Policy should be directed to the Company's General Counsel.

I. Prohibition Against Hedging or Pledging of Company Stock

The Company believes that “hedging,” a term used to describe certain practices taken to reduce the economic risk of Company stock ownership (e.g., to prevent losses if the Company’s stock price were to fall) is inappropriate when undertaken by employees, officers or directors as such techniques reduce alignment with the interests of our public stockholders. As a result, no Company director, officer or other employee, agent or contractor may engage in short sales of the Company’s securities or other transactions intended to hedge or offset any decrease in the market value of the Company’s common stock. Similarly, the Company believes that “pledging” of Company stock by employees, officers or directors (i.e., using Company stock as collateral for a loan, such as in a margin account) can be inappropriate when such practice could cause shares to be sold during a trading blackout period or while the individual is in possession of material non-public information and would otherwise be prohibited from selling under this policy. Therefore, the Company prohibits officers and directors from (i) depositing any Company common stock in a margin account or (ii) pledging Company securities as collateral for a loan, unless approved by the Nominating and Governance Committee of the Board.

J. Public Reporting Requirements

(i) **General.** Accounting and other business records are relied upon in the preparation of reports the Company files with certain government agencies, such as the SEC. These reports must contain full, timely and understandable information and accurately reflect the Company’s financial condition and results of operations.

(ii) **Employee Responsibilities.** Employees who collect, provide or analyze information for or otherwise contribute in any way in preparing or verifying these reports must strive to ensure that the Company’s financial disclosures are accurate and verifiable, thus to enable stockholders and potential investors to assess the soundness and risks of the Company’s business and finances and the quality and integrity of the Company’s accounting and disclosures. The integrity of the Company’s public disclosures depends on the accuracy and completeness of the Company’s records. To that end:

a. All business transactions must be supported by appropriate documentation and reflected accurately in the Company’s books and records; in particular, no “side letters” or understandings, oral or written, that deviate from express contractual terms may be entered into;

b. No entry be made that intentionally mischaracterizes the nature or proper accounting of a transaction;

c. No employee may take or authorize any action that would cause the Company’s financial records or disclosures to fail to comply with generally accepted accounting principles, the rules and regulations of the SEC or other applicable laws, rules and regulations;

d. All employees must cooperate fully with the Company’s independent public accountants and counsel, respond to their questions with candor and provide them with complete and accurate information to help ensure that the Company’s books and records, as well as the Company’s reports filed with the SEC, are accurate and complete; and

e. No employee should knowingly make (or cause or encourage any other person to make) any false or misleading statement in any report filed with the SEC or other government agency, or knowingly omit (or cause or encourage any other person to omit) any information necessary to make the disclosure in any of the Company's reports accurate in all material respects.

Any employee who becomes aware of any departure from these standards has a responsibility to report his or her knowledge promptly to his or her manager or through the Open Door Hotline.

K. Use of Company's Assets

(i) **General**. Protecting the Company's assets is a key fiduciary responsibility of every employee, agent and contractor. Care should be taken to ensure that assets are not misappropriated, loaned to others, or sold or donated, without appropriate authorization. All Company employees, agents and contractors are responsible for the proper use of Company assets, and must safeguard such assets against loss, damage, misuse or theft. Employees, agents or contractors who violate any aspect of this policy or who demonstrate poor judgment in the manner in which they use any Company asset may be subject to disciplinary action, up to and including termination of employment or business relationship at the Company's sole discretion. Company equipment and assets are to be used for Company business purposes only. With the exception of computers and cell phones (for which reasonable personal use is allowed, subject to the provisions in Subsection III (K) (iv) below), employees, agents and contractors may not use Company assets for personal use, nor may they allow any other person to use Company assets. Employees who have any questions regarding this policy should bring them to the attention of the Company's Human Resources Department.

