UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

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

For the fiscal year ended January 2, 2017
Commission file number 0-31285

TTM TECHNOLOGIES, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**91-1033443**
(State or Other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification No.)*
1665 Scenic Avenue Suite 250, Costa Mesa, California	**92626**
(Address of Principal Executive Offices)	*(Zip Code)*

(714) 327-3000

(Registrant's telephone number, including area code)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.001 par value	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 15(d) of the Act. Yes ☐ No ☑

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes ☐ No ☑

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

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

Large accelerated filer ☐ Accelerated filer ☑ Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☐

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

The aggregate market value of Common Stock held by non-affiliates of the registrant (based on the closing price of the registrant's Common Stock as reported on the Nasdaq Global Select Market on June 27, 2016, the last business day of the most recently completed second fiscal quarter), was $502,753,884. For purposes of this computation, all officers, directors, and 10% beneficial owners of the registrant are deemed to be affiliates of the registrant. Such determination should not be deemed to be an admission that such officers, directors, or 10% beneficial owners are, in fact, affiliates of the registrant.

As of February 17, 2017, there were outstanding 100,405,573 shares of the registrant's Common Stock, $0.001 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for its 2017 Annual Meeting of Stockholders are incorporated by reference into Part III of this report. Such Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

TTM TECHNOLOGIES, INC.

ANNUAL REPORT ON FORM 10-K

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PART I

Statement Regarding Forward-Looking Statements

This report on Form 10-K contains forward-looking statements regarding future events or our future financial and operational performance. Forward-looking statements include statements regarding markets for our products; trends in net sales, gross profits and estimated expense levels; liquidity and anticipated cash needs and availability; and any statement that contains the words "anticipate," "believe," "plan," "forecast," "foresee," "estimate," "project," "expect," "seek," "target," "intend," "goal" and other similar expressions. The forward-looking statements included in this report reflect our current expectations and beliefs, and we do not undertake publicly to update or revise these statements, even if experience or future changes make it clear that any projected results expressed in this annual report or future quarterly reports to stockholders, press releases or company statements will not be realized. In addition, the inclusion of any statement in this report does not constitute an admission by us that the events or circumstances described in such statement are material. Furthermore, we wish to caution and advise readers that these statements are based on assumptions that may not materialize and may involve risks and uncertainties, many of which are beyond our control that could cause actual events or performance to differ materially from those contained or implied in these forward-looking statements. These risks and uncertainties include the business and economic risks described in "Item 1A — Risk Factors".

Unless otherwise indicated or unless the context requires otherwise, all references to time periods refer to our fiscal year, and all reference to "TTM," "our company," "we," "us," "our," and similar names refer to TTM Technologies, Inc. and its subsidiaries.

ITEM 1. *BUSINESS*

General

We are a leading global printed circuit board (PCB) manufacturer, focusing on quick-turn and volume production of technologically complex PCBs and electro-mechanical solutions (E-M Solutions). We are the largest PCB manufacturer in North America and one of the largest PCB manufacturers in the world, in each case based on revenue, according to the 2015 rankings from N.T. Information LTD (NTI). In 2016 we generated $2.5 billion in net sales and ended the year with approximately 28,360 employees worldwide. We operate a total of 25 specialized facilities in North America and China. We focus on providing time-to-market and volume production of advanced technology products and offer a one-stop manufacturing solution to our customers from engineering support to prototype development through final mass production. This one-stop manufacturing solution allows us to align technology development with the diverse needs of our customers and to enable them to reduce the time required to develop new products and bring them to market. We serve a diversified customer base consisting of approximately 1,500 customers in various markets throughout the world, including networking/communications infrastructure products, smartphones and touchscreen tablets, as well as aerospace and defense, automotive components, high-end computing and medical, industrial and instrumentation related products. Our customers include both original equipment manufacturers (OEMs) and electronic manufacturing services (EMS) providers.

As a result of our acquisition of Viasystems Group, Inc. (Viasystems), we now manage our worldwide operations based on two reportable operating segments: (1) *PCB*, which consists of 13 domestic PCB fabrication plants, including a facility that provides follow-on value-added services primarily for one of the PCB fabrication plants; eight PCB fabrication plants in China and one in Canada, and (2) *E-M Solutions*, which consists of three custom electronic assembly plants in China. Each segment operates predominantly in the same industries with production facilities that produce customized products for our customers and use similar means of product distribution.

Additional information on our operating segments and product information is contained in Note 18 of the Notes to Consolidated Financial Statements.

Acquisition of Viasystems Group, Inc.

On May 31, 2015, we completed the acquisition of Viasystems, for total consideration of $248.8 million in cash and 15.1 million shares of TTM common stock with a fair value of $149.0 million, and thereby acquired all of the outstanding shares of capital stock and other equity rights of Viasystems. Additionally, in connection with the completion of the acquisition, we assumed and refinanced Viasystems' debt, which was approximately $669.0 million as of May 31, 2015. Viasystems was a worldwide provider of complex multi-layer rigid, flexible, and rigid-flex PCBs and custom electronic assemblies. The acquisition has increased our revenue base and brought more diversity to our business, particularly with the addition of the automotive end market to the markets we serve. The acquisition of Viasystems has had and will continue to have a significant effect on our operations and financial results, which demonstrates the benefits of diversification along with our strong operational execution and realization of synergies from the transaction.

Industry Overview

PCBs are manufactured in panels from sheets of laminated material. Each panel is typically subdivided into multiple PCBs, each consisting of a pattern of electrical circuitry etched from copper to provide an electrical connection between the components mounted to it. PCBs serve as the foundation for virtually all electronic products, including the electronic components integrated into automobiles, consumer electronics products (smartphones, and touchscreen tablets), high-end commercial electronic equipment (such as medical equipment and data communications routers, switches and servers) and aerospace and defense electronic systems.

In recent years, the demand for smaller sized electronic devices with more features and functionality has been increasing. Products designed to offer faster data transmission, thinner and more lightweight packaging, and reduced power consumption generally require increasingly complex PCBs to meet these criteria. By using High Density Interconnect (HDI) technology, circuit densities can be increased, thereby providing for smaller products with higher packaging densities. Furthermore, flexible printed circuit technology, which includes flexible circuits, rigid-flex circuits, and flexible circuit assemblies, can be found in small and lightweight end products, such as smartphones and touchscreen tablets and increasingly in other end markets such as automotive, industrial and aerospace and defense. We collectively refer to these new technologies as "advanced technologies," and they have growth rates which are higher than conventional technologies. In addition, most of our markets have low volume requirements during the prototype stage that demand a highly flexible manufacturing environment which later transitions to a higher volume requirement during product ramp.

According to estimates in a November 2016 report by Prismark Partners LLC (Prismark Partners), worldwide demand for PCBs was approximately $55.3 billion in 2015. Of this worldwide demand for production in 2015, Prismark Partners reports that PCB production in the Americas accounted for approximately 5% (approximately $2.8 billion), PCB production in China accounted for approximately 48% (approximately $26.7 billion), and PCB production in the rest of the world accounted for approximately 47% (approximately $25.8 billion). According to the same report by Prismark Partners, worldwide demand for PCBs is forecast to grow at a 2.4% CAGR from 2016 to 2021 driven by above average growth expected in the automotive and aerospace and defense end markets offset by below average growth expected in the networking communications and computing end markets. While Prismark Partners expects long-term growth to occur in all PCB technologies, it forecasts more robust growth in the HDI, flexible and rigid-flex segments. This growth expectation stems from the increase in the number of applications that can utilize, and in many cases require, smaller, denser interconnects.

Industry Trends

We believe that several trends are impacting the PCB manufacturing industry which will benefit us in the future. These trends include:

***Shorter electronic product life cycles*.** Shorter electronic product life cycles which create opportunities for PCB manufacturers that can offer engineering support in the prototype stage and manufacturing scalability throughout the production life cycle.

Increasing complexity of electronic products. Increasing complexity of electronic products, which requires technologically complex PCBs that can accommodate higher speeds and component densities, including HDI, flexible, and substrate PCBs.

Increasing demand for sophisticated safety systems, automated driving, electric/hybrid vehicles and miniaturization of electronic devices in the automotive industry. These trends are driving increasing electronic content and higher PCB usage in automobiles, particularly increased demand for advanced technologies like HDI, rigid-flex and complex conventional technologies such as radio-frequency (RF) for radar.

Increasing concentration of global PCB production in Asia. In recent years, China has emerged as a global production center for electronics manufacturers. We believe that the expected continued concentration of consumer electronic production in China should result in additional commercial market share potential for PCB manufacturers with a strong presence and reputation in China.

Supply chain consolidation by commercial OEMs. Supply chain consolidation by commercial OEMs, which we believe presents an opportunity for those PCB manufacturers that can offer one-stop manufacturing capabilities — from prototype to volume production.

Our Strategy

Our goal is to be the leading global provider of time-critical, one-stop manufacturing services for highly complex PCBs. Our core strategy includes the following elements:

Maintain our customer-driven culture and provide superior service to our customers in our core markets of networking communications, automotive, cellular phones, aerospace and defense, medical, industrial and instrumentation, and computing and storage. Our customer-oriented culture is designed to achieve extraordinary service, competitive differentiation, and superior execution. Our customer-oriented strategies include engaging in co-development of new products, capturing new technology products for next generation equipment, and continuing investments to enhance our broad offering of PCB technologies. We believe our ability to anticipate and meet customers' needs is critical to retaining existing customers and attracting leading companies as new customers.

Drive operational efficiency and productivity. We are constantly focused on improving our operational execution to increase efficiency, productivity and yields. We strongly believe in the benefits of sharing best practices across our extensive manufacturing footprint and rely on stringent goals for throughput, quality and customer satisfaction to measure our effectiveness. The fast paced nature of our business requires a disciplined approach to manufacturing that is rooted in continuous improvement.

Accelerate customer and end-market diversification through strategic mergers and acquisitions. We have a history of executing successful acquisitions that have been key to our growth and profitability. We continuously look for strategic opportunities that could facilitate our efforts to further diversify into other growing end markets including automotive, aerospace and defense and medical/industrial/instrumentation. Our recent acquisition of Viasystems, which has increased our diversification into the automotive and medical/industrial/instrumentation end markets, demonstrates the benefits of this strategy.

Accelerate our expansion into the automotive and other growing markets using our advanced technology position to differentiate our operations. With rising requirements for faster data transmission, shrinking features (i.e., lightweight and thin), and lower power consumption, many PCB designs have migrated to more complex HDI PCBs from conventional multi-layer PCB technologies. This trend began with PCBs used in portable devices such as smartphones and touchscreen tablets but has become an increasing trend in other end markets, such as automotive, networking/communications, medical, and aerospace and defense. We are focused in particular on the automotive opportunity where the combination of our strength in highly reliable conventional PCBs and our advanced technology PCB product capabilities allows us to meet our automotive customers' growing demand in such areas as infotainment, radar systems, and cameras for advanced driver assistance systems and electric vehicles. As our customers consolidate their supply chain, our objective is to differentiate ourselves as a strategic supplier with the technology breadth to meet most, if not all, of our automotive customers PCB requirements.

Address customer needs in all stages of the product life cycle. By providing a one-stop solution, we work to service our customers' needs from the earliest stages of product development through volume production. We believe that by servicing our customers early in the development process, we are able to demonstrate our capabilities and establish an incumbent position early in the product development cycle, which translates into additional opportunities as our customers move into volume production. We believe our expertise is enhanced by our ability to deliver highly complex PCBs to customers in significantly compressed lead times. This rapid delivery service enables OEMs to develop sophisticated electronic products more quickly and reduce their time to market.

Deliver strong financial performance. We aspire to deliver industry-leading financial performance. We expect to achieve this by servicing our customers' needs in higher-growth end markets — meeting their product needs in a cost-efficient and effective manner. We believe that this strategy will allow us to generate strong cash flows, which will enable us to reduce financial leverage over time while at the same time providing us with the financial flexibility to continue to invest in our business.

Products and Services

We offer a wide range of PCB products and electro-mechanical solutions, including conventional PCBs, HDI PCBs, flexible PCBs, rigid-flex PCBs, custom assemblies and system integration, and IC substrates. We also offer certain value-added services to support our customers' needs. These include design-for-manufacturability (DFM), PCB design, simulation and testing services, and quick turnaround (QTA) production. By offering this wide range of PCB products and complementary value-added services, we are able to provide our customers with a "one-stop" manufacturing solution for their PCB requirements. This differentiates us from our competition and enhances our relationships with our customers.

Conventional PCBs

A conventional PCB is made from a composite laminate that is metalized with a conductive material such as copper. The PCB is the basic platform used to interconnect components in most electronic products including computers, communications equipment, cellular phones, high-end consumer electronics, automotive controls, commercial aerospace and defense systems and medical and industrial equipment. Conventional PCBs can be classified as single-sided, double-sided and multi-layer boards.

We focus on higher layer count conventional PCBs. A multi-layer PCB can accommodate more complex circuitry than a single-sided or double-sided PCB and as such requires more sophisticated production techniques. The number of layers comprising a PCB often increases with the complexity of the end product. For example, a simple consumer device such as a garage door controller may use a single-sided or double-sided PCB, while a high-end network router or computer server may use a PCB with 30 or more layers.

RF and microwave circuits

We produce and test specialized circuits used in radio-frequency or microwave emission and collection applications. These products are typically used for radar, transmit/receive antennas and similar wireless applications. Markets for these products include automotive, defense, avionics, satellite, and commercial applications. The manufacture of these products requires advanced materials, equipment, and methods that are highly specialized and distinct from conventional printed circuit manufacturing techniques. We also offer specialized radio-frequency assembly and test services.

High density interconnect or HDI PCBs

Our facilities in North America and China also produce HDI PCBs, which are PCBs with higher interconnect density per unit area requiring more sophisticated technology and manufacturing processes for their production than conventional PCB products. HDI PCBs are boards with high-density characteristics including micro-sized holes, or microvias (diameter at or less than 0.15 mm), and fine line circuitry (circuit line width and spacing at or less than 0.075 mm) and are fabricated with thin high performance materials, thereby enabling more

interconnection functions per unit area. HDI PCBs generally are manufactured using a sequential build-up process in which circuitry is formed in the PCB one layer at a time through successive drilling, plating and lamination cycles. In general, a board's complexity is a function of interconnect and circuit density, layer count, laminate material type and surface finishes. As electronic devices have become smaller and more portable with higher functionality, demand for advanced HDI PCB products has increased dramatically. We define advanced HDI PCBs as those having more than one layer of microvia interconnection structure.

Flexible PCBs

Flexible PCBs are printed circuits produced on flexible films, allowing them to be folded or bent to fit the available space or allowing for application movement. We manufacture circuits on flexible substrates that can be installed in three-dimensional applications for electronic packaging systems. Use of flexible circuitry can enable improved reliability, improved electrical performance, reduced weight and reduced assembly costs when compared with traditional wire harness or ribbon cable packaging. Flexible PCBs can provide for flexible electronic connectivity of an electrical device's apparatus such as printer heads, cameras, camcorders, TVs, mobile handsets, and tablets. For some of our flexible PCB customers, we also assemble components onto the flexible PCBs we manufacture.

Rigid-flex PCBs

Rigid-flex circuitry provides a simple means to integrate multiple PCB assemblies and other elements such as display, input or storage devices without wires, cables or connectors, replacing them with thin, light composites that integrate wiring in ultra-thin, flexible ribbons between rigid sections. In rigid-flex packaging, a flexible circuit substrate provides a backbone of wiring with rigid multilayer circuit sections built up as modules where needed.

Since the ribbons can be bent or folded, rigid-flex provides a means to compactly package electronics in three dimensions with dynamic or static bending functions as required, enabling miniaturization and thinness of product design. The simplicity of rigid-flex integration also generally reduces the number of parts and interconnections required, which can improve reliability. The increasing popularity of mobile electronics coupled with the design trend of developing increasingly thinner, lighter and more feature-rich products, is expected to further drive growth in the rigid-flex and flex sectors, where these PCBs are the backbone of miniaturization.

Rigid-flex technology is essential to a broad range of applications including aerospace and defense, industrial and transportation systems requiring high reliability; hand-held and wearable electronics such as mobile phones, video cameras and music players where thinness and mechanical articulation are essential; and ultra-miniaturized products such as headsets, medical implants and semiconductor packaging where size and reliability are paramount.

Custom assemblies and system integration

Our assembly facilities produce custom electronic assemblies as well as fully integrated electronic systems. Custom electronic assemblies refers to a variety of PCB assemblies such as backplane and midplane assemblies, flexible and rigid-flex assemblies and RF assemblies. Each of these assemblies involves mounting electronic components to a printed circuit board and then testing the assembly for electrical continuity. Our services also go beyond the PCB assembly to fully integrated systems. A fully integrated system often includes installing the PCB assembly into a metal enclosure and adding fans for cooling the system, a power supply and cable assemblies to create a fully assembled and tested system that will be shipped to our customers.

IC substrates

IC substrates provide mechanical support and electrical interconnect for very small ICs (integrated circuits or semiconductors) and up to comparatively larger PCBs for assembly into electronic end products such as memory modules, cellular phones, digital cameras, automotive GPS and engine controls. IC substrates, also known as chip carriers, are highly miniaturized circuits manufactured by a process largely similar to that for PCBs but requiring the use of ultra-thin materials and including micron-scale features, because they must bridge

the gap between sub-micron IC features and millimeter scale PCBs. Consequently, IC substrates are generally manufactured in a semiconductor-grade clean room environment to ensure products are free of defects and contamination.

Quick turnaround services

We refer to our rapid delivery services as "quick turnaround" or "QTA", because we provide custom-fabricated PCBs to our customers within as little as 24 hours to ten days. As a result of our ability to rapidly and reliably respond to the critical time requirements of our customers, we generally receive premium pricing for our QTA services as compared to standard lead time prices.

- *Prototype production.* In the design, testing, and launch phase of a new electronic product's life cycle, our customers typically require limited quantities of PCBs in a very short period of time. We satisfy this need by manufacturing prototype PCBs in small quantities, with delivery times ranging from as little as 24 hours to ten days.
- *Ramp-to-volume production.* After a product has successfully completed the prototype phase, our customers introduce the product to the market and require larger quantities of PCBs in a short period of time. This transition stage between low-volume prototype production and volume production is known as ramp-to-volume. Our ramp-to-volume services typically include manufacturing up to a few hundred PCBs per order with delivery times ranging from five to 15 days.

Thermal management

Increased component density on circuit boards often requires improved thermal dissipation to reduce operating temperatures. We produce printed circuits with heavy copper cores and both embedded and press-fit coins. In addition, we produce PCBs with electrically passive heat sinks laminated externally on a circuit board or between two circuit boards, as well as PCBs with electrically active thermal cores.

Manufacturing Technologies

The market for our products is characterized by rapidly evolving technology. In recent years, the trend in the electronic products industry has been to increase the speed, complexity, and performance of components while reducing their size. We believe our technological capabilities allow us to address the needs of manufacturers to bring complicated electronic products to market faster.

To manufacture PCBs, we generally receive circuit designs directly from our customers in the form of computer data files, which we review to ensure data accuracy and product manufacturability. Processing these computer files with computer aided manufacturing (CAM) technology, we generate images of the circuit patterns that we then physically develop on individual layers, using advanced photographic processes. Through a variety of plating and etching processes, we selectively add and remove conductive materials to form horizontal layers of thin circuitry, which are separated by electrical insulating material. A multilayer circuit board is produced by laminating together multiple layers of circuitry, using intense heat and pressure under vacuum. Vertical connections between layers are achieved by drilling and plating through small holes, called vias. Vias are made by highly specialized drilling equipment capable of achieving extremely fine tolerances with high accuracy. We specialize in high layer count PCBs with extremely fine geometries and tolerances. Because of the tolerances involved, we employ clean rooms in certain manufacturing processes where tiny particles might otherwise create defects on the circuit patterns. We also use automated optical inspection systems and electrical testing systems to ensure consistent quality of the circuits we produce.

We believe that our highly specialized equipment and advanced manufacturing processes enable us to reliably produce PCBs with the following characteristics:

- *High layer count.* Manufacturing PCBs with a large number of layers is difficult to accomplish due to the accumulation of manufacturing tolerances and registration systems required. In our PCB operating segment, we regularly manufacture PCBs with more than 30 layers on a quick-turn and volume basis. Approximately 14% of our 2016 PCB net sales involved the manufacture of PCBs with at least 18 layers or more, compared to 13% in 2015.

- *Blind and buried vias.* Vias are drilled holes that provide electrical connectivity between layers of circuitry in a PCB. Blind vias connect the surface layer of the PCB to an internal layer and terminate at the internal layer. Buried vias are holes that do not reach either surface of the PCB but allow inner layers to be interconnected. Products with blind and buried vias can be made thinner, smaller, lighter and with higher component density and more functionality than products with traditional vias.
- *Microvias.* HDI technology utilizes microvias, which are small vias with diameters generally less than 0.005 inches after plating. Advanced HDI products may also require the microvias to be fully filled using a specialized plating process so that additional microvia structures can be stacked to form more complex interconnections. These microvias consume much less space on the layers they connect, thereby providing for greater wiring densities and flexibility, and also providing closer spacing of components and their attachment pads. The fabrication of PCBs with microvias requires specialized equipment, such as laser drills, and highly developed process knowledge. Applications such as handheld wireless devices employ microvias to obtain a higher degree of functionality from a given surface area.
- *Embedded passives.* Embedded passive technology involves embedding either capacitive or resistive elements inside the PCB, which allows for removal of passive components from the surface of the PCB and thereby leaves more surface area for active components. Use of this technology provides greater surface area for surface-mounted ICs and better signal performance, as well as increased functionality of products with higher component density.
- *Fine line traces and spaces.* Traces are the connecting copper lines between the different components of the PCB, and spaces are the distances between traces. The smaller the traces and the tighter the spaces, the higher the density of the PCB and the greater the expertise required to achieve a desired final yield performance level. We are able to manufacture PCBs with traces and spaces less than 0.002 inches.
- *High aspect ratios.* The aspect ratio is the ratio between the thickness of the PCB and the diameter of a drilled hole. As the aspect ratio increases, it becomes increasingly more difficult to consistently and reliably form, electroplate and finish all the holes on a PCB. In production, we are able to provide aspect ratios of up to 30:1.
- *Thin core processing.* A core is the basic inner-layer building block material from which PCBs are constructed. A core consists of a flat sheet of material comprised of glass-reinforced resin with copper foil laminated on either side. The thickness of inner-layer cores is typically determined by the overall thickness of the PCB and the number of layers required. The demand for thinner cores derives from the requirements for thinner PCBs, higher layer counts and various electrical parameters. Core thickness in our PCBs ranges from as little as 0.002 inches up to 0.062 inches.
- *Advanced hole fill processes.* Our advanced hole fill processes provide designers the opportunity to increase the density of component placements by reducing the surface area required to place many types of components. In traditional design, components are routed from their surface interfaces through via connections in order to access power and ground connections and the internal circuitry used to connect to other discrete components. Our advanced hole fill processes provide methods to allow for vias to be placed inside their respective surface mount pads by filling the vias with a thermoset epoxy and plating flat copper surface mount pads directly over the filled hole.
- *Advanced materials.* We manufacture circuit boards using a wide variety of advanced dielectric materials. These high-performance materials offer electrical, thermal, and long-term reliability advantages over conventional materials but are more difficult to manufacture. We are certified by Underwriters Laboratories to manufacture PCBs using many types and combinations of these specialty materials. This broad offering allows us to manufacture PCBs for a wide array of end-use applications, including highly complex PCBs for niche and high-end commercial and aerospace and defense markets.
- *Quick Turn Manufacturing*: In addition, in circumstances where our customers require time critical engineering and manufacturing services, we are able to meet our customers’ need with our quick-turn manufacturing capabilities.

Customers and Markets

Our customers include both OEMs and EMS companies that primarily serve the automotive, networking/communications, cellular phone, computing, aerospace and defense, and medical/industrial/instrumentation end markets of the electronics industry. Included in the end markets that our OEM and EMS customers serve is the U.S. government. As a result, we are a supplier, primarily as a subcontractor, to the U.S. government.

The following table shows the percentage of our net sales in each of the principal end markets we served for the periods indicated:

End Markets(1)(2)	2016	2015(4)	2014
Aerospace and Defense	15%	14%	16%
Automotive(2)	20	13	2
Cellular Phone(3)	14	21	23
Computing/Storage/Peripherals(3)	12	12	13
Medical/Industrial/Instrumentation	14	13	10
Networking/Communications	23	25	33
Other(2)(3)	2	2	3
Total	100%	100%	100%

(1) Sales to EMS companies are classified by the end markets of their OEM customers.

(2) Certain reclassifications of prior year end market percentages have been made to conform to the current year presentation. Beginning 2015, Automotive has been reclassified from the Other end market.

(3) Smartphones are included in the Cellular Phone end market, tablets are included in the Computing/Storage/Peripherals end market and other mobile devices such as e-readers are included in the Other end market.

(4) Amounts include 211 days of activity of Viasystems, which we acquired on May 31, 2015.

Sales attributable to our five largest OEM customers, which can vary from year to year, collectively accounted for 33%, 37%, and 44%, of our net sales in fiscal years 2016, 2015 and 2014, respectively, as a result of our diversification. Our five largest OEM customers in 2016 were, in alphabetical order, Apple Inc., Autoliv Inc., Cisco Systems, Inc., Huawei Technology Co. Ltd., and Robert Bosch GmbH. For the fiscal year 2016, Apple accounted for 15% of our net sales. Sales attributed to OEMs include sales made through EMS providers. Sales to EMS providers comprised approximately 35%, 35%, and 39% of our net sales in fiscal years 2016, 2015 and 2014, respectively. Although our contractual relationships are with the EMS companies, we typically negotiate price and volume requirements directly with the OEMs. In addition, we are on the approved vendor lists of several of our EMS providers. This positions us to participate in business that is awarded at the discretion of the EMS provider.

During fiscal years 2016, 2015 and 2014, our net sales by country invoiced were as follows:

Country	2016	2015	2014
United States	44%	46%	43%
China	26	26	27
Other	30	28	30
Total	100%	100%	100%

Other than in the United States and China, we do not conduct business in any country in which our net sales exceed 10% of our total net sales for the fiscal years 2016, 2015 and 2014.

Our sales and marketing strategy focuses on building long-term relationships with our customers' engineering and new product introduction personnel early in the product development phase, frequently through strategic account management teams. As the product moves from the prototype stage through ramp-to-volume and volume production, we shift our focus to the customers' procurement departments in order to capture sales at each point in the product's life cycle.

Our staff of engineers, sales support personnel, and managers assists our sales representatives in advising customers with respect to manufacturing feasibility, design review, and technological capabilities through direct communication and visits. We combine our sales efforts with customer service at each facility to better serve our customers. Each large customer is typically assigned an account manager to coordinate all of the Company's services across all of our facilities. Additionally, the largest and most strategic customers are also supported by select program management and engineering teams. Our global sales force is comprised of direct sales personnel, complemented by commission-based independent representatives, and supports customers throughout North America, Europe, Asia and the Middle East.

Our North America footprint comprises a significant amount of our PCB operating segment with fourteen PCB fabrication plants located in California, Colorado, Connecticut, Ohio, Oregon, Utah, Virginia, Wisconsin and Ontario, Canada. The footprint includes a facility that provides follow-on value-added assembly services primarily to our Connecticut PCB fabrication plant. In addition, we operate a North America based outsourcing operation that provides brokered sourcing of lower cost, off-shore PCB companies as an additional option for our customers.

Our China footprint includes facilities from both our PCB and E-M Solutions operating segments with eight PCB fabrication plants located in Hong Kong, Huiyang, Dongguan, Guangzhou, Shanghai, and Zhongshan China, and three custom assembly and system integration operations in Shanghai and Shenzhen China.

For information regarding credit to customers, see Note 11 of the Notes to Consolidated Financial Statements.

For information about net sales, income before income taxes, depreciation, total assets and capital expenditures of each of our segments, and geographical information, including net sales to customers and long-lived assets, see Note 18 of the Notes to Consolidated Financial Statements.

Suppliers

The primary raw materials we use in PCB manufacturing include copper-clad laminate, chemical solutions such as copper and gold for plating operations, photographic film, carbide drill bits, and plastic for testing fixtures. Although we have preferred suppliers for some raw materials used in the manufacture of PCBs, most of our raw materials are generally readily available in the open market from numerous other potential suppliers.

The primary raw materials we use in backplane assemblies and other PCB assemblies are manufactured components such as PCBs, connectors, capacitors, resistors, diodes and integrated circuits, many of which are custom made and controlled by our customers' approved vendors. These components for backplane assemblies and other PCB assemblies in some cases have limited or sole sources of supply. For example, in some instances, our customers will require us to use a specific component from a particular supplier or require us to use a component provided by the customer itself, in which case we may have a single or limited number of suppliers for these specific components. The backplane assemblies, PCB assemblies and precision metal fabricated chassis and enclosures produced by us may be incorporated into a fully integrated and tested system delivered to our customer. These products often incorporate procured power, thermal, interconnect and mechanical components sourced from customer directed or our selected suppliers.

We typically use just-in-time procurement practices to maintain our raw materials inventory at low levels and work closely with our suppliers to obtain technologically advanced raw materials. In addition, we periodically seek alternative supply sources to ensure that we are receiving competitive pricing and service. Adequate amounts of all raw materials have been available in the past, and we believe this availability will continue into the foreseeable future.

Competition

Despite industry consolidation, the PCB industry remains fragmented and characterized by intense competition. There are several competitive factors our customers consider when choosing their supplier including, but not limited to, pricing, service, support, reliability, and quality production. Our principal PCB and substrate competitors include AT&S (Austria Technologie & Systemtechnik AG), Chin Poon Industrial Co., Ltd., Compeq Manufacturing Co., Ltd., IBIDEN Co., Ltd., ISU Petasys Co., Ltd., Multek Corporation, Sanmina

Corporation, Tripod Technology Corp., Unimicron Technology Corp., and Wus Printed Circuit Co., Ltd. Our principal E-M Solutions competitors include Amphenol Corporation, Flex, Jabil Circuit, Inc. and Sanmina Corporation.

We believe we compete favorably based on the following key competitive strengths:

Leading global PCB manufacturer. The Company is one of the largest and most diversified PCB manufacturers in the world and enjoys significant economies of scale, with net sales in excess of $2.5 billion for fiscal 2016. The PCB industry is highly fragmented with the top 20 PCB providers comprising approximately 47% of market share in 2015, according to NTI. As our customers consolidate their supply base, we offer the technology breadth and scale to emerge as a preferred partner.

Breadth of technology and products. We offer a wide range of PCB products and electro-mechanical solutions, including HDI PCBs, conventional PCBs, flexible PCBs, rigid-flex PCBs, custom assemblies, and IC substrates. We also offer certain value-added services to support our customers' needs. These include design for manufacturability, or DFM, PCB layout design, simulation and testing services, and quick turnaround, or QTA, services. By providing these value-added services to customers, we are able to provide our customers with a "one-stop" manufacturing solution, which we believe enhances our relationships with our customers.

Diversified business model. Our sales are diversified by the well-balanced portfolio of end markets which we serve and by the customers we sell to within those end markets. We believe this diversity reduces our exposure to, and reliance on, any single end market or customer. We enjoy a large and diverse customer base with over 1,500 customers, as well as long-term relationships in excess of ten years with our ten largest customers. For fiscal 2016, net sales to our top five customers represented approximately 33% of our total net sales. Furthermore, for fiscal 2016, our largest five customers are not concentrated in any single end market, but rather are represented across four of our end markets.

Focused on attractive growth end markets including automotive with a favorable growth outlook and dependence on sophisticated product capabilities. We believe that our global manufacturing footprint and breadth of capabilities enables us to serve several of the key end markets for the PCB industry. The automotive industry in particular provides an opportunity for us as we combine our traditional market strength in core automotive engine controls with the advanced technologies we offer for growing requirements in safety systems, automated driving and infotainment.

One-stop solution for customers with low volume, high-mix capabilities and an ability to seamlessly transition volume requirements to Asia. We are capable of providing a one-stop manufacturing solution to our customers from engineering support and prototype development through final volume production around the globe. This one-stop manufacturing solution allows us to better serve our customers, many of whom are based in time-critical high growth markets, enabling our customers to reduce the time required to develop new products and bring them to market. We utilize a facility specialization strategy in which each customer is directed to the facility best suited to the customer's product type, delivery time, complexity and volume needs, which enables us to reduce the time from order placement to delivery. As our customers ramp to volume, we are positioned to seamlessly transition them to one of our volume facilities in China.

Leading aerospace and defense supplier. We provide the aerospace and defense industry with products in North America from our broad North American footprint. We have passed OEM and government certification processes, and administrative requirements associated with participation in government and commercial aerospace programs. When supplying various departments and agencies of the U.S. government, we are required to maintain facility security clearances under the National Industrial Security Program Operating Manual and International Traffic in Arms Regulations. Along with supply of traditional PCBs, we offer our engineering services and assembly capabilities which allow us to bring additional value to our customers.

In addition, we believe our continuous evaluation and early adoption of new manufacturing and production technologies give us a competitive advantage. We believe that our ability to manufacture PCBs using advanced technologies, including our HDI, flexible PCBs and substrate capabilities, provides us with a competitive advantage over manufacturers that do not possess this advanced technology expertise. Our future success will depend in large part on our ability to maintain and enhance our manufacturing capabilities and production technologies.

Seasonality

Orders for our products generally correspond to the production schedules of our customers. We historically experience higher net sales in the third and fourth quarters due to end customer demand in the fourth quarter for consumer electronics products. Seasonal fluctuations also include the Chinese New Year holidays in the first quarter, which typically results in lower net sales. We attribute this decline to shutdowns of our customers' and our own China based manufacturing facilities surrounding the Chinese New Year public holidays, which normally occur in January or February of each year.

Backlog

Backlog consists of purchase orders received, including, in some instances, demand agreements released for production under customer contracts. We obtain firm purchase orders from our customers for all products. However, for some of these purchase orders, customers do not make firm schedules for delivery more than 90 days in advance. Therefore, we measure backlog as orders with deliveries scheduled over the next 90 days. At January 2, 2017, total backlog was $405.3 million, compared with $365.8 million at the end of 2015. Substantially all backlog at January 2, 2017 is expected to be converted to sales in the first quarter of 2017. Additionally, we typically experience a higher amount of backlog in the second half of the year due to increased end customer demand for consumer electronics products in the fourth quarter, which is consistent with our seasonal patterns as discussed above.

Intellectual Property

We believe our business depends on the effectiveness of our fabrication techniques and our ability to continue to improve our manufacturing processes. We have limited patent or trade secret protection for our manufacturing processes. We rely on the collective experience of our employees in the manufacturing process to ensure that we continuously evaluate and adopt the new technologies available in our industry. In addition, we depend on training, recruiting, and retaining our employees, who are required to have sufficient know-how to operate advanced equipment and to conduct complicated manufacturing processes.

National Security Matters

A portion of our business consists of manufacturing defense and defense-related items for various departments and agencies of the U.S. government, including the U.S. Department of Defense, or the DoD, which requires that we maintain facility security clearances under the National Industrial Security Program Operating Manual, or NISPOM. The NISPOM requires that a corporation with significant foreign ownership maintaining a facility security clearance take steps to mitigate foreign control or influence, referred to as "FOCI." Pursuant to these laws and regulations, effective October 2010, we entered into a Special Security Agreement (SSA) with the DoD; Su Sih (BVI) Limited, or Su Sih (a significant foreign owner of our capital stock); and Mr. Tang Hsiang Chien (as the beneficial owner of Su Sih). The purpose of the SSA is to deny Mr. Tang, Su Sih, and other persons affiliated with our China operations, unauthorized access to classified and export controlled unclassified information and to mitigate any influence over our business or management in a manner that could result in the compromise of classified information or could adversely affect the performance of classified contracts.

Other Governmental Regulations

Our operations, particularly those in North America, are subject to a broad range of regulatory requirements relating to export control, environmental compliance, waste management, and health and safety matters. In particular, we are subject to the following:

- U.S. Department of State regulations, including the Arms Export Control Act (AECA) and International Traffic In Arms Regulations (ITAR) located at 22 CFR Parts 120-130;
- U.S. Department of Commerce regulations, including the Export Administration Regulations (EAR) located at 15 CFRParts 730-744;
- Office of Foreign Asset Control (OFAC) regulations located at 31 CFR Parts 500-599;

- U.S. Occupational Safety and Health Administration (OSHA), and state OSHA and Department of Labor laws pertaining to health and safety in the workplace;
- U.S. Environmental Protection Agency regulations pertaining to air emissions; waste water discharges; and the use, storage, discharge, and disposal of hazardous chemicals used in the manufacturing processes; the reporting of chemical releases to the environment; and the reporting of chemicals manufactured in by-products that are beneficially recycled;
- Department of Homeland Security regulations regarding the storage of certain chemicals of interest;
- corresponding state laws and regulations, including site investigation and remediation;
- corresponding U.S. county and city agencies;
- corresponding regulations and agencies in China for our Chinese facilities;
- material content directives and laws that ban or restrict certain hazardous substances in products sold in member states of the European Union, China, other countries and jurisdictions;
- SEC rules that require reporting of the use of certain metals from "conflict minerals" originating in the Democratic Republic of the Congo and the 9 countries surrounding it pursuant to Section 1502 of the Dodd-Frank Act; and
- reporting requirements of the California Transparency in Supply Chains Act of 2010 that requires reporting on efforts to eradicate slavery and human trafficking in retailers' and manufacturers' supply chains.

The process to manufacture PCBs requires adherence to city, county, state, federal and foreign environmental regulations regarding the storage, use, handling and disposal of chemicals, solid wastes and other hazardous materials, as well as compliance with air quality standards and chemical use reporting. We believe that our facilities in the United States comply in all material respects with applicable environmental laws and regulations. In China, governmental authorities are taking various steps to tighten the rules and regulations governing environmental issues. An update to Chinese environmental waste water law was issued in late 2012, allowing for an interim period in which plants subject to such laws may install equipment that meets the new regulatory regime. Our plants in China are not yet in full compliance with the current environmental regulations. We believe we have developed plans acceptable to the Chinese government, and we are in the process of implementing these plans. We do not anticipate any immediate risk of government fines or temporary closure of Chinese plants. We have established and enacted an investment plan related to the efforts to come into full compliance with the new regulations. There can be no assurance that violations will not occur in the future.

Employees

As of January 2, 2017, we had approximately 28,360 employees. Of our employees, approximately 26,400 were involved in manufacturing and engineering, 690 worked in sales and marketing, and approximately 1,270 worked in accounting, systems and other support capacities. None of our U.S. employees are represented by unions. In China, approximately 19,275 employees are members of the All-China Federation of Trade Unions and accordingly are considered to be represented by a labor union. We have not experienced any labor problems resulting in a work stoppage and we believe that we have good relations with our employees.

Availability of Reports Filed with the Securities and Exchange Commission

We are a Delaware corporation founded in 1998, with our principal executive offices located at 1665 Scenic Avenue, Suite 250, Costa Mesa, CA 92626. Our telephone number is (714) 327-3000. Our website address is *www.ttm.com*. Information included on our website is not incorporated into this report. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports are available without charge on our website at www.ttm.com/investors/investor_sec.aspx, as soon as reasonably practicable after they are filed electronically with the Securities and Exchange Commission (SEC). Copies are also available without charge by (i) telephonic request by calling our Investor Relations Department at (714) 327-3000, (ii) e-mail request to investor@ttmtech.com, or (iii) a written request to TTM Technologies, Inc., Attention: Investor Relations, 1665 Scenic Avenue, Suite 250, Costa Mesa, CA 92626.

ITEM 1A. *RISK FACTORS.*

An investment in our common stock involves a high degree of risk. You should carefully consider the factors described below, in addition to those discussed elsewhere in this report, in analyzing an investment in our common stock. If any of the events described below occurs, our business, financial condition, and results of operations would likely suffer, the trading price of our common stock could fall, and you could lose all or part of the money you paid for our common stock. The risk factors described below are not the only ones we face. Risks and uncertainties not known to us currently, or that may appear immaterial, also may have a material adverse effect on our business, financial condition, and results of operations.

In addition, the following risk factors and uncertainties could cause our actual results to differ materially from those projected in our forward-looking statements, whether made in this annual report or future quarterly reports to stockholders, press releases, or oral statements, whether in presentations, responses to questions, or otherwise.

Risks Related to our Business

We have substantial outstanding indebtedness, and our outstanding indebtedness could adversely impact our liquidity and flexibility in obtaining additional financing, our ability to fulfill our debt obligations and our financial condition and results of operations.

We have substantial debt and, as a result, we have significant debt service obligations. On May 31, 2015, we entered into a $950.0 million Term Loan Credit Agreement (Term Loan), a $150.0 million U.S. Asset-Based Lending Credit Agreement (U.S ABL), and a $150.0 million Asia Asset-Based Lending Credit Agreement (Asia ABL). We drew $80.0 million of the U.S. ABL at the closing of the acquisition of Viasystems. On September 27, 2016, we issued new $775.0 million Term B Loans (Term Loan B) at an interest rate of LIBOR plus 4.25%, a reduction of 75 basis points from our previous Term Loan, and repaid in full the remaining outstanding balance of the May 31, 2015 Term Loan. In addition, we and a number of our direct and indirect subsidiaries have various credit facilities, letters of credit and guarantee facilities. Such agreements also contain certain financial covenants which require us to maintain a specified consolidated leverage ratio and under the occurrence of certain events, a consolidated fixed charge coverage ratio.

Our indebtedness could have important consequences to us and our shareholders because in certain circumstances we may need to comply with the covenants in the agreements governing such indebtedness and dedicate funds to service our outstanding debt. For example, it could:

- make it more difficult for us to satisfy our obligations with respect to our indebtedness, which could in turn result in an event of default on such indebtedness;
- require us to use a substantial portion of our cash flow from operations for debt service payments, thereby reducing the availability of cash for working capital, capital expenditures, acquisitions and other general corporate purposes;
- impair our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions and other investments or general corporate purposes, which may limit our ability to execute our business strategy;
- diminish our ability to withstand a downturn in our business, the industry in which we operate or the economy generally and restrict us from exploiting business opportunities or making acquisitions;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate or the general economy;
- increase our vulnerability to general adverse economic and industry conditions, including movements in interest rates, which could result in increased borrowing costs;
- limit management's discretion in operating our business; and
- place us at a competitive disadvantage as compared to our competitors that have less debt as it could limit our ability to capitalize on future business opportunities and to react to competitive pressures or adverse changes.

We may be able to incur substantial additional debt in the future, some or all of which may be secured by a lien on our assets. If new debt or other liabilities or obligations are added to our current debt levels, the related risks that we and our subsidiaries now face could intensify.

Servicing our debt requires a significant amount of cash and we may not be able to generate sufficient cash to service all of our debt and may be forced to take other actions to satisfy our obligations under our debt, which may not be successful.

For the year ended January 2, 2017, we made net debt principal payments totaling $217.6 million, representing normal scheduled principal payments as well as additional prepayments of principal. We are not required to make quarterly scheduled payments of the outstanding Term Loan B balance due to mandatory payments and optional loan prepayments applied to date. We may be required to make an additional principal payment on an annual basis, based on certain parameters defined in these agreements, which includes a secured leverage ratio.

Our ability to make scheduled payments on or to refinance our debt obligations and to fund planned capital expenditures and expansion efforts depends on our ability to generate cash in the future and our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain regulatory, competitive, financial, business and other factors beyond our control. We cannot assure you that we will maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our debt.

If we are unable to meet our debt service obligations, we may be forced to reduce or delay investments or to sell assets, seek additional capital (which could include obtaining additional equity capital on terms that may be onerous or highly dilutive) or restructure or refinance our debt. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. Our operating results and available cash may in the future be insufficient to meet our debt service obligations. We could face substantial liquidity challenges and might be required to dispose of material assets or operations to meet our debt service and other obligations. We may not be able to consummate those dispositions or, if consummated, the proceeds of such dispositions may not be adequate to meet any debt service obligations then due.

We have pursued and intend to continue to pursue acquisitions of other businesses and may encounter risks associated with these activities, which could harm our business and operating results.

As part of our business strategy, we expect that we will continue to grow by pursuing acquisitions of businesses, technologies, assets, or product lines that complement or expand our business. Risks related to an acquisition may include:

- the potential inability to successfully integrate acquired operations and businesses or to realize anticipated synergies, economies of scale, or other expected value;
- diversion of management's attention from normal daily operations of our existing business to focus on integration of the newly acquired business;
- unforeseen expenses associated with the integration of the newly acquired business;
- difficulties in managing production and coordinating operations at new sites;
- the potential loss of key employees of acquired operations;
- the potential inability to retain existing customers of acquired companies when we desire to do so;
- insufficient revenues to offset increased expenses associated with acquisitions;
- the potential decrease in overall gross margins associated with acquiring a business with a different product mix;
- the inability to identify certain unrecorded liabilities;
- the potential need to restructure, modify, or terminate customer relationships of the acquired company;

- an increased concentration of business from existing or new customers; and
- the potential inability to identify assets best suited to our business plan.

Acquisitions may cause us to:

- enter lines of business and/or markets in which we have limited or no prior experience;
- issue debt and be required to abide by stringent loan covenants;
- assume liabilities; record goodwill and indefinite-lived intangible assets that will be subject to impairment testing and potential periodic impairment charges;
- become subject to litigation and environmental issues, which include product material content certifications related to conflict minerals;
- incur unanticipated costs;
- incur large and immediate write-offs; and
- incur substantial transaction-related costs, whether or not a proposed acquisition is consummated.

Acquisitions of high technology companies are inherently risky, and no assurance can be given that our recent or future acquisitions will be successful. Failure to manage and successfully integrate acquisitions we make could have a material adverse effect on our business, financial condition, and results of operations. Even when an acquired company has already developed and marketed products, product enhancements may not be made in a timely fashion. In addition, unforeseen issues might arise with respect to such products after any such acquisition.