(ii) **Physical Access Control**. The Company has and will continue to develop procedures covering physical access control to ensure privacy of communications, maintenance of the security of the Company communication equipment, and safeguard Company assets from theft, misuse and destruction. You are personally responsible for complying with the level of access control that has been implemented in the facility where you work on a permanent or temporary basis. You must not defeat or cause to be defeated the purpose for which the access control was implemented.

(iii) **Company Funds**. Every Company employee is personally responsible for all Company funds over which he or she exercises control. Company agents and contractors should not be allowed to exercise control over Company funds. Company funds must be used only for Company business purposes. Every Company employee, agent and contractor must take reasonable steps to ensure that the Company receives good value for Company funds spent, and must maintain accurate and timely records of each and every expenditure. Expense reports must be accurate and submitted in a timely manner. Company employees, agents and contractors must not use Company funds for any personal purpose.

(iv) **Computers and Other Equipment**. The Company strives to furnish employees with the equipment necessary to efficiently and effectively do their jobs. You must care for that equipment and to use it responsibly only for Company business purposes. If you use Company equipment at your home or off site, take precautions to protect it from theft or damage, just as if it were your own. If the Company no longer employs you, you must immediately return all Company equipment. While computers and other electronic devices (including cell phones) are made accessible to employees to assist them to perform their jobs and to promote the Company's interests, all such computers and electronic devices, whether used entirely or partially on the Company's premises or with the aid of the Company's equipment or resources, must remain fully accessible to the Company and, to the maximum extent permitted by law, will remain the sole and exclusive property of the Company. You should not install any software on your Company computer which has not been provided to you by the Company.

To the extent permitted by applicable law, employees, agents and contractors should not maintain any expectation of privacy with respect to information transmitted over, received by, or stored in any electronic communications device owned, leased, or operated in whole or in part by or on behalf of the Company. To the extent permitted by applicable law, the Company retains the right to gain access to any information received by, transmitted by, or stored in any such electronic communications device, by and through its employees, agents, contractors, or representatives, at any time, either with or without an employee's or third party's knowledge, consent or approval.

(v) **Software**. All software used by employees to conduct Company business must be appropriately licensed. Never make or use illegal or unauthorized copies of any software, whether in the office, at home, or on the road, since doing so may constitute copyright infringement and may expose you and the Company to potential civil and criminal liability. In addition, use of illegal or unauthorized copies of software may subject the employee to disciplinary action, up to and including termination. The Company's IT Department will inspect Company computers periodically to verify that only approved and licensed software has been installed. Any non-licensed/supported software will be removed.

(vi) **Electronic Usage**. The purpose of this policy is to make certain that employees utilize electronic communication devices in a legal, ethical, and appropriate manner. This policy addresses the Company's responsibilities and concerns regarding the fair and proper use of all electronic communications devices within the organization, including computers, e-mail, connections to the Internet, intranet and extranet and any other public or private networks, voice mail, video conferencing, facsimiles, and telephones. Posting or discussing information concerning the Company's products or business on the Internet without the prior written consent of the Company's CFO is prohibited. Any other form of electronic communication used by employees currently or in the future is also intended to be encompassed under this policy. It is not possible to identify every standard and rule applicable to the use of electronic communications devices. Employees are therefore encouraged to use sound judgment whenever using any feature of our communications systems. The complete set of policies with respect to electronic usage of the Company's assets is located on the Sanmina intranet site. You are expected to review, understand and follow such policies and procedures.

L. Maintaining and Managing Records

The Company maintains a Records Retention Policy intended to ensure that Company records are retained only as long as required for the Company's business operations or archival purposes, or to satisfy specific requirements including, but not limited to accounting, audit, legal and tax requirements. Once the applicable retention policy has expired (and provided there is no legal hold on Company records), Company records shall be promptly destroyed in accordance with the policy. Records include paper documents, CDs, computer hard disks, email, floppy disks, microfiche, microfilm or all other media. Furthermore, records are deemed to include personal data within the meaning of the European Union General Data Protection Regulation 2016/679 ("GDPR"). The Company is required by local, state, federal, foreign and other applicable laws and regulations such as (but not limited to) the GDPR to retain certain records and to follow specific guidelines in the management, processing and disposal of its records. Civil and criminal penalties for failure to comply with such guidelines can be severe for employees, agents, contractors and the Company, and failure to comply with such guidelines may subject the employee, agent or contractor to disciplinary action, up to and including termination of employment or business relationship at the Company's sole discretion.