Changes in tax laws could materially affect our financial position and results of operations.

The U.S. tax laws are subject to significant change. The current U.S. administration and key members of Congress have made public statements indicating that tax reform is a priority. Certain changes to U.S. tax laws including limitations on the ability to defer U.S. taxation on earnings outside of the United States until those earnings are repatriated to the United States, could affect the tax treatment of our earnings. Due to the large and expanding scale of our international business activities, many of these types of changes to the taxation of our activities could increase our worldwide effective tax rate and materially impact our financial position or results of operations.

Uncertainty and adverse changes in the economy and financial markets could have an adverse impact on our business and operating results.

Uncertainty or adverse changes in the economy could lead to a significant decline in demand for the end products manufactured by our customers, which, in turn, could result in a decline in the demand for our products and pressure to reduce our prices. Any decrease in demand for our products could have an adverse impact on our financial condition, operating results and cash flows. Uncertainty and adverse changes in the economy could also increase the cost and decrease the availability of potential sources of financing and increase our exposure to losses from bad debts, either of which could have a material adverse effect on our financial condition, operating results and cash flows.

We are subject to risks of currency fluctuations.

A portion of our cash and other current assets is held in currencies other than the U.S. dollar. As of January 2, 2017, we had an aggregate of approximately $111.7 million in current assets denominated in Chinese Renminbi (RMB) and the Hong Kong Dollar (HKD). Changes in exchange rates among other currencies and the U.S. dollar will affect the value of these assets as translated to U.S. dollars on our balance sheet. To the extent that we ultimately decide to repatriate some portion of these funds to the United States, the actual value transferred could be impacted by movements in exchange rates. Any such type of movement could negatively impact the amount of cash available to fund operations or to repay debt. To the extent that we may have

outstanding indebtedness denominated in the U.S. dollar or in the HKD, the depreciation of the RMB against the U.S. dollar or the HKD may have a material adverse effect on our business, financial condition, and results of operations (including the cost of servicing, and the value on our balance sheet of, the U.S. dollar and HKD-denominated indebtedness). Additionally, we have revenues and costs denominated in currencies other than the U.S. dollar (primarily the RMB). Fluctuations in the exchange rates between the U.S. dollar and the RMB could result in increases or decreases in our costs or revenues which could negatively impact our business, financial condition, and results of operations. Significant inflation or disproportionate changes in foreign exchange rates could occur as a result of general economic conditions, acts of war or terrorism, changes in governmental monetary or tax policy, or changes in local interest rates. The impact of future exchange rate fluctuations between the U.S. dollar and the RMB and the U.S. dollar and the HKD cannot be predicted. Further, China's government imposes controls over the convertibility of RMB into foreign currencies, which subjects us to further currency exchange risk.

Products we manufacture may contain design or manufacturing defects, which could result in reduced demand for our services and liability claims against us.

We manufacture products to our customers' specifications, which are highly complex and may contain design or manufacturing errors or failures, despite our quality control and quality assurance efforts. Defects in the products we manufacture, whether caused by a design, manufacturing, or materials failure or error, may result in delayed shipments, customer dissatisfaction, a reduction or cancellation of purchase orders, or liability claims against us. If these defects occur either in large quantities or too frequently, our business reputation may be impaired. Since our products are used in products that are integral to our customers' businesses, errors, defects, or other performance problems could result in financial or other damages to our customers beyond the cost of the PCB, for which we may be liable. Although our invoices and sales arrangements generally contain provisions designed to limit our exposure to product liability and related claims, existing or future laws or unfavorable judicial decisions could negate these limitation of liability provisions. In addition, we manufacture products for a range of automotive customers. If any of our products are or are alleged to be defective, we may be required to participate in a recall of such products. As suppliers become more integral to the vehicle design process and assume more of the vehicle assembly functions, vehicle manufacturers are increasingly looking to their suppliers for contributions when faced with product liability claims or recalls. In addition, vehicle manufacturers, which have traditionally borne the costs associated with warranty programs offered on their vehicles, are increasingly requiring suppliers to guarantee or warrant their products and may seek to hold us responsible for some or all of the costs related to the repair and replacement of parts supplied by us to the vehicle manufacturer.

We are heavily dependent upon the worldwide electronics industry, which is characterized by economic cycles and fluctuations in product demand. A downturn in the electronics industry or prolonged global economic crisis could result in decreased demand for our manufacturing services and materially adversely affect our business, financial condition, and results of operations.

A majority of our revenue is generated from the electronics industry, which is characterized by intense competition, relatively short product life cycles, and significant fluctuations in product demand. The industry is subject to economic cycles and recessionary periods. Due to the uncertainty in the end markets served by most of our customers, we have a low level of visibility with respect to future financial results. Consequently, our past operating results, earnings, and cash flows may not be indicative of our future operating results, earnings, and cash flows.

We depend upon a relatively small number of OEM customers for a large portion of our sales, and a decline in sales to major customers would materially adversely affect our business, financial condition, and results of operations.

A small number of customers are responsible for a significant portion of our sales. Our five largest OEM customers accounted for approximately 33%, 37% and 44% of our net sales for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively, and one customer represented 15% of our sales for the year ended January 2, 2017. Sales attributed to OEMs include both direct sales as well as sales that the OEMs place through EMS providers. Our customer concentration could fluctuate, depending on future customer

requirements, which will depend in large part on market conditions in the electronics industry segments in which our customers participate. The loss of one or more significant customers or a decline in sales to our significant customers would materially adversely affect our business, financial condition, and results of operations. In addition, we generate significant accounts receivable in connection with providing manufacturing services to our customers. If one or more of our significant customers were to become insolvent or were otherwise unable to pay for the manufacturing services provided by us, our business, financial condition, and results of operations would be materially adversely affected.

In addition, during industry downturns, we may need to reduce prices to limit the level of order losses, and we may be unable to collect payments from our customers. There can be no assurance that key customers would not cancel orders, that they would continue to place orders with us in the future at the same levels as experienced by us in prior periods, that they would be able to meet their payment obligations, or that the end-products that use our products would be successful. This concentration of customer base may materially adversely affect our business, financial condition, and results of operations due to the loss or cancellation of business from any of these key customers, significant changes in scheduled deliveries to any of these customers, or decreases in the prices of the products sold to any of these customers.

If we are unable to maintain satisfactory capacity utilization rates, our business, financial condition, and results of operations would be materially adversely affected.

Given the high fixed costs of our operations, decreases in capacity utilization rates can have a significant effect on our business. Accordingly, our ability to maintain or enhance gross margins will continue to depend, in part, on maintaining satisfactory capacity utilization rates. In turn, our ability to maintain satisfactory capacity utilization will depend on the demand for our products, the volume of orders we receive, and our ability to offer products that meet our customers' requirements at competitive prices. If current or future production capacity fails to match current or future customer demands, our facilities would be underutilized, our sales may not fully cover our fixed overhead expenses, and we would be less likely to achieve expected gross margins. If forecasts and assumptions used to support the realizability of our long-lived assets change in the future, significant impairment charges could result that would materially adversely affect our business, financial condition, and results of operations.

In addition, we generally schedule our quick turnaround production facilities at less than full capacity to retain our ability to respond to unexpected additional quick-turn orders. However, if these orders are not received, we may forego some production and could experience continued excess capacity. If we conclude we have significant, long-term excess capacity, we may decide to permanently close one or more of our facilities and lay off some of our employees. Closures or lay-offs could result in our recording restructuring charges such as severance, other exit costs, and asset impairments, as well as potentially causing disruptions in our ability to supply customers.

We rely on the cellular phone and mobile technology industry for a significant portion of sales. The economic volatility in this industry has had, and may continue to have, a material adverse effect on our ability to forecast demand and production and to meet desired sales levels.

A large percentage of our business is conducted with customers who are in the cellular phone and mobile technology industry. This industry is characterized by intense competition, short product life cycles, seasonality, particularly around the year-end holiday season, and significant fluctuations in consumer demand. This industry is heavily dependent on consumers and therefore can be affected by their demand patterns. If the volatility in this industry continues, it may have a material adverse effect on our business, financial condition, and results of operations.

Our results of operations are often subject to demand fluctuations and seasonality. With a high level of fixed operating costs, even small revenue shortfalls would decrease our gross margins.

Our results of operations fluctuate for a variety of reasons, including:

- timing of orders from and shipments to major customers;
- the levels at which we utilize our manufacturing capacity;

- price competition;
- changes in our mix of revenues generated from quick-turn versus standard delivery time services;
- expenditures, charges or write-offs, including those related to acquisitions, facility restructurings, or asset impairments; and
- expenses relating to expanding existing manufacturing facilities.

A significant portion of our operating expenses is relatively fixed in nature, and planned expenditures are based in part on anticipated orders. Accordingly, unexpected revenue shortfalls may decrease our gross margins. In addition, we have experienced sales fluctuations due to seasonal patterns in the capital budgeting and purchasing cycles, as well as inventory management practices of our customers and the end markets we serve. In particular, the seasonality of the cellular phone and tablet industries and quick-turn ordering patterns affect the overall PCB industry. These seasonal trends have caused fluctuations in our operating results in the past and may continue to do so in the future. Results of operations in any period should not be considered indicative of the results that may be expected for any future period. In addition, our future quarterly operating results may fluctuate and may not meet the expectations of securities analysts or investors.

We rely on the telecommunication industry for a significant portion of sales. The economic volatility in this industry has had, and may continue to have, a material adverse effect on our ability to forecast demand and production and to meet desired sales levels.

A large percentage of our business is conducted with customers who are in the telecommunication industry. This industry is characterized by intense competition, relatively short product life cycles, and significant fluctuations in product demand. This industry is heavily dependent on the end markets it serves and therefore can be affected by the demand patterns of those markets. If the volatility in this industry continues, it would have a material adverse effect on our business, financial condition, and results of operations.

Our results can be adversely affected by rising labor costs.

There is uncertainty with respect to rising labor costs, particularly within China, where we have most of our manufacturing facilities. In recent periods there have been regular and significant increases in the minimum wage payable in various provinces of China. In addition, we have experienced very high employee turnover in our manufacturing facilities in China, generally after the Chinese New Year, and we are experiencing ongoing difficulty in recruiting employees for these facilities. Furthermore, labor disputes and strikes based partly on wages have in the past slowed or stopped production by certain manufacturers in China. In some cases, employers have responded by significantly increasing the wages of workers at such plants. Any increase in labor costs due to minimum wage laws or customer requirements about scheduling and overtime that we are unable to recover in our pricing to our customers could materially adversely affect our business, financial condition, and results of operations. In addition, the high turnover rate and our difficulty in recruiting and retaining qualified employees and the other labor trends we are noting in China could result in a potential for defects in our products, production disruptions or delays, or the inability to ramp production to meet increased customer orders, resulting in order cancellation or imposition of customer penalties if we are unable to deliver products in a timely manner.

To respond to competitive pressures and customer requirements, we may further expand internationally in lower-cost locations. If we pursue such expansions, we may be required to make additional capital expenditures. In addition, the cost structure in certain countries that are now considered to be favorable may increase as economies develop or as such countries join multinational economic communities or organizations, causing local wages to rise. As a result, we may need to continue to seek new locations with lower costs and the employee and infrastructure base to support PCB manufacturing. We cannot assure investors that we will realize the anticipated strategic benefits of our international operations or that our international operations will contribute positively to our operating results.

In our North America operations, rising health care costs pose a significant labor-related risk. We work with our insurance brokers and carriers to control the cost of health care for our employees. However, there can be no assurance that our efforts will succeed, especially given recent and pending changes in government oversight of health care.

Unanticipated changes in our tax rates or in our assessment of the realizability of our deferred income tax assets or exposure to additional income tax liabilities could affect our business, financial condition, and results of operations.

We are subject to income taxes in the United States and various foreign jurisdictions. Significant judgment is required in determining our provision for income taxes and, in the ordinary course of business, there are many transactions and calculations in which the ultimate tax determination is uncertain. Our effective tax rates could be materially adversely affected by changes in the mix of earnings in countries and states with differing statutory tax rates, changes in the valuation of deferred income tax assets and liabilities, changes in tax laws, as well as other factors. Our tax determinations are regularly subject to audit by tax authorities, and developments in those audits could adversely affect our income tax provision. Although we believe that our tax estimates are reasonable, the final determination of tax audits or tax disputes may be different from what is reflected in our historical income tax provisions, which could materially adversely affect our business, financial condition, and results of operations.

If our net earnings do not remain at or above recent levels, or we are not able to predict with a reasonable degree of probability that they will continue, we may have to record a valuation allowance against our net deferred income tax assets.

Certain of our foreign subsidiaries have deferred income tax assets. Based on our forecast for future taxable earnings for these foreign subsidiaries, we believe we will utilize the deferred income tax assets in future periods. However, if our estimates of future earnings decline, we may have to increase our valuation allowance against our net deferred income tax assets, resulting in a higher income tax provision, which would reduce our cash flows.

Issues arising during the upgrade of our enterprise resource planning system could affect our operating results and ability to manage our business effectively.

We are in the process of upgrading our enterprise resource planning, or ERP, management system to enhance operating efficiencies and provide more effective management of our business operations. We are investing significant financial and personnel resources into this project. However, there is no assurance that the system upgrade will meet our current or future business needs or that it will operate as designed. The transition to the new ERP system will affect numerous systems necessary for our operation. If we fail to correctly implement one or more components of the ERP system, we could experience significant disruption to our operations. Such disruptions could include, among other things, temporary loss of data, inability to process certain orders, failure of systems to communicate with each other and the inability to track or reconcile key data. We are heavily dependent on automated management systems, and any significant failure or delay in the system upgrade could cause a substantial interruption to our business and additional expense, which could result in an adverse impact on our operating results, cash flows or financial condition.

We have a significant amount of goodwill, indefinite-lived intangible assets, and other intangible assets on our consolidated balance sheet. If our goodwill, indefinite-lived intangible assets, or other intangible assets become impaired in the future, we would be required to record a material, non-cash charge to earnings, which would also reduce our stockholders' equity.

As of January 2, 2017, our consolidated balance sheet reflected $499.2 million of goodwill and definite-lived intangible assets. We periodically evaluate whether events and circumstances have occurred, such that the potential for reduced expectations for future cash flows coupled with further decline in the market price of our stock and market capitalization may indicate that the remaining balance of goodwill and definite-lived intangible assets may not be recoverable. If factors indicate that assets are impaired, we would be required to reduce the carrying value of our goodwill and definite-lived intangible assets, which could harm our results during the periods in which such a reduction is recognized.

Our ability to use net operating loss carryforwards to offset future taxable income for U.S. federal income tax purposes is subject to limitations, and future transfers of shares, when aggregated with the November 2016 secondary sale of our shares, could cause us to experience an "ownership change" that could further limit our ability to utilize our net operating losses.

Under U.S. federal income tax law, a corporation's ability to utilize its net operating losses (NOL's) to offset future taxable income may be significantly limited if it experiences an "ownership change" as defined in Section 382 of the Internal Revenue Code of 1986, as amended (the Code). In general, an ownership change will occur if there is a cumulative change in a corporation's ownership by "5-percent shareholders" that exceeds 50 percentage points over a rolling three-year period.

A corporation that experiences an ownership change will generally be subject to an annual limitation on its pre-ownership change NOLs equal to the value of the corporation immediately before the ownership change, multiplied by the long-term tax-exempt rate (subject to certain adjustments). The annual limitation for a taxable year is generally increased by the amount of any "recognized built-in gains" for such year and the amount of any unused annual limitation in a prior year. As a result of our acquisition of Viasystems, the NOLs acquired were subject to this limitation. In November 2016, 13,800,000 shares of common stock were sold by Su Sih, our largest shareholder and a "5-percent shareholder," in an underwritten registered public secondary offering. Additional future transfers or sales of our common stock during the rolling period by "5-percent shareholders" could cause us to experience an ownership change under Section 382, which could further limit our use of NOLs.

Adverse judgments or settlements resulting from legal proceedings in which we may be involved in the normal course of our business could reduce our profitability or limit our ability to operate our business.

In the normal course of our business, we have been, and may in the future be subject to employee claims based on, among other things, discrimination, minimum wage, overtime pay and other employment related matters. We cannot predict with certainty the cost of defense, the cost of prosecution or the ultimate outcome of these legal proceedings. Any significant adverse determinations, judgments or settlements could reduce our profitability and could materially adversely affect our business, financial condition and results of operations, limit our ability to operate our business or harm our reputation.

Employee strikes and other labor-related disruptions may materially adversely affect our business, financial condition, and results of operations.

Our business is labor intensive, utilizing large numbers of engineering and manufacturing personnel. Strikes or labor disputes with our unionized employees, primarily in China, may adversely affect our ability to conduct our business. If we are unable to reach agreement with any of our unionized work groups on future negotiations regarding the terms of their collective bargaining agreements, we may be subject to work interruptions or stoppages. Any of these events could be disruptive to our operations and could result in negative publicity, loss of contracts, and a decrease in revenues. We may also become subject to additional collective bargaining agreements in the future if more employees or segments of our workforce become unionized, including any of our employees in the United States. We have not experienced any labor problems resulting in a work stoppage since 2013.

We are exposed to the credit risk of some of our customers and to credit exposures in weakened markets.

Most of our sales are on an "open credit" basis, with standard industry payment terms. We monitor individual customer payment capability in granting such open credit arrangements, seek to limit such open credit to amounts we believe the customers can pay, and maintain reserves we believe are adequate to cover exposure for doubtful accounts. During periods of economic downturn in the electronics industry and the global economy, our exposure to credit risks from our customers increases. Although we have programs in place to monitor and mitigate the associated risks, such programs may not be effective in reducing our credit risks.

Additionally, our OEM customers often direct a significant portion of their purchases through a relatively limited number of EMS companies. Sales to EMS companies represented approximately 35%, 35% and 39% of our net sales for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively. Our

contractual relationship is often with the EMS companies, who are obligated to pay us for our products. Because we expect our OEM customers to continue to direct our sales to EMS companies, we expect to continue to be subject to this credit risk with a limited number of EMS customers. If one or more of our significant customers were to become insolvent or were otherwise unable to pay us, our business, financial condition, and results of operations would be materially adversely affected.

We rely on suppliers and equipment manufacturers for the timely delivery of raw materials, components, equipment and spare parts used in manufacturing our PCBs and E-M Solutions. If a raw material supplier or equipment manufacturer goes bankrupt, liquidates, consolidates out of existence or fails to satisfy our product quality standards, it could harm our ability to purchase new manufacturing equipment, service the equipment we have, or timely produce our products, thereby affecting our customer relationships.

Consolidations and restructuring in our supplier base and equipment fabricators related to our raw materials purchases or the manufacturing equipment we use to fabricate our products may result in adverse changes in pricing of materials due to reduction in competition among our raw material suppliers or an elimination or shortage of equipment and spare parts from our manufacturing equipment supply base. Suppliers and equipment manufacturers may be impacted by other events outside our control including macro-economic, financial instability, environmental occurrences, or supplier interruptions due to fire, natural catastrophes or otherwise. Suppliers and equipment manufacturers may extend lead times, limit supplies, or increase prices due to capacity constraints or other factors, which could harm our ability to deliver our products on a timely basis and negatively impact our financial results. In addition, in extreme circumstances, the suppliers we purchase from could cease production due to a fire, natural disaster, consolidation or liquidation of their businesses. As such, this may impact our ability to deliver our products on a timely basis and harm our customer relationships and negatively impact our financial results.

We serve customers and have manufacturing facilities outside the United States and are subject to the risks characteristic of international operations.

We have significant manufacturing operations in Asia and sales offices located in Asia and Europe, and we continue to consider additional opportunities to make foreign investments and construct new foreign facilities.

For the year ended January 2, 2017, we generated 72% of our net sales from non-U.S. operations, and a significant portion of our manufacturing material was provided by international suppliers during this period. As a result, we are subject to risks relating to significant international operations, including but not limited to:

- managing international operations;
- imposition of governmental controls;
- unstable regulatory environments;
- compliance with employment laws;
- implementation of disclosure controls, internal controls, financial reporting systems, and governance standards to comply with U.S. accounting and securities laws and regulations;
- limitations on imports or exports of our product offerings;
- fluctuations in the value of local currencies;
- inflation or changes in political and economic conditions;
- labor unrest, rising wages, difficulties in staffing, and geographical labor shortages;
- government or political unrest;
- longer payment cycles;
- language and communication barriers, as well as time zone differences;
- cultural differences;

- increases in duties and taxation levied on our products;
- other potentially adverse tax consequences;
- imposition of restrictions on currency conversion or the transfer of funds;
- travel restrictions;
- expropriation of private enterprises;
- the potential reversal of current favorable policies encouraging foreign investment and trade; and
- the potential for strained trade relationships between the United States and its trading partners.

Our operations in China subject us to risks and uncertainties relating to the laws and regulations of China.

Under its current leadership, the government of China has been pursuing economic reform policies, including the encouragement of foreign trade and investment and greater economic decentralization. No assurance can be given, however, that the government of China will continue to pursue such policies, that such policies will be successful if pursued, or that such policies will not be significantly altered from time to time. Despite progress in developing its legal system, China does not have a comprehensive and highly developed system of laws, particularly with respect to foreign investment activities and foreign trade. Enforcement of existing and future laws and contracts is uncertain, and implementation and interpretation thereof may be inconsistent. As the Chinese legal system develops, the promulgation of new laws, changes to existing laws, and the preemption of local regulations by national laws may adversely affect foreign investors. Further, any litigation in China may be protracted and may result in substantial costs and diversion of resources and management's attention. In addition, though changes in government policies and rules are timely published or communicated, there is usually no indication of the duration of any grace period before which full implementation and compliance will be required. As a result, we may operate our business in violation of new rules and policies before full compliance can be achieved. These uncertainties could limit the legal protections available to us.

We depend on the U.S. government for a significant portion of our business, which involves unique risks. Changes in government defense spending or regulations could have a material adverse effect on our business, financial condition, and results of operations.

A significant portion of our revenues is derived from products and services ultimately sold to the U.S. government by our OEM and EMS customers and is therefore affected by, among other things, the federal budget process. We are a supplier, primarily as a subcontractor, to the U.S. government and its agencies, as well as foreign governments and agencies. The contracts between our direct customers and the government end user are subject to political and budgetary constraints and processes, changes in short-range and long-range strategic plans, the timing of contract awards, the congressional budget authorization and appropriation processes, the government's ability to terminate contracts for convenience or for default, as well as other risks, such as contractor suspension or debarment in the event of certain violations of legal and regulatory requirements.

For the year ended January 2, 2017, aerospace and defense sales accounted for approximately 15% of our total net sales. The substantial majority of aerospace and defense sales are related to both U.S. and foreign military and defense programs. While we do not sell any significant volume of products directly to the U.S. government, we are a supplier to the U.S. government and its agencies, as well as foreign governments and agencies. Consequently, our sales are affected by changes in the defense budgets of the U.S. and foreign governments and may be affected by federal budget sequestration measures.

The domestic and international threat of terrorist activity, emerging nuclear states, and conventional military threats have led to an increase in demand for defense products and services and homeland security solutions in the recent past. The U.S. government, however, is facing unprecedented budgeting constraints. The termination or failure to fund one or more significant contracts by the U.S. government could have a material adverse effect on our business, financial condition, and results of operations.

Future changes to the U.S. Munitions List could reduce or eliminate restrictions that currently apply to some of the products we produce. If these regulations or others are changed in a manner that reduces restrictions on products being manufactured overseas, we would likely face an increase in the number of competitors and increased price competition from overseas manufacturers, who are restricted by the current export laws from manufacturing products for U.S. defense systems.

We are subject to the requirements of the National Industrial Security Program Operating Manual for our facility security clearance, which is a prerequisite to our ability to perform on classified contracts for the U.S. government.

A facility security clearance is required in order to be awarded and perform on classified contracts for the Department of Defense and certain other agencies of the U.S. government. As a cleared entity, we must comply with the requirements of the National Industrial Security Program Operating Manual (NISPOM), and any other applicable U.S. government industrial security regulations. Further, due to the fact that a significant portion of our voting equity is owned by a non-U.S. entity, we are required to be governed by and operate in accordance with the terms and requirements of the Special Security Agreement (the SSA). The terms of the SSA have been previously disclosed in our SEC filings.

If we were to violate the terms and requirements of the SSA, the NISPOM, or any other applicable U.S. government industrial security regulations (which may apply to us under the terms of classified contracts), we could lose our security clearance. We cannot be certain that we will be able to maintain our security clearance. If for some reason our security clearance is invalidated or terminated, we may not be able to continue to perform on classified contracts and would not be able to enter into new classified contracts, which could materially adversely affect our business, financial condition, and results of operations.

We participate in the competitive automotive industry, which has strict quality control standards.

A significant portion of our sales are to customers within the automotive industry. If there was a destabilization of the automotive industry or a market shift away from our automotive customers, it may have a materially adverse effect on our business, financial condition, and results of operations.

In addition, for safety reasons, automotive customers have strict quality standards that generally exceed the quality requirements of other customers. If such products do not meet these quality standards, our business, financial condition, and results of operations may be materially adversely affected. These automotive customers may require long periods of time to evaluate whether our manufacturing processes and facilities meet their quality standards. If we were to lose automotive customers due to quality control issues, we might not be able to regain those customers or gain new automotive customers for long periods of time, which could have a material adverse effect on our business, financial condition, and results of operations. Moreover, we may be required under our contracts with automotive industry customers to indemnify them for the cost of warranties and recalls relating to our products.

Competition in the PCB market is intense, and we could lose market share if we are unable to maintain our current competitive position in end markets using our quick-turn, high technology, and high-mix manufacturing services.

The PCB industry is intensely competitive, highly fragmented, and rapidly changing. We expect competition to continue, which could result in price reductions, reduced gross margins, and loss of market share. Our principal PCB and substrate competitors include AT & S Austria Technologie & Systemtechnik AG, Chin Poon Industrial Co., LTD., Compeq Manufacturing Co., Ltd., IBIDEN Co., Ltd., ISU Petasys Co., Ltd., Multek Corporation, Sanmina Corporation, Tripod Technology Corp., Unimicron Technology Corp., and Wus Printed Circuit Co., Ltd. Our principal E-M Solutions competitors include Amphenol Corp, Flex, Jabil Circuit, Inc. and Sanmina Corporation. In addition, we increasingly compete on an international basis, and new and emerging technologies may result in new competitors entering our markets.

Some of our competitors and potential competitors have advantages over us, including:

- greater financial and manufacturing resources that can be devoted to the development, production, and sale of their products;

- more established and broader sales and marketing channels;
- more manufacturing facilities worldwide, some of which are closer in proximity to OEMs;
- manufacturing facilities that are located in countries with lower production costs;
- lower capacity utilization, which in peak market conditions can result in shorter lead times to customers;
- ability to add additional capacity faster or more efficiently;
- preferred vendor status with existing and potential customers;
- greater name recognition; and
- larger customer bases.

In addition, these competitors may respond more quickly to new or emerging technologies or adapt more quickly to changes in customer requirements than we do. We must continually develop improved manufacturing processes to meet our customers' needs for complex products, and our manufacturing process technology is generally not subject to significant proprietary protection. During recessionary periods in the electronics industry, our strategy of providing quick-turn services, an integrated manufacturing solution, and responsive customer service may take on reduced importance to our customers. As a result, we may need to compete more on the basis of price, which would cause our gross margins to decline.

If we are unable to respond to rapid technological change and process development, we may not be able to compete effectively.

The market for our manufacturing services is characterized by rapidly changing technology and continual implementation of new production processes. The future success of our business will depend in large part upon our ability to maintain and enhance our technological capabilities, to manufacture products that meet changing customer needs, and to successfully anticipate or respond to technological changes on a cost-effective and timely basis. We expect that the investment necessary to maintain our technological position will increase as customers make demands for products and services requiring more advanced technology on a quicker turnaround basis. For example, in 2017 we expect to continue to make significant capital expenditures to expand our HDI and other advanced manufacturing capabilities. We may not be able to obtain access to additional sources of funds in order to respond to technological changes as quickly as our competitors.

In addition, the PCB industry could encounter competition from new or revised manufacturing and production technologies that render existing manufacturing and production technology less competitive or obsolete. We may not respond effectively to the technological requirements of the changing market. If we need new technologies and equipment to remain competitive, the development, acquisition, and implementation of those technologies and equipment will require us to make significant capital investments.

An increase in the cost of raw materials could have a material adverse effect on our business, financial condition, and results of operations and reduce our gross margins.

To manufacture PCBs, we use raw materials such as laminated layers of fiberglass, copper foil, chemical solutions, gold, and other commodity products, which we order from our suppliers. In the case of backplane assemblies, components include connectors, sheet metal, capacitors, resistors and diodes, many of which are custom made and controlled by our customers' approved vendors. If raw material and component prices increase, it may reduce our gross margins.

If we are unable to provide our customers with high-end technology, high-quality products, and responsive service, or if we are unable to deliver our products to our customers in a timely manner, our business, financial condition, and results of operations may be materially adversely affected.

In order to maintain our existing customer base and obtain business from new customers, we must demonstrate our ability to produce our products at the level of technology, quality, responsiveness of service, timeliness of delivery, and cost that our customers require. If our products are of substandard quality, if they are

not delivered on time, if we are not responsive to our customers' demands, or if we cannot meet our customers' technological requirements, our reputation as a reliable supplier of our products would likely be damaged. If we are unable to meet anticipated product and service standards, we may be unable to obtain new contracts or keep our existing customers, and this would have a material adverse effect on our business, financial condition, and results of operations.

We are subject to risks for the use of certain metals from "conflict minerals" originating in the Democratic Republic of the Congo.

During the third quarter of 2012, the SEC adopted rules implementing the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank). These rules impose diligence and disclosure requirements regarding the use of "conflict minerals" mined from the Democratic Republic of Congo and adjoining countries. While these new rules continue to be the subject of ongoing litigation and, as a result, uncertainty, we submitted a conflict minerals report on Form SD with the SEC on June 2, 2014, May 14, 2015 and May 26, 2016. Compliance with these rules results in additional costs and expenses, including costs and expenses incurred for due diligence to determine and verify the sources of any conflict minerals used in our products, in addition to the costs and expenses of remediation and other changes to products, processes, or sources of supply as a consequence of such verification efforts. These rules may also affect the sourcing and availability of minerals used in the manufacture of our PCBs, as there may be only a limited number of suppliers offering "conflict free" minerals that can be used in our products. There can be no assurance that we will be able to obtain such minerals in sufficient quantities or at competitive prices. Also, since our supply chain is complex, we may, at a minimum, face reputational challenges with our customers, stockholders, and other stakeholders if we are unable to sufficiently verify the origins of the minerals used in our products. We may also encounter customers who require that all of the components of our products be certified as conflict free. If we are not able to meet customer requirements, such customers may choose to disqualify us as a supplier, which could impact our sales and the value of portions of our inventory.

Damage to our manufacturing facilities due to fire, natural disaster, or other events could materially adversely affect our business, financial condition, and results of operations.

The destruction or closure of any of our facilities for a significant period of time as a result of fire, explosion, blizzard, act of war or terrorism, flood, tornado, earthquake, lightning, other natural disasters, an outbreak of epidemics such as Ebola or severe acute respiratory syndrome, required maintenance, or other events could harm us financially, increasing our costs of doing business and limiting our ability to deliver our manufacturing services on a timely basis.

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. Such coverage may not be adequate or continue to be available at commercially reasonable rates and terms.

In the event one or more of our facilities is closed on a temporary or permanent basis as a result of a natural disaster, required maintenance or other event, or in the event that an outbreak of a serious epidemic results in quarantines, temporary closures of offices or manufacturing facilities, travel restrictions or the temporary or permanent loss of key personnel, our operations could be significantly disrupted. Such events could delay or prevent product manufacturing and shipment for the time required to transfer production or repair, rebuild or replace the affected manufacturing facilities. This time frame could be lengthy and result in significant expenses for repair and related costs. While we have disaster recovery plans in place, there can be no assurance that such plans will be sufficient to allow our operations to continue in the event of every natural or man-made disaster, pandemic, required repair or other extraordinary event. Any extended inability to continue our operations at unaffected facilities following such an event would reduce our revenue and potentially damage our reputation as a reliable supplier.

We face constant pricing pressure from our customers and competitors, which may decrease our profit margins.

Competition in the PCB market is intense, and we expect that competition will continue to increase, thereby creating a highly aggressive pricing environment. We and some of our competitors have reduced average selling prices in the past. In addition, competitors may reduce their average selling prices faster than our ability to reduce costs, which can also accelerate the rate of decline of our selling prices. When prices decline, we may also be required to write down the value of our inventory.

The effects of such pricing pressures on our business may be exacerbated by inflationary pressures that affect our costs of supply. When we are unable to extract comparable concessions from our suppliers on prices they charge us, this in turn reduces gross profit if we are unable to raise prices. Further, uncertainty or adverse changes in the economy could also lead to a significant decline in demand for our products and pressure to reduce our prices. As a result of the recent global economic downturn, many businesses have taken a more conservative stance in ordering inventory. Any decrease in demand for our products, coupled with pressure from the market and our customers to decrease our prices, would materially adversely affect our business, financial condition, and results of operations.

The pricing pressure we face on our products requires us to introduce new and more advanced technology products to maintain average selling prices or reduce any declines in average selling prices. As we shift production to more advanced, higher-density PCBs, we tend to make significant investments in plants and other capital equipment and incur higher costs of production, which may not be recovered.

The prominence of EMS companies as our customers could reduce our gross margins, potential sales, and customers.

Sales to EMS companies represented approximately 35%, 35% and 39% of our net sales for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively. Sales to EMS providers include sales directed by OEMs as well as orders placed with us at the EMS providers' discretion. EMS providers source on a global basis to a greater extent than OEMs. The growth of EMS providers increases the purchasing power of such providers and has in the past, and could in the future, result in increased price competition or the loss of existing OEM customers. In addition, some EMS providers, including some of our customers, have the ability to directly manufacture PCBs and create backplane assemblies. If a significant number of our other EMS customers were to acquire these abilities, our customer base might shrink, and our sales might decline substantially. Moreover, if any of our OEM customers outsource the production of PCBs and creation of backplane assemblies to these EMS providers, our business, financial condition, and results of operations may be materially adversely affected.

If we are unable to manage our growth effectively, our business, financial condition, and results of operations could be materially adversely affected.

We have experienced, and expect to continue to experience, growth in the scope and complexity of our operations. This growth may strain our managerial, financial, manufacturing, and other resources. In order to manage our growth, we may be required to continue to implement additional operating and financial controls and hire and train additional personnel. There can be no assurance that we will be able to do so in the future, and failure to do so could jeopardize our expansion plans and seriously harm our operations. In addition, growth in our capacity could result in reduced capacity utilization and a corresponding decrease in gross margins.

Our international sales are subject to laws and regulations relating to corrupt practices, trade, and export controls and economic sanctions. Any non-compliance could have a material adverse effect on our business, financial condition, and results of operations.

We operate on a global basis and are subject to anti-corruption, anti-bribery, and anti-kickback laws and regulations, including restrictions imposed by the Foreign Corrupt Practices Act (the FCPA). The FCPA and similar anti-corruption, anti-bribery, and anti-kickback laws in other jurisdictions generally prohibit companies and their intermediaries and agents from making improper payments to government officials or any other persons for the purpose of obtaining or retaining business. We operate and sell our products in many parts of the world

that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-corruption, anti-bribery, and anti-kickback laws may conflict with local customs and practices. We also, from time to time, undertake business ventures with state-owned companies or enterprises.

Our global business operations must also comply with all applicable domestic and foreign export control laws, including International Traffic In Arms Regulations (ITAR), and Export Administration Regulations (EAR). Some items we manufacture are controlled for export by the U.S. Department of Commerce's Bureau of Industry and Security under EAR.

We train our employees concerning anti-corruption, anti-bribery, and anti-kickback laws and compliance with international regulations regarding trades and exports, and we have policies in place that prohibit employees from making improper payments. We cannot provide assurances that our internal controls and procedures will guarantee compliance by our employees or third parties with whom we work. If we are found to be liable for violations of the FCPA or similar anti-corruption, anti-bribery, or anti-kickback laws in international jurisdictions or for violations of ITAR, EAR, or other similar regulations regarding trades and exports, either due to our own acts or out of inadvertence, or due to the inadvertence of others, we could suffer criminal or civil fines or penalties or other repercussions, including reputational harm, which could have a material adverse effect on our business, financial condition, and results of operations.

Our global business operations also must be conducted in compliance with applicable economic sanctions laws and regulations, such as laws administered by the U.S. Department of the Treasury's Office of Foreign Asset Control, the U.S. State Department, and the U.S. Department of Commerce. We must comply with all applicable economic sanctions laws and regulations of the United States and other countries. Violations of these laws or regulations could result in significant additional sanctions including criminal or civil fines or penalties, more onerous compliance requirements, more extensive debarments from export privileges, or loss of authorizations needed to conduct aspects of our international business.

In certain countries, we may engage third-party agents or intermediaries, such as customs agents, to act on our behalf, and if these third-party agents or intermediaries violate applicable laws, their actions may result in criminal or civil fines or penalties or other sanctions being assessed against us. We take certain measures designed to ensure our compliance with U.S. export and economic sanctions laws, anti-corruption laws and regulations, and export control laws. However, it is possible that some of our products were sold or will be sold to distributors or other parties, without our knowledge or consent, in violation of applicable law. There can be no assurances that we will be in compliance in the future. Any such violation could result in significant criminal or civil fines, penalties, or other sanctions and repercussions, including reputational harm, which could have a material adverse effect on our business, financial condition, and results of operations.

Our failure to comply with the requirements of environmental laws could result in litigation, fines, revocation of permits necessary to our manufacturing processes, or debarment from our participation in federal government contracts.

Our operations are regulated under a number of federal, state, local, and foreign environmental and safety laws and regulations that govern, among other things, the discharge of hazardous materials into the air and water, as well as the handling, storage, and disposal of such materials. These laws and regulations include the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Superfund Amendment and Reauthorization Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Toxic Substances Control Act, and the Federal Motor Carrier Safety Improvement Act, as well as analogous state, local, and foreign laws. Compliance with these environmental laws is a major consideration for us because our manufacturing processes use and generate materials classified as hazardous. Because we use hazardous materials and generate hazardous wastes in our manufacturing processes, we may be subject to potential financial liability for costs associated with the investigation and remediation of our own sites, or sites at which we have arranged for the disposal of hazardous wastes, if such sites become contaminated. Even if we fully comply with applicable environmental laws and are not directly at fault for the contamination, we may still be liable. The wastes we generate include spent ammoniacal and cupric etching solutions, metal stripping solutions, waste acid solutions, waste alkaline cleaners, waste oil, and waste waters that contain heavy metals such as copper, tin, lead, nickel,

gold, silver, cyanide, and fluoride, and both filter cake and spent ion exchange resins from equipment used for on-site waste treatment.

Environmental law violations, including the failure to maintain required environmental permits, could subject us to fines, penalties, and other sanctions, including the revocation of our effluent discharge permits. This could require us to cease or limit production at one or more of our facilities and could have a material adverse effect on our business, financial condition, and results of operations. Even if we ultimately prevail, environmental lawsuits against us would be time consuming and costly to defend.

Environmental laws have generally become more stringent and this trend may continue over time, imposing greater compliance costs and increasing risks and penalties associated with violation. We operate in environmentally sensitive locations, and we are subject to potentially conflicting and changing regulatory agendas of political, business, and environmental groups. Changes or restrictions on discharge limits, emissions levels, material storage, handling, or disposal might require a high level of unplanned capital investment or relocation to another global location where prohibitive regulations do not exist. It is possible that environmental compliance costs and penalties from new or existing regulations may materially adversely affect our business, financial condition, and results of operations.

We are increasingly required to certify compliance with various material content restrictions in our products based on laws of various jurisdictions or territories such as the Restriction of Hazardous Substances (RoHS) and Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) directives in the European Union and China's RoHS legislation. Similar laws have been adopted in other jurisdictions and may become increasingly prevalent. In addition, we must also certify as to the non-applicability of the EU's Waste Electrical and Electronic Equipment directive for certain products that we manufacture. The REACH directive requires the identification of Substances of Very High Concern (SVHCs) periodically. We must survey our supply chain and certify to the non-presence or presence of SVHCs to our customers. As with other types of product certifications that we routinely provide, we may incur liability and pay damages if our products do not conform to our certifications.

We are also subject to a variety of environmental laws and regulations in China, which impose limitations on the discharge of pollutants into the air and water and establish standards for the treatment, storage, and disposal of solid and hazardous wastes. The manufacturing of our products generates gaseous chemical wastes, liquid wastes, waste water, and other industrial wastes from various stages of the manufacturing process. Production sites in China are subject to regulation and periodic monitoring by the relevant environmental protection authorities. Environmental claims or the failure to comply with current or future regulations could result in the assessment of damages or imposition of fines against us, suspension of production, or cessation of operations.

The process to manufacture PCBs requires adherence to city, county, state, federal, and foreign environmental regulations regarding the storage, use, handling, and disposal of chemicals, solid wastes, and other hazardous materials, as well as compliance with air quality standards and chemical use reporting. In China, governmental authorities have adopted new rules and regulations governing environmental issues. An update to Chinese environmental waste water law was issued in late 2012, allowing for an interim period in which plants subject to such law may install equipment that meets the new regulatory regime. Our plants in China are not yet in full compliance with the newly adopted environmental regulations. There can be no assurance that violations will not occur in the future.

Employee theft or fraud could result in loss.

Certain of our employees have access to, or signature authority with respect to, bank accounts or other company assets, which could expose us to fraud or theft. In addition, certain employees have access to certain precious metals used in connection with our manufacturing and key information technology (IT) infrastructure and to customer and other information that is commercially valuable. Should any employee, for any reason, steal any such precious metals (which has occurred from time to time), compromise our IT systems, or misappropriate customer or other information, we could incur losses, including losses relating to claims by our customers against us, and the willingness of customers to do business with us may be damaged. Additionally, in the case of our

defense business, we could be debarred from future participation in government programs. Any such losses may not be fully covered by insurance.

Because we sell on a purchase order basis, we are subject to uncertainties and variability in demand by our customers that could decrease revenues and harm our operating results.

Although we have long-term contracts with many customers, those contracts generally do not contain volume commitments. We generally sell to customers on a purchase order basis. Our quick-turn orders are subject to particularly short lead times. Consequently, our sales are subject to short-term variability in demand by our customers. Customers submitting purchase orders may cancel, reduce, or delay their orders for a variety of reasons, subject to negotiations. The level and timing of orders placed by our customers may vary due to:

- customer attempts to manage inventory;
- changes in customers' manufacturing strategies, such as a decision by a customer to either diversify or consolidate the number of PCB manufacturers or backplane assembly service providers used or to manufacture or assemble its own products internally;
- variation in demand for our customers' products; and
- changes in new product introductions.

We have periodically experienced terminations, reductions, and delays in our customers' orders. Further terminations, reductions, or delays in our customers' orders could materially adversely affect our business, financial condition, and results of operations.

Increasingly, our customers are requesting that we enter into supply agreements with them that have restrictive terms and conditions. These agreements typically include provisions that increase our financial exposure, which could result in significant costs to us.

Increasingly, our customers are requesting that we enter into supply agreements with them. These agreements typically do not include volume commitments, but do include provisions that generally serve to increase our exposure for product liability and limited sales returns, which could result in higher costs to us as a result of such claims. In addition, these agreements typically contain provisions that seek to limit our operational and pricing flexibility and extend payment terms, which could materially adversely affect our cash flow, business, financial condition, and results of operations.

Our business has benefited from OEMs deciding to outsource their PCB manufacturing and backplane assembly needs to us. If OEMs choose to provide these services in-house or select other providers, our business could suffer.

Our future revenue growth partially depends on new outsourcing opportunities from OEMs. Current and prospective customers continuously evaluate our performance against other providers. They also evaluate the potential benefits of manufacturing their products themselves. To the extent that outsourcing opportunities are not available either due to OEM decisions to produce these products themselves or to use other providers, our financial results and future growth could be materially adversely affected.

Consolidation among our customers could materially adversely affect our business, financial condition, and results of operations.

Recently, some of our large customers have consolidated, and further consolidation of customers may occur. Depending on which organization becomes the controller of the supply chain function following the consolidation, we may not be retained as a preferred or approved supplier. In addition, product duplication could result in the termination of a product line that we currently support. While there is potential for increasing our position with the combined customer, there does exist the potential for decreased revenue if we are not retained as a continuing supplier. We also face the risk of increased pricing pressure from the combined customer because of its increased market share.

We may need additional capital in the future to fund investments in our operations, refinance our indebtedness, and to maintain and grow our business, and such capital may not be available on a timely basis, on acceptable terms, or at all.

Our business is capital-intensive, and our ability to increase revenue, profit, and cash flow depends upon continued capital spending. To the extent that the funds generated by our ongoing operations are insufficient to cover our liquidity requirements, we may need to raise additional funds through financings. If we are unable to fund our operations and make capital expenditures as currently planned or if we do not have sufficient liquidity to service the interest and principal payments on our debt, it would have a material adverse effect on our business, financial condition, and results of operations. If we do not achieve our expected operating results, we would need to reallocate our sources and uses of operating cash flows. This may include borrowing additional funds to service debt payments, which may impair our ability to make investments in our business. Looking ahead at long-term needs, we may need to raise additional funds for a number of purposes, including the following:

- to fund capital equipment purchases to increase production capacity, upgrade and expand our technological capabilities and replace aging equipment or introduce new products;
- to refinance our existing indebtedness;
- to fund our operations beyond 2017;
- to fund working capital requirements for future growth that we may experience;
- to enhance or expand the range of services we offer;
- to increase our sales and marketing activities; or
- to respond to competitive pressures or perceived opportunities, such as investment, acquisition, and international expansion activities.