M. Records on Legal Hold

A legal hold suspends all document destruction procedures in order to preserve appropriate records under special circumstances, such as litigation or government investigations. The Company's Legal Department determines and identifies what types of Company records or documents are required to be placed under a legal hold. Every Company employee, agent and contractor must comply with this policy. Failure to comply with this policy may subject the employee, agent or contractor to disciplinary action, up to and including termination of employment or business relationship at the Company's sole discretion.

The Company's Legal Department will notify you if a legal hold is placed on records for which you are responsible. You then must preserve and protect the necessary records in accordance with instructions from the Company's Legal Department. **RECORDS OR SUPPORTING DOCUMENTS THAT HAVE BEEN PLACED UNDER A LEGAL HOLD MUST NOT BE DESTROYED, ALTERED OR MODIFIED UNDER ANY CIRCUMSTANCES**. A legal hold remains effective until it is officially released in writing by the Company's Legal Department. If you are unsure whether a document has been placed under a legal hold, you should preserve and protect that document while you check with the Company's Legal Department.

If you have any questions about this policy you should contact the Company's Legal Department.

N. Political Contributions

The Company reserves the right to communicate its position on important issues to elected representatives and other government officials. It is the Company's policy to comply fully with all local, state, federal, foreign and other applicable laws, rules and regulations regarding political contributions. The Company's funds or assets must not be used for, or be contributed to, political campaigns or political practices under any circumstances without the prior written approval of the Company's Legal Department and, if required, the Board of Directors.

O. Foreign Corrupt Practices Act

The Company requires full compliance with the Foreign Corrupt Practices Act ("FCPA") by all of its employees, agents, and contractors.

The anti-bribery and corrupt payment provisions of the FCPA make illegal any corrupt offer, payment, promise to pay, or authorization to pay any money, gift, or anything of value to any foreign official, or any foreign political party, candidate or official, for the purpose of: influencing any act or failure to act, in the official capacity of that foreign official or party; or inducing the foreign official or party to use influence to affect a decision of a foreign government or agency, in order to obtain or retain business for anyone, or direct business to anyone.

All Company employees, agents and contractors whether located in the United States or abroad, are responsible for FCPA compliance and the procedures to ensure FCPA compliance. All managers and supervisory personnel are expected to monitor continued compliance with the FCPA to ensure compliance with the highest moral, ethical and professional standards of the Company. FCPA compliance includes the Company's policy on Maintaining and Managing Records in Section III (L) of this Code of Business Conduct and Ethics.

Laws in most countries outside of the United States also prohibit or restrict government officials or employees of government agencies from receiving payments, entertainment, or gifts for the purpose of winning or keeping business. No contract or agreement may be made with any business in which a government official or employee holds a significant interest, without the prior approval of the Company's Legal Department.

P. Export Controls

A number of countries maintain controls on the destinations to which products or software may be exported. Some of the strictest export controls are maintained by the United States against countries that the U.S. government considers unfriendly or as supporting international terrorism. The U.S. regulations are complex and apply both to exports from the United States and to exports of products from other countries, when those products contain U.S.-origin components or technology. Software created in the United States is subject to these regulations even if duplicated and packaged abroad. In some circumstances, an oral presentation containing technical data made to foreign nationals in the United States may constitute a controlled export. The Legal Department can provide you with guidance on which countries are prohibited destinations for Company products or whether a proposed technical presentation to foreign nationals may require a U.S. Government license. Accordingly, you should check with the Legal Department in advance of effecting any offshore transaction that may raise concerns regarding compliance with U.S. export control laws.