Should we need to raise funds through incurring additional debt, we may become subject to covenants even more restrictive than those contained in our current debt instruments. There can be no assurance that additional capital, including any future equity or debt financing, would be available on a timely basis, on favorable terms, or at all. If such funds are not available to us when required or on acceptable terms, our business, financial condition, and results of operations could be materially adversely affected.

Our operations could be materially adversely affected by a shortage of utilities or a discontinuation of priority supply status offered for such utilities.

The manufacturing of PCBs requires significant quantities of electricity and water. Our operations in Asia have historically purchased substantially all of the electrical power for their manufacturing plants in China from local power plants. Because China's economy has recently been in a state of growth, the strain on the nation's power plants is increasing, which has led to continuing power outages in various parts of the country. There may be times when our operations in China may be unable to obtain adequate sources of electricity to meet production requirements. Various regions in China have in the past experienced shortages of both electricity and water and unexpected interruptions of power supply. From time to time, the Chinese government rations electrical power, which can lead to unscheduled production interruptions at our manufacturing facilities.

In addition, certain of the areas in which our North America operations have manufacturing facilities, particularly in California, have experienced power and resource shortages from time to time, including mandatory periods without electrical power, changes to water availability, and significant increases in utility and resource costs. California has also recently experienced drought conditions, prompting the Governor of California to proclaim a Drought State of Emergency. Due to the severe drought conditions, some local and regional water districts and the state government are implementing policies or regulations that restrict water usage and increase the cost of water.

We do not generally maintain any back-up power generation facilities or reserves of water for our operations, so if we were to lose supplies of power or water at any of our facilities, we would be required to cease

operations until such supply was restored. Any resulting cessation of operations could materially adversely affect our ability to meet our customers' orders in a timely manner, thus potentially resulting in a loss of business, along with increased costs of manufacturing, and under-utilization of capacity. In addition, the sudden cessation of our power or water supply could damage our equipment, resulting in the need for costly repairs or maintenance, as well as damage to products in production, resulting in an increase in scrapped products.

For example, in the third quarter of 2014, one of our principal plants was affected by a five day unexpected power outage, which increased our manufacturing costs and caused delivery delays. There can be no assurance that our required utilities would not in the future experience material interruptions, which could have a material adverse effect on our business, financial condition, and results of operations.

Outages, computer viruses, break-ins, and similar events could disrupt our operations, and breaches of our security systems may cause us to incur significant legal and financial exposure.

We rely on information technology networks and systems, some of which are owned and operated by third parties, to process, transmit, and store electronic information. In particular, we depend on our information technology infrastructure for a variety of functions, including worldwide financial reporting, inventory management, procurement, invoicing, and email communications. Any of these systems may be susceptible to outages due to fire, floods, power loss, telecommunications failures, terrorist attacks, and similar events. Despite the implementation of network security measures, our systems and those of third parties on which we rely may also be vulnerable to computer viruses, break-ins, and similar disruptions. If we or our vendors are unable to prevent such outages and breaches, our operations could be disrupted. If unauthorized parties gain access to our information systems or such information is used in an unauthorized manner, misdirected, lost, or stolen during transmission, any theft or misuse of such information could result in, among other things, unfavorable publicity, governmental inquiry and oversight, difficulty in marketing our services, allegations by our customers that we have not performed our contractual obligations, litigation by affected parties, and possible financial obligations for damages related to the theft or misuse of such information, any of which could have a material adverse effect on our business, financial condition, and results of operations.

We may be unable to hire and retain sufficient qualified personnel, and the loss of any of our key executive officers could materially adversely affect our business, financial condition, and results of operations.

We believe that our future success will depend in large part on our ability to attract and retain highly skilled, knowledgeable, sophisticated, and qualified managerial and professional personnel. We may not be able to retain our executive officers and key personnel or attract additional qualified management in the future. We can make no assurances that future changes in executive management will not have a material adverse effect on our business, financial condition, or results of operations. Our business also depends on our continuing ability to recruit, train, and retain highly qualified employees, particularly engineering and sales and marketing personnel. The competition for these employees is intense, and the loss of these employees could harm our business. Further, our ability to successfully integrate acquired companies depends in part on our ability to retain key management and existing employees at the time of the acquisition.

Our manufacturing processes depend on the collective industry experience of our employees. If a significant number of these employees were to leave us, it could limit our ability to compete effectively and could materially adversely affect our business, financial condition, and results of operations.

We have limited patent or trade secret protection for our manufacturing processes. We rely on the collective experience of our employees involved in our manufacturing processes to ensure that we continuously evaluate and adopt new technologies in our industry. Although we are not dependent on any one employee or a small number of employees, if a significant number of our employees involved in our manufacturing processes were to leave our employment, and we were not able to replace these people with new employees with comparable experience, our manufacturing processes might suffer as we might be unable to keep up with innovations in the industry. As a result, we may lose our ability to continue to compete effectively. For example, we have experienced a significant amount of employee attrition in our China operations each year, which has negatively impacted our yield, costs of production, and service times.

We may be exposed to intellectual property infringement claims by third parties that could be costly to defend, could divert management's attention and resources, and if successful, could result in liability.

We rely on a combination of copyright, patent, trademark, and trade secret laws, confidentiality procedures, contractual provisions, and other measures to protect our proprietary information. All of these measures afford only limited protection. These measures may be invalidated, circumvented, or challenged, and others may develop technologies or processes that are similar or superior to our technology. We may not have the controls and procedures in place that are needed to adequately protect proprietary information. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy our products or obtain or use information that we regard as proprietary, which could materially adversely affect our business, financial condition, and results of operations.

Furthermore, there is a risk that we may infringe on the intellectual property rights of others. As is the case with many other companies in the PCB industry, we from time to time receive communications from third parties asserting patent rights to our products and enter into discussions with such third parties. Irrespective of the validity or the successful assertion of such claims, we could incur costs in either defending or settling any intellectual property disputes alleging infringement. If any claims are brought against the customers for such infringement, whether or not these have merit, we could be required to expend significant resources in defending such claims. In the event we are subject to any infringement claims, we may be required to spend a significant amount of money to develop non-infringing alternatives or obtain licenses. We may not be successful in developing such alternatives or in obtaining such licenses on reasonable terms or at all, which could disrupt the production processes, damage our reputation, and materially adversely affect our business, financial condition, and results of operations.

Future sales of our common stock or other securities by the Company or its large shareholders may adversely affect the market price of our common stock.

In the future, we may issue additional equity securities or one or more of our large shareholders may offer their shares for sale through public or private offerings. Pursuant to our certificate of incorporation, our board of directors has the authority, without action by stockholders, to designate and issue preferred stock in one or more series. Our board of directors may also designate the rights, preferences and privileges of each series of preferred stock, any or all of which may be superior to the rights of the common stock. Any such issuance of additional shares would reduce your influence over matters on which our stockholders vote, would dilute the percentage of ownership interest of existing stockholders and may dilute the per share book value of the common stock. In addition, option holders may exercise their options at a time when we would otherwise be able to obtain additional equity capital on more favorable terms. Any issuances of preferred stock would likely result in your interest being subject to the prior rights of holders of that preferred stock. Also, we may have shareholders that hold large quantities of our shares. If one or more of these shareholders offered their shares for sale, it could result in a decrease in demand for our shares which could have the effect of decreasing our share price. The market price of our common stock could decline as a result of any future offering as well as sales of shares of our common stock made after such offerings or the perception that such sales could occur.

Because we do not expect to pay any cash dividends for the foreseeable future, shareholders may not receive any return on investment unless the shareholders sells their common stock for a price greater than that which was paid.

We have not declared or paid any dividends since 2000 and do not anticipate paying any cash dividends on our common stock in the foreseeable future. Any payment of cash dividends will be at the discretion of our board of directors and will depend on our financial condition, anticipated cash needs, capital requirements, legal requirements, earnings and other factors. Our ability to pay dividends is restricted by the terms of our debt agreements and might be restricted by the terms of any indebtedness that we incur in the future. Consequently, shareholders should not rely on dividends in order to receive a return on your investment. See our dividend policy in Item 5. *Market for Registrants Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities*.

Our business, financial condition, and results of operations could be materially adversely affected by climate change initiatives.

Our manufacturing processes require that we purchase significant quantities of energy from third parties, which results in the generation of greenhouse gases, either directly on-site or indirectly at electric utilities. Both domestic and international legislation to address climate change by reducing greenhouse gas emissions could create increases in energy costs and price volatility. Considerable international attention is now focused on development of an international policy framework to guide international action to address climate change. Proposed and existing legislative efforts to control or limit greenhouse gas emissions could affect our energy sources and supply choices, as well as increase the cost of energy and raw materials that are derived from sources that generate greenhouse gas emissions.

Failure to maintain good relations with the noncontrolling interest holder of a majority-owned subsidiary of TTM in China could materially adversely affect our ability to manage that operation.

A noncontrolling interest holder owns a 5% interest in a subsidiary of TTM that operates the Huiyang, China facility that became a part of our operations through the acquisition of Viasystems. The noncontrolling interest holder is affiliated with the Chinese government and has close ties to local economic development and other Chinese government agencies. The noncontrolling interest holder has certain rights to be consulted and to consent to certain operating and investment matters concerning the Huiyang facility and the board of directors of our subsidiary that operates the Huiyang facility. Failure to maintain good relations with the noncontrolling interest holder could materially adversely affect our ability to manage the operations of the plant.

Security breaches and other disruptions could compromise our information and expose us to liability, which could cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data in our data centers and on our networks, including intellectual property, our proprietary business information and that of our customers, suppliers and business partners, and personally identifiable information of our employees. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, disrupt our operations, damage our reputation, and cause a loss of confidence in our products and services, which could have a material adverse effect on our business, financial condition, results of operations or cash flows.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None.

ITEM 2. *PROPERTIES*

The following table describes our principal manufacturing facilities and our drilling and tooling process facility.

U.S. Locations	Operating Segment	Leased Square Feet	Owned Square Feet	Total Square Feet
Anaheim, CA (ANA)	PCB	—	96,000	96,000
Cleveland, OH (CLE)(2)	PCB	—	40,000	40,000
Costa Mesa, CA(1)	Headquarters	11,775	—	11,775
Chippewa Falls, WI (CF)	PCB	—	281,000	281,000
El Paso, TX(2)	E-M Solutions Warehousing	30,000	—	30,000
Forest Grove, OR (FG)	PCB	—	280,300	280,300
Littleton, Colorado (DEN)	PCB	19,512	22,502	42,014
Logan, UT (LG)	PCB	12,000	129,300	141,300
North Jackson, OH (NJ)	PCB	8,800	66,276	75,076
San Diego, CA (SD)	PCB	37,539	—	37,539
San Jose, CA (SJ)	PCB	42,344	—	42,344
Santa Ana, CA (SA)	PCB	—	82,550	82,550
Santa Clara, CA (SC)	PCB	18,304	49,115	67,419
Stafford, CT (ST)	PCB	—	177,000	177,000
Stafford Springs, CT (SS)	PCB	30,251	85,328	115,579
Sterling, VA (STE)	PCB	100,879	—	100,879
Total		311,404	1,309,371	1,620,775
Foreign Locations				
Canada				
Toronto (TOR)	PCB	15,500	99,960	115,460
Mexico				
Juarez, Chihuahua (JZ)(2)	E-M Solutions	206,000	—	206,000
China				
Hong Kong (OPCM)	PCB	4,757	156,350	161,107
Dongguan (DMC)	PCB	—	1,069,120	1,069,120
Guangzhou (GME)	PCB	—	1,467,827	1,467,827
Guangzhou (GZ)	PCB	—	1,872,800	1,872,800
Huiyang (HY)	PCB	—	435,485	435,485
Shanghai(SH)	E-M Solutions	85,745	—	85,745
Shanghai (SH E-MS)	E-M Solutions	—	286,000	286,000
Shanghai (SME)	PCB	—	316,198	316,198
Shanghai (SMST/SP)	PCB	—	760,496	760,496
Shanghai (SKE)(3)	PCB	—	110,971	110,971
Shenzhen (SZ)	E-M Solutions	430,000	—	430,000
Zhongshan (ZS)	PCB	—	1,132,760	1,132,760
Total		742,002	7,707,967	8,449,969

We maintain our properties in good operating condition. We believe that our properties are suitable and adequate for us to operate at present levels, and the productive capacity and extent of utilization of the facilities are appropriate for our existing manufacturing requirements.

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(1) Location of our headquarters and not a manufacturing facility

(2) Facility / warehouse was shutdown or consolidated into other facilities in 2016

(3) Drilling and tooling process facility

ITEM 3. *LEGAL PROCEEDINGS*

From time to time, we may become a party to various legal proceedings arising in the ordinary course of our business. There can be no assurance that we will prevail in any such litigation. We believe that the amount of any reasonably possible loss for known matters would not be material to our financial statements; however, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate potential loss could have a material adverse effect on our financial condition, results of operations, or cash flows in a particular period.

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*

Historical Trading Price

Our common stock has been listed on the Nasdaq Global Select Market under the symbol "TTMI" since September 21, 2000. The following table sets forth the quarterly high and low sales prices of our common stock as reported on the Nasdaq Global Select Market for the periods indicated.

	High	Low
2016:		
First Quarter	$ 6.97	$ 4.67
Second Quarter	$ 8.16	$ 6.22
Third Quarter	$11.58	$ 6.93
Fourth Quarter	$15.00	$10.85
2015:		
First Quarter	$ 9.27	$ 6.87
Second Quarter	$10.93	$ 8.77
Third Quarter	$10.18	$ 6.09
Fourth Quarter	$ 8.31	$ 5.96

As of February 17, 2017, there were approximately 289 holders of record of our common stock. The closing sale price of our common stock on the Nasdaq Global Select Market on February 17, 2017 was $16.69.

Dividend Policy

TTM Technologies, Inc. has not declared or paid any dividends since 2000 and does not anticipate paying any cash dividends in the foreseeable future. TTM Technologies, Inc. presently intends to retain any future earnings to service debt and to finance future operations and the expansion of its business. In addition, TTM Technologies, Inc. debt agreements contain restrictions and limitations on the declaration and payment of dividends and distributions.

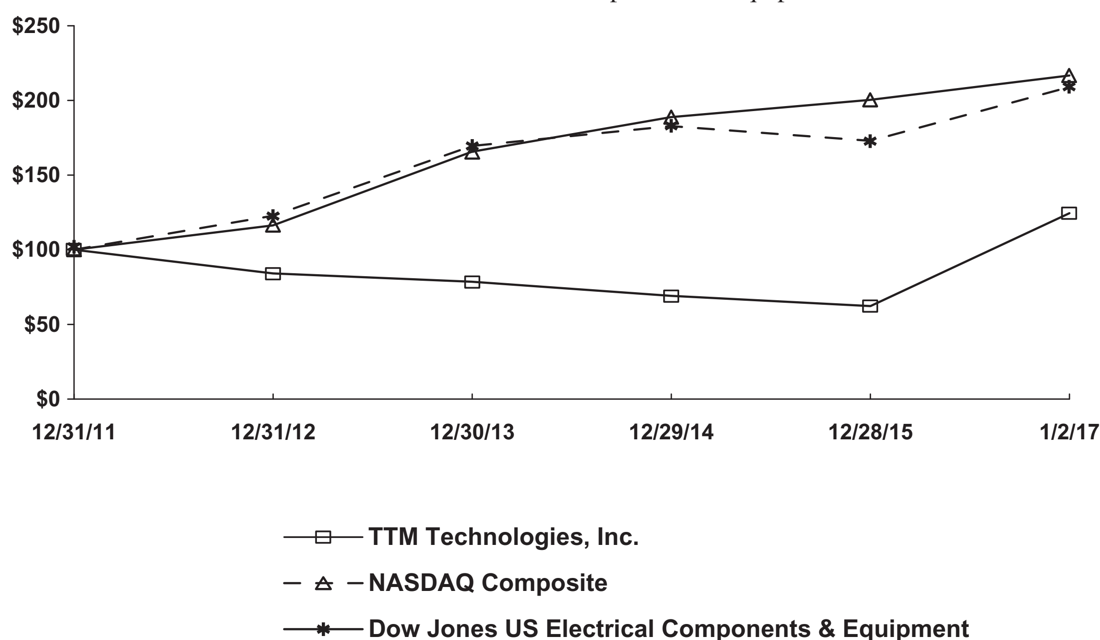
STOCK PRICE PERFORMANCE GRAPH

The performance graph below compares, for the period from December 31, 2011 to January 2, 2017, the cumulative total stockholder return on our common stock against the cumulative total return of:

- the NASDAQ Composite Index; and
- the Dow Jones U.S. Electrical Components & Equipment Index.

The graph assumes $100 was invested in our common stock on December 31, 2011, and an investment in NASDAQ Composite Index and the Dow Jones US Electrical Components & Equipment Index. The stock performance shown on the graph below represents historical stock performance and is not necessarily indicative of future stock performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among TTM Technologies, Inc., the NASDAQ Composite Index
and the Dow Jones US Electrical Components & Equipment Index



* $100 invested on December 31, 2011 in stock or index, including reinvestment of dividends.

	12/31/11	12/31/12	12/30/13	12/29/14	12/28/15	01/02/17
TTM Technologies, Inc.	**100.00**	**83.85**	**78.38**	**68.89**	**62.14**	**124.36**
NASDAQ Composite	**100.00**	**116.41**	**165.47**	**188.69**	**200.32**	**216.54**
Dow Jones US Electrical Components & Equipment	**100.00**	**122.53**	**169.41**	**182.85**	**172.70**	**208.95**

The performance graph above shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section. The performance graph above will not be deemed incorporated by reference into any filing of our company under the Securities Act of 1933, as amended, or the Exchange Act.

ITEM 6. *SELECTED FINANCIAL DATA*

The selected historical financial data presented below are derived from our consolidated financial statements. The selected financial data should be read in conjunction with "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the notes thereto included elsewhere in this report.

	Year Ended				
	January 2, 2017(1)	December 28, 2015(1)(2)	December 29, 2014(1)	December 30, 2013(1)	December 31, 2012
	(In thousands, except per share data)				
Consolidated Statement of Operations Data:					
Net sales	$2,533,359	$2,095,488	$1,325,717	$1,368,215	$1,348,668
Cost of goods sold	2,109,744	1,785,351	1,131,028	1,150,372	1,123,669
Gross profit	423,615	310,137	194,689	217,843	224,999
Operating expenses:					
Selling and marketing	66,366	57,361	36,919	37,149	35,957
General and administrative	147,247	167,669	100,999	105,924	98,005
Amortization of definite-lived intangibles	24,252	18,888	8,387	9,332	14,637
Impairment of long-lived assets	3,346	—	1,845	10,782	18,082
Restructuring charges	8,951	7,381	—	3,445	—
Gain on sale of assets	—	(2,504)	—	(17,917)	—
Impairment of goodwill and definite-lived intangibles	—	—	—	—	200,335
Total operating expenses	250,162	248,795	148,150	148,715	367,016
Operating income (loss)	173,453	61,342	46,539	69,128	(142,017)
Other income (expense):					
Interest expense	(76,008)	(59,753)	(23,830)	(24,031)	(25,784)
Loss on extinguishment of debt	(47,767)	(802)	(506)	(10,743)	(5,527)
Other, net	17,324	8,189	88	5,418	4,956
Total other expense, net	(106,451)	(52,366)	(24,248)	(29,356)	(26,355)
Income (loss) before income taxes	67,002	8,976	22,291	39,772	(168,372)
Income tax provision	(31,427)	(34,594)	(7,598)	(15,879)	(12,728)
Net income (loss)	35,575	(25,618)	14,693	23,893	(181,100)
Less: Net (income) loss attributable to the noncontrolling interest	(714)	(264)	—	(2,016)	6,505
Net income (loss) attributable to TTM Technologies, Inc. stockholders	$ 34,861	$ (25,882)	$ 14,693	$ 21,877	$ (174,595)
Earnings (loss) per common share attributable to TTM Technologies, Inc. stockholders:					
Basic	$ 0.35	$ (0.28)	$ 0.18	$ 0.27	$ (2.13)
Diluted	$ 0.34	$ (0.28)	$ 0.18	$ 0.26	$ (2.13)
Weighted average common shares:					
Basic	100,099	92,675	83,238	82,506	81,800
Diluted	101,482	92,675	83,941	83,132	81,800
Other Financial Data:					
Depreciation of property, plant and equipment	$ 156,229	$ 133,508	$ 95,349	$ 92,120	$ 84,286

(1) Beginning in 2013, we operate on a 52 or 53 week year ending on the Monday nearest December 31. Fiscal 2016 consisted of 53 weeks ended on January 2, 2017 with the additional week included in the fourth quarter. We estimate the additional week contributed approximately $29.2 million of additional revenue and approximately $1.1 million of additional operating income for the year ended January 2, 2017. Fiscal year 2015, 2014 and 2013 were 52 weeks ended December 28, 2015, December 29, 2014 and December 30, 2013, respectively. Prior to 2013, our fiscal year always ended on December 31.

(2) Our results for the year ended December 28, 2015 include 211 days of activity of Viasystems, which we acquired on May 31, 2015. Additionally, our results include $34.4 million of bank fees and legal, accounting and other professional service costs associated with the acquisition of Viasystems.

	As of				
	January 2, 2017(1)	December 28, 2015(1)	December 29, 2014	December 30, 2013	December 31, 2012
			(In thousands)		
Consolidated Balance Sheet Data:					
Working capital	$ 323,776	$ 277,526	$ 302,111	$ 346,988	$ 395,732
Total assets	2,500,076	2,640,133	1,601,289	1,673,575	1,676,962
Long-term debt, including current maturities	1,019,682	1,170,786	502,687	573,743	557,545
TTM Technologies, Inc. stockholders' equity	820,847	819,105	715,464	705,295	653,947

	Year Ended				
	January 2, 2017	December 28, 2015	December 29, 2014	December 30, 2013	December 31, 2012
			(In thousands)		
Supplemental Data:					
Adjusted EBITDA(2)	$ 395,445	$ 285,673	$ 166,044	$ 181,293	$ 190,592
Net cash provided by operating activities	298,336	237,462	129,810	71,388	182,565
Net cash used in investing activities	(77,968)	(247,660)	(108,571)	(35,689)	(136,444)
Net cash (used in) provided by financing activities	(217,109)	(5,756)	(77,141)	12,985	45,068

(1) Reflects adoption of Financial Accounting Update 2015-03, *Imputation of Interest*, which requires that debt issuance costs related to debt be reported as a direct reduction from the face amount of the debt. Accordingly, as of January 2, 2017, approximately $4.7 million of unamortized debt issuance costs were presented as a reduction of long-term debt on our balance sheet. Furthermore, we reclassified approximately $31.2 million of unamortized debt issuance costs that had been presented as other non-current assets as of December 28, 2015 as a reduction of long-term debt.

(2) "EBITDA" means earnings before interest expense, income taxes, depreciation and amortization. Adjusted EBITDA means earnings before interest expense, income taxes, depreciation, amortization, stock-based compensation, gain on sale of assets, acquisition-related costs, and impairments, restructuring and other charges. This is a non-GAAP financial measurement used by us to enhance the understanding of our operating results. Adjusted EBITDA is a key measure we use to evaluate our operations. We provide our adjusted EBITDA because we believe that investors and securities analysts will find adjusted EBITDA to be a useful measure for evaluating our operating performance and comparing our operating performance with that of similar companies that have different capital structures and for evaluating our ability to meet our future debt service, capital expenditures, and working capital requirements. However, adjusted EBITDA should not be considered as an alternative to cash flows from operating activities as a measure of liquidity or as an alternative to net income as a measure of operating results in accordance with accounting principles generally accepted in the United States. The following provides a reconciliation of adjusted EBITDA to the financial information in our consolidated statements of operations.

	Year Ended				
	January 2, 2017	December 28, 2015	December 29, 2014	December 30, 2013	December 31, 2012
			(In thousands)		
Net income (loss)	$ 35,575	$ (25,618)	$ 14,693	$ 23,893	$(181,100)
Add back items:					
Income tax provision	31,427	34,594	7,598	15,879	12,728
Interest expense	76,008	59,753	23,830	24,031	25,784
Depreciation of property, plant and equipment	156,229	133,508	95,349	92,120	84,286
Amortization of definite-lived intangibles	24,252	18,888	8,387	9,332	14,684
EBITDA	323,491	221,125	149,857	165,255	(43,618)
Stock-based compensation	11,090	9,661	7,800	8,985	10,266
Gain on sale of assets	(1,472)	(2,504)	—	(17,917)	—
Acquisition-related costs	1,688	34,448	5,981	—	—
Loss on extinguishment of debt	47,767	802	506	10,743	5,527
Impairments, restructuring, and other charges	12,881	22,141	1,900	14,227	218,417
Adjusted EBITDA	$395,445	$285,673	$166,044	$181,293	$ 190,592

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

This financial review presents our operating results for each of our three most recent fiscal years and our financial condition at January 2, 2017. Except for historical information contained herein, the following discussion contains forward-looking statements which are subject to known and unknown risks, uncertainties and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements. We discuss such risks, uncertainties and other factors throughout this report and specifically under Item 1A of Part I of this report, Risk Factors. In addition, the following discussion should be read in connection with the information presented in our consolidated financial statements and the related notes to our consolidated financial statements.

COMPANY OVERVIEW

We are a leading global printed circuit board (PCB) manufacturer, focusing on quick-turn and volume production of technologically complex PCBs and electro-mechanical solutions (E-M Solutions). We focus on providing time-to-market and volume production of advanced technology products and offer a one-stop manufacturing solution to our customers from engineering support to prototype development through final mass production. This one-stop manufacturing solution allows us to align technology development with the diverse needs of our customers and to enable them to reduce the time required to develop new products and bring them to market. We serve a diversified customer base consisting of approximately 1,500 customers in various markets throughout the world, including manufacturers of networking/communications infrastructure products, smartphones and touchscreen tablets, as well as the aerospace and defense, automotive components, high-end computing, and medical, industrial and instrumentation related products. Our customers include both original equipment manufacturers (OEMs) and electronic manufacturing services (EMS) providers.

RECENT DEVELOPMENTS

On May 31, 2015, we completed the acquisition of Viasystems for total consideration of $248.8 million in cash and 15.1 million shares of TTM common stock with a fair value of $149.0 million, and thereby acquired all of the outstanding shares of capital stock and other equity rights of Viasystems. Additionally, in connection with the completion of the acquisition, we assumed and refinanced Viasystems' debt, which was approximately $669.0 million as of May 31, 2015. Viasystems was a worldwide provider of complex multi-layer rigid, flexible, and rigid-flex PCBs and custom electronic assemblies.

The acquisition of Viasystems has had and will continue to have a significant effect on our operations and financial results. We have greatly increased and diversified our revenue base and added the fast growing Automotive end market to our portfolio of markets we serve. Our financial results for the year ended January 2, 2017 demonstrate the benefits of this diversification along with our strong operational execution and focus on realizing synergies from the integration. These results are reflected in improved gross and operating margins for the year ended January 2, 2017 as compared to the year ended December 28, 2015.

On September 29, 2015 we announced a consolidation plan that resulted in the closure of our facilities in Cleveland, Ohio, Milpitas, California and Juarez, Mexico (the Consolidation Plan). The Consolidation Plan was part of our integration strategy to improve total plant utilization, operational performance and customer focus following our acquisition of Viasystems. In accordance with the Consolidation Plan, we combined our Cleveland and Milpitas facilities into our North Jackson, Ohio and Silicon Valley, California facilities, respectively, and closed our Juarez facility. As a result, during the year ended January 2, 2017, we recognized total restructuring charges of $8.9 million. These charges primarily represent severance expense associated with the Consolidation Plan and other global realignment restructuring efforts. As of January 2, 2017, we have incurred approximately $16.3 million of restructuring charges since the September 29, 2015 announcement.

On September 27, 2016, we issued new $775.0 million Term B Loans (Term Loan B) at an interest rate of LIBOR, with a 1.0% LIBOR floor, plus 4.25%, a reduction of 75 basis points from the previous Term Loan Credit Agreement (Term Loan), and repaid in full the remaining outstanding balance of the Term Loan. This transaction was accounted for as an extinguishment of debt and accordingly, we recognized a loss of $47.8 million primarily associated with the write off of the remaining unamortized debt discount and issuance costs.

Additionally, on September 27, 2016, we amended our U.S. Asset-Based Lending Credit Agreement (U.S. ABL) to increase the amount available to $200.0 million, reduce the applicable margin by 25 basis points for both Eurodollar loans and ABR loans, and reduce the Letters of Credit Facilities to $50 million. On December 22, 2016, we amended our Asia Asset-Based Lending Credit Agreement (Asia ABL) to reduce the interest margin by 35 basis points.

During the year ended January 2, 2017, we made net debt principal payments totaling $217.6 million, representing normally scheduled principal payments as well as additional prepayments of principal.

FINANCIAL OVERVIEW

For the fiscal year 2016, we experienced higher demand in our Automotive and Aerospace and Defense end markets and additional sales from the full year contribution of Viasystems compared to that of fiscal year 2015. This increase in sales resulted in higher capacity utilization at our Automotive focused facilities resulting in higher gross margins. Additionally, we have improved operating efficiencies at certain of our North American plants.

We operate on a 52 or 53 week year ending on the Monday nearest December 31. Fiscal 2016 consisted of 53 weeks ended on January 2, 2017 with the additional week included in the fourth quarter. We estimate the additional week contributed approximately $29.2 million of additional revenue and approximately $1.1 million of additional operating income for the year ended January 2, 2017. Fiscal year 2015 and 2014 were 52 weeks ended December 28, 2015 and December 29, 2014, respectively.

While our customers include both OEMs and EMS providers, we measure customers based on OEM companies as they are the ultimate end customers. Sales to our five largest customers accounted for 33%, 37% and 44% of our net sales in fiscal years 2016, 2015 and 2014, respectively. We sell to OEMs both directly and indirectly through EMS providers.

The following table shows the percentage of our net sales attributable to each of the principal end markets we served for the periods indicated:

End Markets(1)(2)	2016	2015(4)	2014
Aerospace and Defense	15%	14%	16%
Automotive(2)	20	13	2
Cellular Phone(3)	14	21	23
Computing/Storage/Peripherals(3)	12	12	13
Medical/Industrial/Instrumentation	14	13	10
Networking/Communications	23	25	33
Other(2)(3)	2	2	3
Total	100%	100%	100%

(1) Sales to EMS companies are classified by the end markets of their OEM customers.
(2) Certain reclassifications of prior year end market percentages have been made to conform to the current year presentation. Beginning 2015, Automotive has been reclassified from the Other end market.
(3) Smartphones are included in the Cellular Phone end market, tablets are included in the Computing/Storage/Peripherals end market and other mobile devices such as e-readers are included in the Other end market.
(4) Amounts includes 211 days of activity of Viasystems, which we acquired on May 31, 2015.

We derive revenues primarily from the sale of PCBs and custom electronic assemblies using customer-supplied engineering and design plans. We recognize revenues when persuasive evidence of a sales arrangement exists, the sales terms are fixed or determinable, title and risk of loss have transferred, and collectability is reasonably assured — generally when products are shipped to the customer. Net sales consist of gross sales less an allowance for returns, which typically have been less than 3% of gross sales. We provide our customers a limited right of return for defective PCBs and backplane assemblies. We record an estimate for sales returns and

allowances at the time of sale based on historical results. Purchase orders may be cancelled prior to shipment. We generally charge customers a fee, based on the percentage completed, if an order is cancelled once it has entered production.

Cost of goods sold consists of materials, labor, outside services, and overhead expenses incurred in the manufacture and testing of our products. Shipping and handling fees and related freight costs and supplies associated with shipping products are also included as a component of cost of goods sold. Many factors affect our gross margin, including capacity utilization, product mix, production volume, and yield. We generally do not participate in any significant long-term contracts with suppliers, and we believe there are a number of potential suppliers for the raw materials we use.

Selling and marketing expenses consist primarily of salaries, labor related benefits, and commissions paid to our internal sales force, independent sales representatives, and our sales support staff, as well as costs associated with marketing materials and trade shows.

General and administrative costs primarily include the salaries for executive, finance, accounting, information technology, facilities and human resources personnel, as well as expenses for accounting and legal assistance, incentive compensation expense, and gains or losses on the sale or disposal of property, plant and equipment.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our consolidated financial statements included in this report have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, net sales and expenses, and related disclosure of contingent assets and liabilities.

A critical accounting policy is defined as one that is both material to the presentation of our consolidated financial statements and requires us to make judgments that could have a material effect on our financial condition or results of operations. These policies require us to make assumptions about matters that are highly uncertain at the time of the estimate. Different estimates we could reasonably have used, or changes in the estimates that are reasonably likely to occur, or could have a material effect on our financial condition or results of operations.

We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Management has discussed the development, selection and disclosure of these estimates with the audit committee of our board of directors. Actual results may differ from these estimates under different assumptions or conditions.

Our critical accounting policies include asset valuation related to bad debts and inventory; sales returns and allowances; impairment of long-lived assets, including goodwill and intangible assets; realizability of deferred tax assets; and determining self-insurance reserves.

Allowance for Doubtful Accounts

We provide customary credit terms to our customers and generally do not require collateral. We perform ongoing credit evaluations of the financial condition of our customers and maintain an allowance for doubtful accounts based upon historical collections experience and judgments as to expected collectability of accounts. Our actual bad debts may differ from our estimates.

Inventories

In assessing the realizability of inventories, we are required to make judgments as to future demand requirements and compare these with current and committed inventory levels. When the market value of inventory is less than the carrying value, the inventory cost is written down to its estimated net realizable value, thereby establishing a new cost basis. Our inventory requirements may change based on our projected customer

demand, market conditions, technological and product life cycle changes, longer or shorter than expected usage periods, and other factors that could affect the valuation of our inventories. We maintain certain finished goods inventories near certain key customer locations in accordance with agreements with those customers. Although this inventory is typically supported by valid purchase orders, should these customers ultimately not purchase these inventories, our results of operations and financial condition would be adversely affected.

Sales Returns and Allowances

We derive revenues primarily from the sale of PCBs and custom electronic assemblies using customer-supplied engineering and design plans. We recognize revenue when persuasive evidence of a sales arrangement exists, the sales terms are fixed or determinable, title and risk of loss have transferred, and collectability is reasonably assured — generally when products are shipped to the customer. We provide our customers a limited right of return for defective PCBs and backplane assemblies. We accrue an estimate for sales returns and allowances at the time of sale using our judgment based on historical results and anticipated returns as a result of current period sales. To the extent actual experience varies from our historical experience, revisions to these allowances may be required.

Long-lived Assets

We have significant long-lived tangible and intangible assets consisting of property, plant and equipment, definite-lived intangibles, and goodwill. We review these assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. In addition, we perform an impairment test related to goodwill at least annually. As necessary, we make judgments regarding future cash flow forecasts in the assessment of impairment.

During the fourth quarter of each year, and when events and circumstances warrant an evaluation, we perform an impairment assessment of goodwill, which may require the use of a fair-value based analysis. We first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If we conclude that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, we conduct a two-step quantitative goodwill impairment test. We determine the fair value of our reporting units based on discounted cash flows and market approach analyses as considered necessary. We consider factors such as the state of the economy and reduced expectations for future cash flows coupled with a decline in our market capitalization for a sustained period as indicators for potential goodwill impairment. If the reporting unit's carrying amount exceeds its estimated fair value, a second step must be performed to measure the amount of the goodwill impairment loss, if any. The second step compares the implied fair value of the reporting unit's goodwill, determined in the same manner as the amount of goodwill recognized in a business combination, with the carrying amount of such goodwill. If the carrying amount of the reporting unit's goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to that excess. We periodically evaluate whether events and circumstances have occurred, such that the potential for reduced expectations for future cash flows coupled with a further decline in the market price of our stock and market capitalization may indicate that the remaining balance of goodwill and definite-lived intangible assets may not be recoverable. If factors indicate that assets are impaired, we would be required to reduce the carrying value of our goodwill and definite-lived intangible assets which may result in an impairment charge.

We also assess other long-lived assets, specifically definite-lived intangibles and property, plant and equipment, for potential impairment given similar impairment indicators. When indicators of impairment exist related to our long-lived tangible assets and definite-lived intangible assets, we use an estimate of the undiscounted net cash flows and comparison to like-kind assets, as appropriate, in measuring whether the carrying amount of the assets is recoverable. Measurement of the amount of impairment, if any, is based upon the difference between the asset's carrying value and estimated fair value. Fair value is determined through various valuation techniques, including cost-based, market and income approaches as considered necessary, which involve judgments related to future cash flows and the application of the appropriate valuation model. During the years ended 2016 and 2014 we recorded impairment charges to reduce the carrying value of certain long-lived assets in the PCB operating segment. See Note 4 to our consolidated financial statements.

Assets Held for Sale — We classify assets to be sold as assets held for sale when (i) we have approved and commit to a plan to sell the asset, (ii) the asset is available for immediate sale in its present condition, (iii) an active program to locate a buyer and other actions required to sell the asset have been initiated, (iv) the sale of the asset is probable, (v) the asset is being actively marketed for sale at a price that is reasonable in relation to its current fair value, and (vi) it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. Assets classified as held for sale are recorded at the lower of the carrying amount or fair value less the cost to sell.

Assets Held for Use — If a decision to dispose of an asset or a business is made and the held for sale criteria are not met, it is considered held for use. Assets of the business are evaluated for recoverability in the following order: (i) assets other than goodwill, property and intangibles; (ii) property and intangibles subject to amortization; and (iii) goodwill. In evaluating the recoverability of property and intangible assets subject to amortization, in a held for use business, the carrying value is first compared to the sum of the undiscounted cash flows expected to result from the use and eventual disposition. If the carrying value exceeds the undiscounted expected cash flows, then a fair value analysis is performed. An impairment charge is recognized if the carrying value exceeds the fair value.

Income Taxes

Deferred income tax assets are reviewed for recoverability, and valuation allowances are provided, when necessary, to reduce deferred income tax assets to the amounts that are more likely than not to be realized based on our estimate of future taxable income. At January 2, 2017, we had a net noncurrent deferred income tax liability of $14.0 million, which is net of the $76.9 million deferred tax assets. At January 2, 2017, our deferred income tax assets of $76.9 million were net of a valuation allowance of approximately $222.0 million. Should our expectations of taxable income change in future periods, it may be necessary to adjust our valuation allowance, which could affect our results of operations in the period such a determination is made. We record income tax provision or benefit during interim periods at a rate that is based on expected results for the full year. If future changes in market conditions cause actual results for the year to be more or less favorable than those expected, adjustments to the effective income tax rate could be required.

In addition, we are subject to income taxes in the United States and foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of our business, there are many transactions for which the ultimate tax determination is uncertain. Additionally, our calculations of income taxes are based on our interpretations of applicable tax laws in the jurisdictions in which we file.

Self Insurance

We are primarily self-insured in North America for group health insurance and worker's compensation benefits provided to our U.S. employees, and we purchase insurance to protect against annual claims at the individual and aggregate level. We estimate our exposure for claims incurred but not reported at the end of each reporting period. We use our judgment using our historical claim data and information and analysis provided by actuarial and claim advisors, our insurance carriers and brokers on an annual basis to estimate our liability for these claims. This liability is subject to individual insured stop-loss coverage of $350,000 per individual for group health insurance and $250,000 per individual for worker's compensation benefits. Our actual claims experience may differ from our estimates.

RESULTS OF OPERATIONS

We operate on a 52 or 53 week year ending on the Monday nearest December 31. Fiscal 2016 consisted of 53 weeks ended on January 2, 2017 with the additional week included in the fourth quarter. We estimate the additional week contributed approximately $29.2 million of additional revenue and approximately $1.1 million of additional operating income for the year ended January 2, 2017. Fiscal year 2015 and 2014 were 52 weeks ended December 28, 2015 and December 29, 2014, respectively.

The Viasystems acquisition occurred on May 31, 2015. Accordingly, the results of operations of Viasystems are not included in our fiscal year 2014, and our fiscal year 2015 only includes the last seven fiscal months

Viasystems' 2015 results of operations. The acquisition has had and will continue to have a significant effect on our operations as discussed in the various comparisons noted below.

The following table sets forth the relationship of various items to net sales in our consolidated statements of operations:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
Net sales	100.0%	100.0%	100.0%
Cost of goods sold	83.3	85.2	85.3
Gross profit	16.7	14.8	14.7
Operating expenses:			
Selling and marketing	2.6	2.7	2.8
General and administrative	5.8	8.0	7.6
Amortization of definite-lived intangibles	1.0	0.9	0.7
Impairment of long-lived assets	0.1	—	0.1
Restructuring charges	0.4	0.4	—
Gain on sale of assets	—	(0.1)	—
Total operating expenses	9.9	11.9	11.2
Operating income	6.8	2.9	3.5
Other income (expense):			
Interest expense	(3.0)	(2.9)	(1.8)
Loss on extinguishment of debt	(1.9)	—	—
Other, net	0.7	0.4	—
Total other expense, net	(4.2)	(2.5)	(1.8)
Income before income taxes	2.6	0.4	1.7
Income tax provision	(1.2)	(1.6)	(0.6)
Net income (loss)	1.4	(1.2)	1.1
Less: Net income attributable to the noncontrolling interest	—	—	—
Net income (loss) attributable to TTM Technologies, Inc. stockholders	1.4%	(1.2)%	1.1%

We have reviewed our reportable operating segments and determined that we continue to have two reportable operating segments: PCB and E-M Solutions. The PCB reportable segment is comprised of multiple operating segments. This determination was made based on the criteria of earning revenues and incurring expenses, our organizational structure which has segment managers who report to the chief operating decision maker, discrete financial information, and the aggregation of similar operating segments into reportable operating segments.

The following table compares net sales by reportable segment for fiscal years 2016, 2015 and 2014:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Net Sales:			
PCB	$2,346,554	$1,944,041	$1,251,665
E-M Solutions	198,483	158,655	76,545
Total sales	2,545,037	2,102,696	1,328,210
Inter-segment sales	(11,678)	(7,208)	(2,493)
Total net sales	$2,533,359	$2,095,488	$1,325,717

Net Sales

Total net sales increased $437.9 million, or 20.9%, from $2,095.5 million for the year ended December 28, 2015 to $2,533.4 million for the year ended January 2, 2017. Net sales for the PCB operating segment, excluding inter-segment sales, increased $397.7 million, or 20.5%, from $1,937.2 million for the year ended December 28, 2015 to $2,334.9 million for the year ended January 2, 2017. This increase is primarily due to the additional sales resulting from a full year contribution from the acquisition of Viasystems, combined with higher demand in our Automotive and Aerospace and Defense end markets, partially offset with lower demand in our Cellular Phone end market. These changes, including the sales from Viasystems, resulted in a 40% increase in PCB shipments from the year ended December 28, 2015. In addition, the average PCB selling price decreased 13%, which was driven by a product mix shift resulting from the acquisition. Net sales for the E-M Solutions operating segment, excluding inter-segment sales, increased $40.2 million, or 25.4%, from $158.3 million for the year ended December 28, 2015 to $198.5 million for the year ended January 2, 2017. This increase is due to the additional sales resulting from the acquisition of Viasystems.

Total net sales increased $769.8 million, or 58.1%, from $1,325.7 million for the year ended December 29, 2014 to $2,095.5 million for the year ended December 28, 2015. Net sales for the PCB operating segment, excluding inter-segment sales, increased $687.7 million, or 55.0%, from $1,249.5 million for the year ended December 29, 2014 to $1,937.2 million for the year ended December 28, 2015. This increase is primarily due to the additional sales resulting from the acquisition of Viasystems, which accounted for $582.3 million in PCB sales for the year ended December 28, 2015. Additionally, the increase in PCB sales is due to higher demand in our Cellular Phone end market, partially offset with lower demand in our Networking/Communications end market. These changes, including the sales from Viasystems, resulted in a 110% increase in PCB shipments from the year ended December 29, 2014. In addition, the average PCB selling price decreased 25%, which was driven by a product mix shift resulting from the acquisition. Net sales for the E-M Solutions operating segment, excluding inter-segment sales, increased $82.1 million, from $76.2 million for the year ended December 29, 2014 to $158.3 million for the year ended December 28, 2015. This increase is due to the acquisition of Viasystems, which accounted for $82.0 million in E-M Solutions sales for the year ended December 28, 2015.

The inter-segment sales are primarily sales from the PCB operating segment to the E-M Solutions operating segment.

Gross Margin

Overall gross margin increased from 14.8% for the year ended December 28, 2015 to 16.7% for the year ended January 2, 2017. Gross margin for the PCB operating segment increased from 15.5% for the year ended December 28, 2015 to 17.7% for the year ended January 2, 2017 primarily due to higher utilization and full year contribution from the Automotive focused facilities and the absence of $13.3 million of increased costs incurred during fiscal year 2015 due to the fair value mark up of acquired inventory associated with the acquisition of Viasystems. Gross margin for the E-M Solutions operating segment increased from 6.6% for the year ended December 28, 2015 to 9.1% for the year ended January 2, 2017 primarily due to increased production volumes at certain acquired facilities.

Overall gross margin increased from 14.7% for the year ended December 29, 2014 to 14.8% for the year ended December 28, 2015. Gross margin for the PCB operating segment increased from 15.0% for the year ended December 29, 2014 to 15.5% for the year ended December 28, 2015 primarily due to higher utilization at our advanced technology plants, partially offset by the acquisition of Viasystems with lower margins than our existing business and $13.3 million of increased costs due to the fair value mark up of acquired inventory associated with the acquisition of Viasystems. Gross margin for the E-M Solutions operating segment decreased from 9.4% for the year ended December 29, 2014 to 6.6% for the year ended December 28, 2015 primarily due to the acquisition of Viasystems.