Q. Building Security

If you suspect any illegal activity, security breach (whether in fences, cages, attempts by unauthorized personnel to gain entry or otherwise), or dangerous situation, it is critical that you report the violation to management, the security guard or to your human resources representative as soon as possible. In the event you come into contact with a person who doesn't have the appropriate badge or other credential, you should politely inquire as to the individual's business on the premises and, if unsatisfied with the response, promptly report the individual to the security guard and/or your human resources representative. In the event of an emergency, you should dial 911 (if you are in the United States) or the appropriate emergency number (if you are outside of the United States).

IV. RESPONSIBILITIES TO OUR CUSTOMERS AND OUR SUPPLIERS

A. Customer Relationships

If your job puts you in contact with any Company customers or potential customers, it is critical for you to remember that you represent the Company to the people with whom you are dealing. Act in a manner that creates value for our customers and helps to build a relationship based upon trust. The Company and its employees have provided products and services for many years and have built up significant goodwill over that time. This goodwill is one of our most important assets, and the Company's employees, agents and contractors must act to preserve and enhance our reputation.

B. Publications of Others

The Company subscribes to many publications that help employees do their jobs better. These include newsletters, reference works, online reference services, magazines, books, and other digital and printed works. Copyright law generally protects these works, and their unauthorized copying and distribution constitute copyright infringement. You must first obtain the consent of the publisher of a publication before copying publications or significant parts of them. When in doubt about whether you may copy a publication, consult the Legal Department.

C. Selecting Suppliers

The Company's suppliers make significant contributions to our success. To create an environment where our suppliers have an incentive to work with the Company, they must be confident that they will be treated lawfully and in an ethical manner. The Company's policy is to purchase supplies based on need, quality, service, price and terms and conditions. The Company's policy is to select significant suppliers or enter into significant supplier agreements through a competitive bid process where possible. Under no circumstances should any Company employee, agent or contractor attempt to coerce suppliers in any way. The confidential information of a supplier is entitled to the same protection as that of any other third party and must not be received before an appropriate nondisclosure agreement has been signed. A supplier's performance should generally not be discussed with anyone outside the Company. A supplier to the Company is generally free to sell its products or services to any other party, including competitors of the

Company. In some cases where the products or services have been designed, fabricated, or developed to our specifications, the agreement between the parties may contain restrictions on sales.

D. Government Relations

It is the Company's policy to comply fully with all applicable laws and regulations governing contact and dealings with government employees and public officials, and to adhere to high ethical, moral and legal standards of business conduct. This policy includes strict compliance with all local, state, federal, foreign and other applicable laws, rules and regulations. If you have any questions concerning government relations, you should contact the Company's Legal Department.

E. Lobbying

Employees, agents or contractors whose work requires lobbying communication with any member or employee of a legislative body or with any government official or employee in the formulation of legislation must have prior written approval of such activity from the Company's Legal Department. Activity covered by this policy includes meetings with legislators or members of their staffs or with senior executive branch officials. Preparation, research, and other background activities that are done in support of lobbying communication are also covered by this policy even if the communication ultimately is not made.

F. Government Contracts

It is the Company's policy to comply fully with all applicable laws and regulations that apply to government contracting. It is also necessary to strictly adhere to all terms and conditions of any contract with local, state, federal, foreign or other applicable governments. The Company's Legal Department must review and approve all contracts with any government entity.

G. Free and Fair Competition

Most countries have well-developed bodies of law designed to encourage and protect free and fair competition. The Company is committed to obeying both the letter and spirit of these laws. The consequences of not doing so can be severe for all of us.

These laws often regulate the Company's relationships with its distributors, resellers, dealers, and customers. Competition laws generally address the following areas: pricing practices (including price discrimination), discounting, terms of sale, credit terms, promotional allowances, secret rebates, exclusive dealerships or distributorships, product bundling, restrictions on carrying competing products, termination, and many other practices.