Selling and Marketing Expenses

Selling and marketing expenses increased $9.0 million from $57.4 million for the year ended December 28, 2015 to $66.4 million for the year ended January 2, 2017. Additionally, selling and marketing expenses increased $20.5 million, from $36.9 million for the year ended December 29, 2014 to $57.4 million for the year ended December 28, 2015. The increase in selling and marketing expense for the years ended January 2, 2017 and December 28, 2015 primarily related to additional selling and marketing activities resulting from the acquisition of Viasystems. As a percentage of net sales, selling and marketing expenses were 2.6% for the year ended January 2, 2017, as compared to 2.7% for the year ended December 28, 2015, and 2.8% for the year ended December 29, 2014. The decrease in selling and marketing expense as a percentage of net sales for the periods noted was primarily due to higher net sales.

General and Administrative Expenses

General and administrative expenses decreased $20.5 million from $167.7 million, or 8.0% of net sales, for the year ended December 28, 2015 to $147.2 million, or 5.8% of net sales, for the year ended January 2, 2017. The decrease in expense primarily related to a decrease of $32.8 million in acquisition-related costs as compared to the year ended December 28, 2015, partially offset by increased expenses resulting from the acquisition of Viasystems. The decrease in general and administrative expense as percentage of net sales was primarily due to the decrease in acquisition-related costs and higher net sales.

General and administrative expenses increased $66.7 million from $101.0 million, or 7.6% of net sales, for the year ended December 29, 2014 to $167.7 million, or 8.0% of net sales, for the year ended December 28, 2015. The increase in expense was primarily due to $34.4 million of acquisition-related costs for the year ended December 28, 2015 associated with the acquisition of Viasystems and seven months of general and administrative expense resulting from Viasystems post acquisition through December 28, 2015.

Impairment of Long-Lived Assets and Restructuring Charges

For the years ended January 2, 2017 and December 28, 2015, we incurred restructuring charges of $8.9 million and $7.4 million, respectively, related to the Consolidation Plan announced on September 29, 2015, that resulted in the closure of our facilities in Cleveland, Ohio, Milpitas, California, and Juarez, Mexico and other global realignment efforts.

During the year ended January 2, 2017, in connection with the Consolidation Plan, we recognized restructuring charges of $3.7 million, $4.5 million and $0.7 million in our PCB, E-M Solutions and Corporate segments, respectively. For the year ended December 28, 2015, we recognized restructuring charges of $2.0 million in both our PCB and E-M Solutions segments and $3.4 million in our Corporate segment. These charges primarily represent employee separation and contract termination and other costs associated with the Consolidation Plan and other global realignment restructuring efforts. As of January 2, 2017, the Company has incurred approximately $16.3 million of restructuring charges since the September 29, 2015 announcement.

Additionally, as a result of the above mentioned plant closures and other plant realignment efforts, we also recognized impairment charges of $3.3 million for the year ended January 2, 2017, of which $1.4 million were recognized in our PCB operating segment and $1.9 million were recognized in the Corporate operating segment. The impairment charge for the PCB operating segment related to machinery and equipment while the impairment charge for the Corporate operating segment related to the write-off of capitalized software costs.

If forecasts and assumptions used to support the realizability of our long-lived assets change in the future, significant impairment or restructuring charges could result that would adversely affect our results of operations and financial condition.

Other Income (Expense)

Other expense, net increased $54.1 million from $52.4 million for the year ended December 28, 2015 to $106.5 million for the year ended January 2, 2017. The increase in other expense, net was primarily due to the loss on extinguishment of debt of $47.8 million related to the full repayment of the May 31, 2015 Term Loan and newly issued $775.0 million Term B Loan on September 27, 2016. Another factor contributing to the increase in other expense, net was the increase in interest expense of $16.2 million related to our Term Loan, which was paid off, and currently outstanding Term Loan B and ABL Revolving Loans, compared with only seven months of the Term Loan and ABL Revolving Loans facilities outstanding during 2015 which was secured in connection with the acquisition of Viasystems. The increase in other expense, net was partially offset by $13.5 million foreign currency and derivative transaction gains for the year ended January 2, 2017 compared to $6.4 million for the year ended December 28, 2015.

Other expense, net increased $28.2 million from $24.2 million for the year ended December 29, 2014 to $52.4 million for the year ended December 28, 2015. The increase in other expense, net was primarily due to an increase in interest expense related to a new long-term borrowing and a revolver loan totaling $1,030.0 million at a weighted average interest rate of 5.7% that we secured in connection with the acquisition of Viasystems. The increase in other expense, net was partially offset by $6.4 million foreign currency and derivative transaction gains for the year ended December 28, 2015 compared to $1.2 million for the year ended December 29, 2014.

Income Taxes

The provision for income taxes decreased $3.2 million from an income tax expense of $34.6 million for the year ended December 28, 2015 to $31.4 million for the year ended January 2, 2017. The decrease in income tax expense in 2016 is primarily due to the release of uncertain tax positions due to lapse of statute in foreign jurisdiction.

Our tax expense is primarily impacted by tax rates in China and Hong Kong, the U.S. federal income tax rate, apportioned state income tax rates, generation of other credits and deductions available to us, change in valuation allowance, and certain non-deductible items. Certain losses generated are not more likely than not to be realizable, and thus no income tax benefit has been recognized on these losses. As of January 2, 2017, we had a net deferred income tax liability of approximately $14.0 million; and as of December 28, 2015, we had a net deferred income tax liability of approximately $13.1 million. As of January 2, 2017, we have a full valuation allowance recorded in U.S. Based on our forecast for future taxable earnings in certain foreign jurisdictions, we believe it is more likely than not that we will utilize the deferred income tax assets in future periods.

The provision for income taxes increased $27.0 million from an income tax expense of $7.6 million for the year ended December 29, 2014 to $34.6 million for the year ended December 28, 2015. The increase in income tax expense in 2015 was primarily due to the provision of a full valuation allowance on existing U.S. deferred tax assets, partially offset by the reversal of deferred tax liabilities related to our decision to indefinitely reinvest the foreign earnings attributable to our backplane assembly facility in Shanghai, China. Further, the income tax expense in 2015 was higher due to inclusion of Viasystems earnings from foreign subsidiaries post acquisition.

Liquidity and Capital Resources

Our principal sources of liquidity have been cash provided by operations, the issuance of convertible senior notes, and term and revolving debt. Our principal uses of cash have been to acquire Viasystems, finance capital expenditures, meet debt service requirements, fund working capital requirements, and refinance existing debt. We anticipate that servicing debt, financing capital expenditures, financing acquisitions, and funding working capital requirements will continue to be the principal demands on our cash in the future.

Cash flow provided by operating activities during the year ended January 2, 2017 was $298.3 million as compared to $237.5 million in the same period in 2015. The improved cash flow was the result of stronger

operational performance and the full year contribution of Viasystems. As of January 2, 2017, we had net working capital of approximately $323.8 million compared to $277.5 million as of December 28, 2015. At January 2, 2017 cash cycle days improved to 43 days as compared to 49 days at December 28, 2015.

Net cash used in investing activities was approximately $78.0 million for the year ended January 2, 2017 primarily reflecting the purchases of property, plant and equipment of $85.1 million, offset by net of proceeds from sales of property, plant and equipment and assets held for sale of $3.6 million and the release of restricted cash to cash and cash equivalents of $3.5 million.

Net cash used in financing activities was approximately $217.1 million for the year ended January 2, 2017 primarily reflecting the full repayment of the May 31, 2015 Term Loan, and the repayments of normally scheduled principal payments and additional prepayments of principal of our long-term debt, which amounts totaled $1,022.6 million, offset by $775.0 million newly issued Term B Loan and proceeds from our Asia ABL revolving loan of $30.0 million.

As of January 2, 2017, we had cash and cash equivalents of approximately $256.3 million, of which approximately $206.1 million was held by our foreign subsidiaries, primarily in Asia. Cash and cash equivalents held by our foreign locations are expected to be used in local operations.

Our 2017 capital expenditure plan is expected to be in the range of $130.0 million to $140.0 million of which 50 percent are planned for technology enhancements, 25 percent for capacity expansion and 25 percent for compliance and maintenance related expenditures.

Term and Revolving Loans

On May 31, 2015, in conjunction with the acquisition of Viasystems, we entered into a $950.0 million Term Loan Credit Agreement (Term Loan). Additionally, we entered into a $150.0 million U.S. ABL and a $150.0 million Asia ABL. We drew $80.0 million of the U.S. ABL at the closing of the acquisition of Viasystems.

On September 27, 2016, we issued new $775.0 million Term Loan B at an interest rate of LIBOR, with a 1.0% LIBOR floor, plus 4.25%, a reduction of 75 basis points from our previous Term Loan, and repaid in full the remaining outstanding balance of the May 31, 2015 Term Loan. This transaction was accounted for as an extinguishment of debt and accordingly, we recognized a loss of $47.8 million primarily associated with the write off of the remaining unamortized debt discount and issuance costs.

Additionally, on September 27, 2016, we amended our U.S. ABL credit facility to increase the amount available to $200.0 million, reduce the applicable margin by 25 basis points for both Eurodollar loans and ABR loans, and reduce the Letters of Credit Facilities to $50 million. On December 22, 2016, we amended our Asia ABL credit facility to reduce the interest margin by 35 basis points.

The Term Loan B bears interest at a floating rate of LIBOR, with a 1.0% LIBOR floor, plus an applicable interest margin of 4.25%, or JP Morgan Chase Bank's prime rate, with a 2% floor, plus a margin of 3.25%, at the our option. At January 2, 2017, the weighted average interest rate on the outstanding borrowings under the Term Loan was 5.25%. There is no provision, other than an event of default, for the interest margin to increase. The Term Loan B will mature on May 31, 2021. The Term Loan B is secured by a significant amount of our assets and a pledge of 65% of voting stock of our first tier foreign subsidiaries and is structurally senior to our convertible senior notes. See Convertible Senior Notes below.

The amended U.S. ABL consists of three tranches comprised of a revolving credit facility of up to $200.0 million, a letter of credit facility of up to $50.0 million, and swingline loans of up to $30.0 million, provided that at no time may amounts outstanding under the tranches exceed in aggregate $200.0 million or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the U.S. ABL agreement. Borrowings under the U.S. ABL bear interest at either a floating rate of LIBOR plus a margin of 150 basis points or JP Morgan Chase Bank's prime rate plus a margin of 50 basis points, at our option. At January 2, 2017, the weighted average interest rate on the outstanding borrowings under the U.S. ABL was 2.27%. The applicable margin can vary based on the remaining availability of the facility, from 125 to 175 basis

points for LIBOR-based loans and from 25 to 75 basis points for JP Morgan Chase Bank's prime rate-based loans. Other than availability and an event of default, there are no other provisions for the interest margin to increase. The U.S. ABL will mature on May 31, 2020. Loans made under the U.S. ABL are secured first by all of our domestic cash, receivables and inventories as well as by a second position against a significant amount of our assets and a pledge of 65% of voting stock of our first tier foreign subsidiaries and are structurally senior to our convertible senior notes. See Convertible Senior Notes below. At January 2, 2017, $80.0 million of the U.S. ABL was outstanding. We and our domestic subsidiaries have fully and unconditionally guaranteed the full and timely payment of all Term Loan B and U.S. ABL related obligations.

The Asia ABL consists of two tranches comprised of a revolving credit facility of up to $150.0 million and a letter of credit facility of up to $100.0 million, provided that at no time may amounts outstanding under both tranches exceed in aggregate $150.0 million or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the Asia ABL agreement. Borrowings under the Asia ABL bear interest at a floating rate of LIBOR plus 140 basis points. At January 2, 2017, the weighted average interest rate on the outstanding borrowings under the Asia ABL was 2.17%. There is no provision, other than an event of default, for the interest margin to increase. The Asia ABL will mature on May 22, 2020. Loans made under the Asia ABL are secured by a portion of our Asia Pacific cash and receivables and are structurally senior to our domestic obligations, including the convertible senior notes. See Convertible Senior Notes below. Our Asia Pacific subsidiary and certain of our subsidiaries have fully and unconditionally guaranteed the full and timely payment of all Asia ABL related obligations. At January 2, 2017, $30.0 million of the Asia ABL was outstanding.

During the year ended January 2, 2017, we made net debt principal payments totaling $217.6 million representing normal principal payments as well as additional prepayments of principal. We are not required to make quarterly scheduled payments of the outstanding Term Loan B balance due to mandatory payments and optional loan prepayments applied to date. Based on certain parameters defined in the Term Loan B agreement, including secured leverage ratio, we may be required to make an additional principal payment on an annual basis. Any remaining outstanding balances under the Term Loan B are due at the maturity date of May 31, 2021. Borrowings under the Term Loan B are subject to financial and operating covenants including maintaining a maximum total leverage ratio. Under the occurrence of certain events, the U.S. ABL and the Asia ABL are subject to financial and operational covenants, including maintaining minimum fixed charge coverage ratios. At January 2, 2017, we were in compliance with the covenants under the Term Loan B, the U.S. ABL and the Asia ABL.

We are required to pay a commitment fee of 0.25% to 0.375% per annum on any unused portion of the U.S. ABL or Asia ABL based on utilization levels. We incurred total commitment fees related to unused borrowing availability of $0.7 million, $0.8 million, and $0.6 million for the years ended January 2, 2017, December 28, 2015, and December 29, 2014, respectively. As of January 2, 2017, the outstanding amount of the Term Loan B was $700.0 million, which is included as long-term debt. Additionally, $80.0 million of the U.S. ABL and $30.0 million of the Asia ABL were outstanding as of January 2, 2017, which were classified as short-term debt. Available borrowing capacity under the U.S. ABL and Asia ABL was $113.0 million and $111.7 million, which includes letters of credit outstanding of $7.0 million and $8.3 million mentioned below, respectively, at January 2, 2017.

Letters of Credit

We have up to $50.0 million and $100.0 million Letters of Credit Facilities available under the U.S. ABL and the Asia ABL, respectively. As of January 2, 2017, letters of credit in the amount of $7.0 million were outstanding under the U.S. ABL and $8.3 million were outstanding under the Asia ABL with various expiration dates through December 2017.

Chinese Revolver

We are party to a revolving loan credit facility with a lender in China. Under this arrangement, the lender has made available to us approximately $30.2 million in unsecured borrowing with all terms of the borrowing to

be negotiated at the time the Chinese Revolver is drawn upon. There are no commitment fees on the unused portion of the Chinese Revolver, and this arrangement expires in January 2018. As of January 2, 2017, the Chinese Revolver had not been drawn upon.

Convertible Senior Notes due 2020

We issued 1.75% convertible senior notes due December 15, 2020, in a public offering for an aggregate principal amount of $250.0 million. The convertible senior notes bear interest at a rate of 1.75% per annum. Interest is payable semiannually in arrears on June 15 and December 15 of each year. The convertible senior notes are senior unsecured obligations and rank equally to our future unsecured senior indebtedness and senior in right of payment to any of our future subordinated indebtedness. Offering expenses are being amortized to interest expense over the term of the convertible senior notes.

Conversion: At any time prior to March 15, 2020, holders may convert their convertible senior notes into cash and, if applicable, into shares of our common stock based on a conversion rate of 103.7613 shares of our common stock per $1,000 principal amount of convertible senior notes, subject to adjustment, under the following circumstances: (1) during any calendar quarter beginning after March 31, 2015 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days during the 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the applicable conversion price on each applicable trading day of such preceding calendar quarter; (2) during the five business day period after any 10 consecutive trading day period in which the trading price per note for each day of that 10 consecutive trading day period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on such day; or (3) upon the occurrence of specified corporate transactions described in the indenture governing the notes. As of January 2, 2017, the conversion criteria had been met allowing holders to give notice of conversion in the first quarter of 2017.

On or after March 15, 2020 until the close of business on the third scheduled trading day preceding the maturity date, holders may convert their notes at any time, regardless of the foregoing circumstances. Upon conversion, for each $1,000 principal amount of notes, we will pay shares of our common stock, cash or a combination of cash and shares of our common stock at our election, if applicable, based on a daily conversion value calculated on a proportionate basis for each day of the 80 trading day observation period. All conversions occurring on the same date or on or after March 15, 2020 shall be settled using the same settlement method. Additionally, in the event of a fundamental change as defined in the indenture governing the notes, or other conversion rate adjustments such as share splits or combinations, other distributions of shares, cash or other assets to stockholders, including self-tender transactions (Other Conversion Rate Adjustments), the conversion rate may be modified to adjust the number of shares per $1,000 principal amount of the notes. As of January 2, 2017, none of the criteria for a fundamental change or a conversion rate adjustment had been met.

The maximum number of shares issuable upon conversion, including the effect of a fundamental change and subject to Other Conversion Rate Adjustments, would be 32.4 million.

Note Repurchase: We are not permitted to redeem the convertible senior notes at any time prior to maturity. In the event of a fundamental change or certain default events, as defined in the indenture governing the notes, holders may require us to repurchase for cash all or a portion of their convertible senior notes at a price equal to 100% of the principal amount, plus any accrued and unpaid interest.

In connection with the issuance of the convertible senior notes due 2020, we entered into a convertible note hedge and warrant transaction (the Call Spread Transaction), with respect to our common stock. The convertible note hedge consists of our option to purchase up to 25.9 million common stock shares at a price of $9.64 per share. The hedge expires on December 15, 2020 and can only be executed upon the conversion of the above mentioned convertible senior notes due 2020. Additionally, we sold warrants to purchase 25.9 million shares of our common stock at a price of $14.26 per share. The warrants expire ratably from March 2021 through January 2022. The Call Spread Transaction has no effect on the terms of the convertible senior notes due 2020 and reduces potential dilution by effectively increasing the conversion price of the convertible senior notes due 2020 to $14.26 per share of our common stock.

Based on our current level of operations, we believe that cash generated from operations, cash on hand and cash from the issuance of term and revolving debt will be adequate to meet our currently anticipated capital expenditure, debt service, and working capital needs for the next 12 months.

Contractual Obligations and Commitments

The following table provides information on our contractual obligations as of January 2, 2017:

Contractual Obligations(1)	Total	Less Than 1 Year	1 - 3 Years	4 - 5 Years	After 5 Years
			(In thousands)		
Long-term debt obligations	$ 811,798	$110,652	$ 739	$ 700,407	$ —
Convertible debt obligations	250,000	—	—	250,000	—
Interest on debt obligations	185,228	44,656	83,395	57,177	—
Equipment payables	12,430	12,430	—	—	—
Purchase obligations	82,690	78,520	4,165	5	—
Operating lease commitments	24,490	7,893	7,531	4,050	5,016
Total contractual obligations	$1,366,636	$254,151	$95,830	$1,011,639	$5,016

(1) Unrecognized uncertain tax benefits of $39.7 million are not included in the table above as the settlement timing is uncertain.

Off Balance Sheet Arrangements

We do not currently have, nor have we ever had, any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts. As a result, we are not materially exposed to any financing, liquidity, market, or credit risk that could arise if we had engaged in these relationships.

Seasonality

Orders for our products generally correspond to the production schedules of our customers. We historically experience higher net sales in the third and fourth quarters due to end customer demand in the fourth quarter for consumer electronics products. Seasonal fluctuations also include the Chinese New Year holidays in the first quarter, which typically results in lower net sales. We attribute this decline to shutdowns of our customers' and our own China based manufacturing facilities surrounding the Chinese New Year public holidays, which normally occur in January or February of each year.

Recently Issued Accounting Standards

In October 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory.* The objective of this update is to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory by recognizing the income tax consequences when the transfer occurs. This ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the new guidance to determine the impact it may have on our consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230)*. The objective of this update is to add or clarify guidance on the classification of certain cash receipts and payments in the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those annual periods and is to be applied utilizing a retrospective approach. Early adoption is permitted. We are currently evaluating the new guidance to determine the impact it may have on our consolidated financial statements and related disclosures.

In March 2016, the FASB issued Accounting Standards Update (ASU) 2016-09, *Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The objective of this update is to simplify several aspects of the accounting for employee share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. Early adoption is permitted. The impact on our consolidated financial statements is not expected to be material.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The objective of this update is to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those annual periods and is to be applied utilizing a modified retrospective approach. We are currently evaluating the new guidance to determine the impact it may have on our consolidated financial statements and related disclosures.

In April 2015, the FASB issued ASU 2015-03, *Imputation of Interest*, as amended, which requires an entity to record debt issuance costs related to debt reported in the balance sheet as a direct deduction from the face amount of that debt. The update is effective for annual periods ending after December 15, 2015. The standard requires the use of the retrospective transition method. We adopted the new standard in the first quarter of 2016. Accordingly, as of January 2, 2017, approximately $4.7 million of unamortized debt issuance costs were presented as a reduction of long-term debt on our consolidated balance sheets. Furthermore, we reclassified approximately $31.2 million of unamortized debt issuance costs that had been presented as other non-current assets as of December 28, 2015 as a reduction of long-term debt.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*, as amended, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard is effective at the beginning of fiscal year 2018, however application of the standard is allowed as early as the beginning of fiscal 2017. The standard permits the use of either the retrospective or cumulative effect transition method. We have assessed that the impact of the new guidance will result in a change to the timing of revenue recognition for our revenue stream from “point in time” upon physical delivery to an “over time” model and believe this transition could have a material impact on our consolidated financial statements upon adoption. As of January 2, 2017, management intends to apply the cumulative effect transition method. We have identified and are in the process of implementing changes to our systems, processes and internal controls to meet the standard update’s reporting and disclosure requirements.

ITEM 7A. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

Foreign currency risks

In the normal course of business we are exposed to risks associated with fluctuations in foreign currency exchange rates associated with transactions that are denominated in currencies other than our functional currencies, as well as the effects of translating amounts denominated in a foreign currency to the U.S. Dollar as a normal part of our financial reporting process. Certain of our China operations utilize the Renminbi (RMB) and the Hong Kong Dollar (HKD) as the functional currencies, which results in recognition of translation adjustments included as a component of other comprehensive income. Our foreign exchange exposure results primarily from employee-related and other costs of running operations in foreign countries, foreign currency denominated purchases and translation of balance sheet accounts denominated in foreign currencies. Our primary foreign exchange exposure is to the RMB. We do not engage in hedging to manage foreign currency risk related to revenue and expenses denominated in RMB and HKD, nor do we currently use derivative instruments to reduce exposure to foreign currency risk for a majority of our loans due from our foreign subsidiaries. However, we may consider the use of derivatives in the future. In general, our Chinese customers pay us in RMB, which partially mitigates this foreign currency exchange risk. Additionally, loans due from our foreign subsidiaries are, in some cases, denominated in currencies other than the RMB, thus providing a natural economic hedge, partially mitigating our RMB foreign currency exposure.

Interest rate risk

Our business is exposed to interest rate risk resulting from fluctuations in interest rates. Our interest expense is more sensitive to fluctuations in the general level of LIBOR interest rates than to changes in rates in other markets. Increases in interest rates would increase interest expense relating to our outstanding variable rate borrowings and increase the cost of debt. Fluctuations in interest rates can also lead to significant fluctuations in the fair value of our debt obligations.