Competition laws also govern, usually quite strictly, relationships between the Company and its competitors**. AS A GENERAL RULE, CONTACTS WITH COMPETITORS SHOULD BE LIMITED AND SHOULD ALWAYS AVOID SUBJECTS SUCH AS PRICES OR OTHER TERMS AND CONDITIONS OF SALE, CUSTOMERS, AND SUPPLIERS.** Employees, agents or contractors of the Company may not knowingly make false or misleading statements regarding its competitors or the products of its competitors, customers or suppliers. Participating with competitors in a trade association or in a standards creation body is acceptable when the association has been properly established, has a legitimate purpose, and has limited its activities to that purpose. Membership in trade associations should be approved in advance by the Legal Department.

No employee, agent or contractor shall at any time or under any circumstances enter into an agreement or understanding, written or oral, express or implied, with any competitor concerning prices, discounts, other terms or conditions of sale, profits or profit margins, costs, allocation of product or geographic markets, allocation of customers, limitations on production, or bids or the intent to bid or even discuss or exchange information on these subjects. In some cases, legitimate joint ventures with competitors may permit exceptions to these rules as may bona fide purchases from or sales to competitors on non-competitive products, but the Company's Legal Department must review all such proposed ventures in advance. These prohibitions are absolute and strict observance is required. Collusion among competitors is illegal, and the consequences of a violation are severe.

In addition, no employee, agent or contractor shall cause the Company to participate or agree to participate in a boycott of any customer, competitor, supplier, political subdivision or other group, except as required by applicable law (e.g. legitimate trade sanctions issued by a governmental authority with jurisdiction over the Company).

Although the spirit of these laws, known as "antitrust," "competition," or "consumer protection" or unfair competition laws, is straightforward, their application to particular situations can be quite complex. To ensure that the Company complies fully with these laws, each of us should have a basic knowledge of them and should involve our Legal Department early on if it appears that a questionable situation may arise.

H. Industrial Espionage

It is the Company's policy to lawfully compete in the marketplace. This commitment to fairness includes respecting the rights of our competitors and abiding by all applicable laws in the course of competing. The purpose of this policy is to maintain the Company's reputation as a lawful competitor and to help ensure the integrity of the competitive marketplace. The Company expects its competitors to respect our rights to compete lawfully in the marketplace, and we must respect their rights equally. Company employees, agents and contractors may not steal or unlawfully use the information, material, products, intellectual property, or proprietary or confidential information of anyone including suppliers, customers, business partners or competitors.

V. WAIVERS

Any waiver of any provision of this Code of Business Conduct and Ethics for a member of the Company’s Board of Directors or an executive officer must be approved in writing prior to the proposed transaction by the Company’s Board of Directors and promptly publicly disclosed. Any waiver of any provision of this Code of Business Conduct and Ethics with respect to any other employee, agent or contractor must be approved in writing prior to the proposed transaction by the Company’s Legal Department.

VI. DISCIPLINARY ACTIONS

The matters covered in this Code of Business Conduct and Ethics are of the utmost importance to the Company, its stockholders and its business partners, and are essential to the Company's ability to conduct its business in accordance with its stated values. We expect all of our employees, agents, contractors and consultants to adhere to these rules in carrying out their duties for the Company.

The Company will take appropriate action against any employee, agent, contractor or consultant whose actions are found to violate these policies or any other policies of the Company. Disciplinary actions may include immediate termination of employment or business relationship at the Company's sole discretion. Where the Company has suffered a loss, it may pursue its remedies against the individuals or entities responsible. Where laws have been violated, the Company will cooperate fully with the appropriate authorities. You should review the Company's policies and procedures at the Sanmina intranet site for more detailed information.

VII. ACKNOWLEDGMENT OF CODE OF BUSINESS CONDUCT AND ETHICS

I have received and read the Company's Code of Business Conduct and Ethics. I understand the standards and policies contained in the Company Code of Business Conduct and Ethics and understand that there may be additional policies or laws specific to my job. I further agree to comply with the Company Code of Business Conduct and Ethics, including, without limitation, Section III (C) concerning conflicts of interest. I acknowledge that violations of the Company Code of Business Conduct, including, without limitation, Section III (C) concerning conflicts of interest, constitute a material breach of the Company's rules and regulations and are grounds for termination of my employment with the Company.

If I have questions concerning the meaning or application of the Company Code of Business Conduct and Ethics, any Company policies, or the legal and regulatory requirements applicable to my job, I know I can consult my manager, the Human Resources Department or the Legal Department.

Name

Signature

Date

Location (Facility)

Please sign and return this form to the Human Resources Manager at your facility.

EXHIBIT 21.1

LIST OF SUBSIDIARIES

Entity Name	Jurisdiction
AET Holdings Limited	Mauritius
CertainSource Technology Group Inc.	Texas
CST Real Estate LLC	Texas
Davos Group Limited	British Virgin Islands
Hadco Corporation	Massachusetts
Hadco Santa Clara, Inc.	Delaware
MPSTOR Inc.	Delaware
MPSTOR Limited	Ireland
Primary Sourcing Corp.	Texas
Sanmina (B.V.I.) Ltd	British Virgin Islands
Sanmina Dutch Holdings B.V.	Netherlands
Sanmina Enclosures Systems Hungary Limited Liability Company	Hungary
Sanmina Holdings, Inc.	Delaware
Sanmina Ireland Unlimited Company	Ireland
Sanmina Systems (Dongguan) Company Limited	China
Sanmina SAS	France
Sanmina-SCI (China) Limited	Hong Kong
Sanmina-SCI (H.K.) Limited	Hong Kong
Sanmina-SCI (Shenzhen) Limited	China
Sanmina-SCI AB	Sweden
Sanmina-SCI Central Services	France
Sanmina-SCI Circuits (Wuxi) Co., Ltd	China
Sanmina-SCI Corporation (Malaysia) Sdn Bhd	Malaysia
Sanmina-SCI Corporation Africa (Pty) Ltd.	South Africa
Sanmina-SCI Corporation Argentina SA	Argentina
Sanmina-SCI Corporation Colombia S.A.S.	Colombia
Sanmina-SCI Czech Republic s.r.o.	Czech Republic
Sanmina-SCI de Mexico S.A. de C.V.	Mexico
Sanmina-SCI do Brasil Integration Ltda.	Brazil
Sanmina-SCI do Brasil Ltda.	Brazil
Sanmina-SCI do Brasil Technology Ltda.	Brazil
Sanmina-SCI Dutch Holdings B.V.	Netherlands
Sanmina-SCI Electronics Pte. Ltd.	Singapore
Sanmina-SCI EMS Haukipudas Oy	Finland
Sanmina-SCI Enclosure Systems (Asia) Limited	Hong Kong
Sanmina-SCI Enclosure Systems (Shenzhen) Limited	China
Sanmina-SCI Enclosure Systems (Suzhou) Co. Ltd.	China
Sanmina-SCI Germany GmbH	Germany
Sanmina-SCI Holding (Thailand) Limited	Thailand
Sanmina-SCI Holding GmbH & Co. KG	Germany
Sanmina-SCI Holdings Australia PTY LTD	Australia
Sanmina-SCI Hungary Electronics Manufacturing LLC	Hungary
Sanmina-SCI Hungary Holding Limited Liability Company	Hungary
Sanmina-SCI India Private Limited	India
Sanmina-SCI Israel EMS Ltd.	Israel

Entity Name	**Jurisdiction**
Sanmina-SCI Israel Medical Systems Ltd	Israel
Sanmina-SCI Optical Technology (Shenzhen) Ltd	China
Sanmina-SCI Pte. Ltd.	Singapore
Sanmina-SCI Real Estate Partnership	France
Sanmina-SCI RSP de Mexico, S.A. de C.V.	Mexico
Sanmina-SCI Systems (Kunshan) Co., Limited	China
Sanmina-SCI Systems (Malaysia) Sdn. Bhd.	Malaysia
Sanmina-SCI Systems (Thailand) Ltd.	Thailand
Sanmina-SCI Systems Australia Pty Ltd	Australia
Sanmina-SCI Systems de Mexico S.A. de C.V.	Mexico
Sanmina-SCI Systems Holdings, LLC	Delaware
Sanmina-SCI Systems Ireland Limited	Ireland
Sanmina-SCI Systems Israel LTD.	Israel
Sanmina-SCI Systems Japan, Ltd.	Japan
Sanmina-SCI Systems Singapore Pte. Ltd.	Singapore
Sanmina-SCI Systems Tel Aviv Ltd.	Israel
Sanmina-SCI Technology India Pvt Ltd	India
Sanmina-SCI Technology Limited	Cayman Islands
Sanmina-SCI U.K. Limited	United Kingdom
Sanmina-SCI/TAG de Mexico, S.A. de C.V.	Mexico
SCI Brockville Corp.	Canada
SCI Technology, Inc.	Alabama
SensorWise, Inc.	Texas

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-131360, 333-61042, 333-50282, 333-39316, 333-95467, 333-84221, 333-84039, 333-76279, and 333-71313) and on Form S-8 (Nos. 333-221515, 333-214706, 333-203596, 333-195455, 333-188085, 333-182042, 333-172128, 333-165435, 333-157099, 333-231175, 333-228406, 333-84704, 333-112605, 333-108942, 333-104692, 333-100236, 333-87946, 333-84704, 333-83110, 333-75616, 333-64294, 333-39930, 333-79259, and 333-23565) of Sanmina Corporation of our report dated November 8, 2019 relating to the consolidated financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

San Jose, California
November 8, 2019

EXHIBIT 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 302(A) OF
THE SARBANES-OXLEY ACT OF 2002

I, Hartmut Liebel, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sanmina Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent 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 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: November 8, 2019

/s/ HARTMUT LIEBEL

Hartmut Liebel
Chief Executive Officer (Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 302(A) OF
THE SARBANES-OXLEY ACT OF 2002

I, Kurt Adzema, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sanmina Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent 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 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: November 8, 2019

/s/ KURT ADZEMA

Kurt Adzema
Chief Financial Officer (Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to the requirement set forth in Section 1350 of Chapter 63 of Title 18 of the United States of America Code (18 U.S.C. §1350), Hartmut Liebel, Chief Executive Officer of Sanmina Corporation (the “Company”), hereby certifies that, to the best of his knowledge:

1. The Company's Annual Report on Form 10-K for the fiscal year ended September 28, 2019, to which this Certification is attached as Exhibit 32.1 (the “Periodic Report”), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

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

IN WITNESS WHEREOF, the undersigned has set his hand hereto as of November 8, 2019.

/s/ HARTMUT LIEBEL

Hartmut Liebel

Chief Executive Officer (Principal Executive Officer)

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Sanmina Corporation under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

EXHIBIT 32.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to the requirement set forth in Section 1350 of Chapter 63 of Title 18 of the United States of America Code (18 U.S.C. §1350), Kurt Adzema, Chief Financial Officer of Sanmina Corporation (the "Company"), hereby certifies that, to the best of his knowledge:

1. The Company's Annual Report on Form 10-K for the fiscal year ended September 28, 2019, to which this Certification is attached as Exhibit 32.2 (the "Periodic Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

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

IN WITNESS WHEREOF, the undersigned has set his hand hereto as of November 8, 2019.

/s/ KURT ADZEMA

Kurt Adzema

Chief Financial Officer (Principal Financial Officer)

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Sanmina Corporation under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.