As of January 2, 2017, approximately 23.7% of our long term debt was based on fixed rates. Based on our borrowings as of January 2, 2017, an assumed 100 basis point increase in variable rates would cause our annual interest cost to increase by $6.5 million and an assumed 100 basis point decrease in variable rates would cause our annual interest cost to decrease by $0.8 million, after giving consideration to the 1% LIBOR floor on the Term Loan B.

Debt Instruments

The table below presents information about certain of our debt instruments as of January 2, 2017 and December 28, 2015.

	As of January 2, 2017								
	2017	2018	2019	2020	2021	Thereafter	Total	Fair Market Value	Weighted Average Interest Rate
	(In thousands)								
US$ Variable Rate	$110,000	$ —	$ —	$ —	$700,000	$ —	$ 810,000	$ 818,750	4.84%
US$ Fixed Rate	652	358	381	250,407	—	—	251,798	382,673	1.78%
Total	$110,652	$358	$ 381	$250,407	$700,000	$ —	$1,061,798	$1,201,423	

	As of December 28, 2015								
	2016	2017	2018	2019	2020	Thereafter	Total	Fair Market Value	Weighted Average Interest Rate
	(In thousands)								
US$ Variable Rate	$157,375	$ —	$27,125	$ 47,500	$ 47,500	$748,125	$1,027,625	$ 935,000	5.70%
US$ Fixed Rate	—	—	—	—	250,000	—	250,000	230,950	1.75%
Total	$157,375	$ —	$27,125	$ 47,500	$297,500	$748,125	$1,277,625	$1,165,950	

ITEM 8. *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

Reference is made to our consolidated financial statements, the notes thereto, and the report thereon, commencing on page 66 of this report, which consolidated financial statements, notes and report are incorporated herein by reference.

We operate on a 52 or 53 week year ending on the Monday nearest December 31. Fiscal year 2016 consisted of 53 weeks ended January 2, 2017 with the additional week included in the fourth quarter, and fiscal year 2015 consisted of 52 weeks ended December 28, 2015. Each quarter of fiscal year 2015 contained 91 days.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(In thousands, except per share data)			
Year Ended January 2, 2017:(1)(2)				
Net sales	$583,258	$601,847	$641,720	$706,534
Gross profit	83,563	97,645	109,562	132,845
Income (loss) before income taxes	(1,673)	17,786	35,283	15,606
Net income (loss)	(7,150)	18,765	25,770	(1,810)
Net income (loss) attributable to TTM Technologies, Inc. stockholders	(7,264)	18,548	25,582	(2,005)
Earnings (loss) per share attributable to TTM Technologies, Inc. stockholders:				
Basic	$ (0.07)	$ 0.19	$ 0.26	$ (0.02)
Diluted	$ (0.07)	$ 0.17	$ 0.23	$ (0.02)
Year Ended December 28, 2015:(3)				
Net sales	$329,164	$445,445	$652,005	$668,874
Gross profit	51,559	61,190	89,118	108,270
Income (loss) before income taxes	2,085	(19,959)	6,592	20,258
Net income (loss)	3,446	(36,583)	(2,138)	9,657
Net income (loss) attributable to TTM Technologies, Inc. stockholders	3,446	(36,612)	(2,237)	9,521
Earnings (loss) per share attributable to TTM Technologies, Inc. stockholders:				
Basic	$ 0.04	$ (0.41)	$ (0.02)	$ 0.10
Diluted	$ 0.04	$ (0.41)	$ (0.02)	$ 0.09

(1) Fiscal year 2016 consisted of 53 weeks ended January 2, 2017 with the additional week included in the fourth quarter. We estimate that the additional week contributed approximately $29.2 million of additional revenue and approximately $1.1 million of additional operating income for the year ended January 2, 2017.

(2) Includes impairment and restructuring charges of $3.3 million and $1.9 million, respectively, in the first quarter, restructuring charges of $4.0 million in the second quarter, restructuring charges of $2.1 million in the third quarter, and loss on extinguishment of debt of $47.8 million and restructuring charges of $0.9 million in the fourth quarter.

(3) Includes a $2.5 million gain on sale of assets in the first quarter, 211 days of activity of Viasystems which we acquired May 31, 2015, acquisition costs of $34.4 million with a substantial portion recognized in the second quarter, and restructuring charges of $7.4 million during the third and fourth quarters.

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

Not applicable.

ITEM 9A. *CONTROLS AND PROCEDURES*

Evaluation of Disclosure Controls and Procedures

Our management, under the supervision and with the participation of our Chief Executive Officer (CEO) and Chief Financial Officer (CFO), has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of the end of the period covered by this Report. Based on this evaluation, our CEO and CFO have concluded that, as of January 2, 2017, such disclosure controls and procedures were effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosures.

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 Exchange Act Rules 13a-15(f) and 15d-15(f)) to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). Under the supervision of and with the participation of our CEO and CFO, management conducted an assessment of the effectiveness of our internal control over financial reporting as of January 2, 2017 based on the criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this assessment, management concluded that our internal control over financial reporting was effective as of January 2, 2017.

The effectiveness of our internal control over financial reporting as of January 2, 2017 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report, which appears under the heading "Report of Independent Registered Public Accounting Firm" on page 67 of this Report.

Inherent Limitations on Effectiveness of Controls

A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. In addition, the design of any system of controls is based in part on certain assumptions about the likelihood of future events.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended January 2, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. *OTHER INFORMATION*

Not applicable.

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2017 Annual Meeting of Stockholders.

ITEM 11. *EXECUTIVE COMPENSATION.*

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2017 Annual Meeting of Stockholders.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.*

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2017 Annual Meeting of Stockholders.

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

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2017 Annual Meeting of Stockholders.

ITEM 14. *PRINCIPAL ACCOUNTING FEES AND SERVICES.*

The information required by this Item is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2017 Annual Meeting of Stockholders.

PART IV

ITEM 15. *EXHIBITS, FINANCIAL STATEMENT SCHEDULES*

(a) *Financial Statements*

Financial Statements are listed in the Index to Consolidated Financial Statements on page 66 of this Report.

(b) *Exhibits*

Exhibit Number	Exhibits
2.1	English translation of Equity Interest Transfer Agreement in relation to Dongguan Meadville Circuits Limited, dated March 13, 2013, by and between Shengyi Technology Co., Ltd. and the Registrant(1)
2.2**	English translation of Equity Interest Transfer Agreement in relation to Dongguan Shengyi Electronics Ltd., dated March 13, 2013, by and between Shengyi Technology Co., Ltd. and the Registrant(1)
2.3**	Agreement and Plan of Merger, by and among the Registrant, Viasystems Group, Inc. and Vector Acquisition Corp., dated September 21, 2014(2)
3.1	Registrant's Certificate of Incorporation, as amended June 3, 2011 and May 12,2016(3)
3.2	Registrant's Fourth Amended and Restated Bylaws, as amended March 2, 2016(4)
4.1	Indenture, dated as of May 14, 2008, between the Registrant and American Stock Transfer & Trust Company(5)
4.2	First Supplemental Indenture, dated as of May 14, 2008, between the Registrant and American Stock Transfer & Trust Company(5)
4.3	Form of Registrant's common stock certificate(6)
4.4	Sell-Down Registration Rights Agreement, dated December 23, 2009, by and among Meadville Holdings Limited, MTG Investment (BVI) Limited, and the Registrant(7)

Exhibit Number	Exhibits
4.5	Registration Rights Agreement, dated as of April 9, 2010, by and among Tang Hsiang Chien, Su Sih (BVI) Limited, and the Registrant(8)
4.6	Shareholders Agreement, dated as of April 9, 2010, by and among Meadville Holdings Limited; Su Sih (BVI) Limited; Tang Hsiang Chien; Tang Chung Yen, Tom; Tang Ying Ming, Mai; and the Registrant(8)
4.7	First Amendment to Shareholders Agreement, dated September 14, 2012, by and among Tang Hsiang Chien; Su Sih (BVI) Limited; Tang Chung Yen, Tom; Tang Ying Ming, Mai; and the Registrant(9)
4.8	Indenture, dated as of December 20, 2013, between the Registrant and American Stock Transfer & Trust Company, LLC(10)
4.9	Registration Rights Agreement Memorandum of Understanding, by and among the Registrant, Hicks, Muse, Tate & Furst Equity Fund III, L.P., HM3 Coinvestors, L.P., HMTF Equity Fund IV (1999), L.P., HMTF Private Equity Fund IV (1999), L.P., Hicks, Muse PG-IV (1999), C.V., HM 4-P (1999) Coinvestors, L.P., HM 4-EQ (1999) Coinvestors, L.P., GSC Recovery II, L.P., and GSC Recovery IIA, L.P., dated September 21, 2014(2)
4.10	Addendum to Registration Rights Agreement, by and among the Registrant, Su Sih (BVI) Limited, and Tang Hsiang Chien, dated September 21, 2014(2)
4.11	Registration Rights Agreement, by and among TTM Technologies, Inc., Hicks, Muse, Tate & Furst Equity Fund III, L.P., HM3 Coinvestors, L.P., HMTF Equity Fund IV (1999), L.P., HMTF Private Equity Fund IV (1999), L.P., Hicks, Muse PG-IV (1999), C.V., HM 4-P (1999) Coinvestors, L.P., and HM 4-EQ (1999) Coinvestors, L.P. and GSC Recovery II, L.P. and GSC Recovery IIA, L.P., dated as of May 31, 2015(27)
4.12	The First Amendment to the Registration Rights Agreement, originally dated as of April 9, 2010, by and among Meadville Holdings Limited, MTG Investment (BVI) Limited, and TTM Technologies, Inc.(29)
4.13	The Second Amendment to the Shareholders Agreement, originally dated as of April 9, 2010, by and among Meadville Holdings Limited; Su Sih (BVI) Limited; Tang Hsiang Chien; Tang Chung Yen, Tom; Tang Ying Ming, Mai; and TTM Technologies, Inc.(29)
10.1	Call Option Transaction Confirmation, dated as of May 8, 2008, between the Registrant and JPMorgan Chase Bank, National Association(5)
10.2	Warrant Transaction Confirmation, dated as of May 8, 2008, between the Registrant and JPMorgan Chase Bank, National Association(5)
10.3	Call Option Transaction Confirmation, dated as of May 8, 2008, between the Registrant and UBS AG(5)
10.4	Warrant Transaction Confirmation, dated as of May 8, 2008, between the Registrant and UBS AG(5)
10.5	Call Option Transaction Confirmation, dated as of May 16, 2008, between the Registrant and JPMorgan Chase Bank, National Association(11)
10.6	Warrant Transaction Confirmation, dated as of May 16, 2008, between the Registrant and JPMorgan Chase Bank, National Association(11)
10.7	Call Option Transaction Confirmation, dated as of May 16, 2008, between the Registrant and UBS AG(11)
10.8	Warrant Transaction Confirmation, dated as of May 16, 2008, between the Registrant and UBS AG(11)
10.9‡	2006 Incentive Compensation Plan(12)

Exhibit Number	Exhibits
10.10‡	Form of Stock Option Agreement pursuant to 2006 Incentive Compensation Plan(12)
10.11‡	Form of Restricted Stock Unit Award Grant Notice pursuant to 2006 Incentive Compensation Plan(12)
10.12‡	Form of Performance-Based RSU Grant Notice and Award Agreement pursuant to 2006 Incentive Compensation Plan and schedule of signatories(13)
10.13‡	TTM Technologies, Inc. 2014 Incentive Compensation Plan(14)
10.14‡	TTM Technologies, Inc. Form of Restricted Stock Unit Award Grant Notice pursuant to TTM Technologies, Inc. 2014 Incentive Compensation Plan(14)
10.15	Form of Director and Officer Indemnification Agreement, dated December 10, 2014(15)
10.16	Stock Purchase Agreement, dated November 16, 2009, by and among Meadville Holdings Limited, MTG Investment (BVI) Limited, the Registrant, TTM Technologies International, Inc., and TTM Hong Kong Limited (now known as TTM Technologies (Asia Pacific) Limited)(16)
10.17‡	Form of Executive Change in Control Severance Agreement and schedule of agreements(17)
10.18	Credit Agreement, dated November 16, 2009, as amended and restated on March 30, 2010 and as further amended on August 3, 2010 and July 22, 2011, respectively, by and among certain PCB Subsidiaries, the Registrant, the Lenders, and the other parties named therein(18)
10.19	Waiver and Amendment Letter with The Hongkong and Shanghai Banking Corporation Limited, dated August 3, 2010(19)
10.20	Special Security Agreement by and among Tang Hsiang Chien, Su Sih (BVI) Limited, the Registrant and the United States Department of Defense, dated October 19, 2010(20)
10.21	Amendment Letter with The Hongkong and Shanghai Banking Corporation Limited, dated July 22, 2011(21)
10.22‡	Executive and Director Deferred Compensation Plan(22)
10.23	Facility Agreement, dated September 14, 2012, by and among the PCB Subsidiaries, the lenders, and the other parties named therein(9)
10.24	Call Option Transaction Confirmation, dated as of December 16, 2013, between the Registrant and JPMorgan Chase Bank, National Association, London Branch(10)
10.25	Warrant Transaction Confirmation, dated as of December 16, 2013, between the Registrant and JPMorgan Chase Bank, National Association, London Branch(10)
10.26	Call Option Transaction Confirmation, dated as of December 16, 2013, between the Registrant and RBC Capital Markets, LLC(10)
10.27	Warrant Transaction Confirmation, dated as of December 16, 2013, between the Registrant and RBC Capital Markets, LLC(10)
10.28	Call Option Transaction Confirmation, dated as of December 16, 2013, between the Registrant and Deutsche Bank AG, London Branch(10)
10.29	Warrant Transaction Confirmation, dated as of December 16, 2013, between the Registrant and Deutsche Bank AG, London Branch(10)
10.30	Call Option Transaction Confirmation, dated as of January 9, 2014, between the Registrant and JPMorgan Chase Bank, National Association, London Branch(23)
10.31	Warrant Transaction Confirmation, dated as of January 9, 2014, between the Registrant and JPMorgan Chase Bank, National Association, London Branch(23)

Exhibit Number	Exhibits
10.32	Call Option Transaction Confirmation, dated as of January 9, 2014, between the Registrant and RBC Capital Markets, LLC(23)
10.33	Warrant Transaction Confirmation, dated as of January 9, 2014, between the Registrant and RBC Capital Markets, LLC(23)
10.34	Call Option Transaction Confirmation, dated as of January 9, 2014, between the Registrant and Deutsche Bank AG, London Branch(23)
10.35	Warrant Transaction Confirmation, dated as of January 9, 2014, between the Registrant and Deutsche Bank AG, London Branch(23)
10.36	Voting Agreement, by and among the Company, Hicks, Muse, Tate & Furst Equity Fund III, L.P., HM3 Coinvestors, L.P., HMTF Equity Fund IV (1999), L.P., HMTF Private Equity Fund IV (1999), L.P., Hicks, Muse PG-IV (1999), C.V., HM 4-P (1999) Coinvestors, L.P., and HM 4-EQ (1999) Coinvestors, L.P., dated September 21, 2014(2)
10.37	Voting Agreement, by and among the Company, GSC Recovery II, L.P., and GSC Recovery IIA, L.P., dated September 21, 2014(2)
10.38	Commitment Letter, by and among the Company, JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC and Barclays Bank PLC, dated September 21, 2014(2)
10.39	Amended and Restated Commitment Letter, by and among the Registrant, JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, Barclays Bank PLC, and The Royal Bank of Scotland plc, dated October 23, 2014(24)
10.40	TTM Technologies, Inc. Form of Restricted Stock Unit Award Grant Notice (for U.S. taxpayers) pursuant to TTM Technologies, Inc. 2014 Incentive Compensation Plan(31)
10.41	TTM Technologies, Inc. Form of Restricted Stock Unit Award Grant Notice (for non-U.S. taxpayers) pursuant to TTM Technologies, Inc. 2014 Incentive Compensation Plan(25)
10.42	TTM Technologies, Inc. Form of Performance-Based RSU Grant Notice and Award Agreement pursuant to TTM Technologies, Inc. 2014 Incentive Compensation Plan(31)
10.43	Form of Executive Change in Control Severance Agreement and schedule of agreements(25)
10.44	Facility Agreement, dated May 22, 2015, by and among TTM Technologies Enterprises (HK) Limited, The Hongkong and Shanghai Banking Corporation Limited, and the other parties named therein(26)
10.45	First Amendment to amend and restate the Term Loan Credit Agreement, by and among TTM Technologies, Inc., as Borrower, the several Lenders from time to time parties thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Barclays Bank PLC, as Syndication Agent, and The Royal Bank of Scotland plc and HCBS Securities (USA) Inc., as Documentation Agents, dated as of May 31,2015, as amended September 27, 2016(32)
10.46	First Amendment to amend and restate the ABL Credit Agreement, by and among TTM Technologies, Inc., as Borrower, the several Lenders from time to time parties thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Barclays Bank PLC, as Syndication Agent, and The Royal Bank of Scotland plc and HCBS Securities (USA) Inc., as Documentation Agents, dated as of May 31, 2015, as amended September 27, 2016(32)
10.47	TTM Technologies, Inc. Form of Restricted Stock Unit Award Grant Notice (for non-employee directors) pursuant to TTM Technologies, Inc. 2014 Incentive Compensation Plan(28)
10.48	Amendment to TTM Technologies, Inc. 2014 Incentive Compensation Plan(30)

Exhibit Number	Exhibits
12.1*	Statement of Computation of Ratio of Earnings to Fixed Charges
21.1*	Subsidiaries of the Registrant
23.1*	Consent of KPMG LLP, independent registered public accounting firm
31.1*	Certification of Chief Executive Officer
31.2*	Certification of Chief Financial Officer
32.1*	Certification of Chief Executive Officer
32.2*	Certification of Chief Financial Officer
101.INS*	XBRL Instance 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

(1) Incorporated by reference to the Registrant's Form 10-Q as filed with the Securities and Exchange Commission(the "Commission") on May 7, 2013.
(2) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on September 22, 2014.
(3) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on June 6, 2011 and to the Registrant's Form 8-K as filed with the commission on May 18, 2016.
(4) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on March 8, 2016.
(5) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on May 14, 2008.
(6) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on August 30, 2005.
(7) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on December 23, 2009.
(8) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on April 13, 2010.
(9) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on September 19, 2012.
(10) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on December 20, 2013.
(11) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on May 22, 2008.
(12) Incorporated by reference to the Registrant's Form 10-K as filed with the Commission on March 16, 2007.
(13) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on March 30, 2010.
(14) Incorporated by reference to the Registrant's Form S-8 as filed with the Commission on August 13, 2014.
(15) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on December 15, 2014.
(16) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on November 16, 2009.
(17) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on August 5, 2014.
(18) Incorporated by reference to the Registrant's Form 8-K/A as filed with the Commission on August 5, 2010.
(19) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on August 5, 2010.
(20) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on October 22, 2010.

(21) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on July 27, 2011.

(22) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on September 19, 2011.

(23) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on January 14, 2014.

(24) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on October 27, 2014.

(25) Incorporated by reference to the Registrant's Form 10-Q as filed with the Commission on May 5, 2015.

(26) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on May 29, 2015.

(27) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on June 2, 2015.

(28) Incorporated by reference to the Registrant's Form 10-Q as filed with the Commission on August 10, 2015.

(29) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on January 4, 2016.

(30) Incorporated by reference to the Registrant's Form S-8 as filed with the Commission on June 1, 2016.

(31) Incorporated by reference to the Registrant's Form 10-Q as filed with the Commission on August 4, 2016.

(32) Incorporated by reference to the Registrant's Form 8-K as filed with the Commission on September 27, 2016.

‡ Management contract or Compensation Plan

* Filed herewith

** The appendices to this exhibit have been omitted in reliance on Item 601(b)(2) of Regulation S-K and will be furnished supplementally to the SEC upon request.

(c) *Financial Statement Schedules.*

None.

SIGNATURES

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

TTM TECHNOLOGIES, INC.

By: /s/ Thomas T. Edman

Thomas T. Edman

President and Chief Executive Officer

Date: February 24, 2017

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.

Name	Title	Date
/s/ Thomas T. Edman Thomas T. Edman	President, Chief Executive Officer and Director (Principal Executive Officer)	February 24, 2017
/s/ Todd B. Schull Todd B. Schull	Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 24, 2017
/s/ Robert E. Klatell Robert E. Klatell	Chairman of the Board	February 24, 2017
/s/ Kenton K. Alder Kenton K. Alder	Director	February 24, 2017
/s/ James K. Bass James K. Bass	Director	February 24, 2017
/s/ Julie S. England Julie S. England	Director	February 24, 2017
/s/ Philip G. Franklin Philip G. Franklin	Director	February 24, 2017
/s/ Ronald W. Iverson Ronald W. Iverson	Director	February 24, 2017
/s/ John G. Mayer John G. Mayer	Director	February 24, 2017
/s/ Tang Chung Yen, Tom Tang Chung Yen, Tom	Director	February 24, 2017
/s/ Dov S. Zakheim Dov S. Zakheim	Director	February 24, 2017

TTM TECHNOLOGIES, INC.

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
TTM Technologies, Inc.:

We have audited the accompanying consolidated balance sheets of TTM Technologies, Inc. and subsidiaries as of January 2, 2017 and December 28, 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended January 2, 2017. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of TTM Technologies, Inc. and subsidiaries as of January 2, 2017 and December 28, 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended January 2, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), TTM Technologies, Inc.'s internal control over financial reporting as of January 2, 2017, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 24, 2017, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

Irvine, California
February 24, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
TTM Technologies, Inc.:

We have audited TTM Technologies, Inc.'s internal control over financial reporting as of January 2, 2017, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). TTM Technologies, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express an opinion on TTM Technologies, Inc.'s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

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

In our opinion, TTM Technologies, Inc. maintained, in all material respects, effective internal control over financial reporting as of January 2, 2017, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of TTM Technologies, Inc. and subsidiaries as of January 2, 2017 and December 28, 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended January 2, 2017, and our report dated February 24, 2017, expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Irvine, California
February 24, 2017

TTM TECHNOLOGIES, INC.

Consolidated Balance Sheets

	As of	
	January 2, 2017	December 28, 2015
	(In thousands, except par value)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 256,277	$ 259,100
Restricted cash	—	3,530
Accounts receivable, net	432,788	456,000
Inventories	269,212	268,923
Prepaid expenses and other current assets	54,564	34,967
Total current assets	1,012,841	1,022,520
Property, plant and equipment, net	966,638	1,103,067
Goodwill	372,609	346,990
Definite-lived intangibles, net	126,613	150,874
Deposits and other non-current assets	21,375	16,682
	$2,500,076	$2,640,133
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt, including current portion of long-term debt	$ 110,652	$ 157,375
Accounts payable	371,610	377,222
Accrued salaries, wages and benefits	97,171	108,649
Other accrued expenses	109,632	101,748
Total current liabilities	689,065	744,994
Long-term debt, net of discount and issuance costs	909,030	1,013,411
Other long-term liabilities	72,856	55,059
Total long-term liabilities	981,886	1,068,470
Commitments and contingencies (Note 13)		
Equity:		
Common stock, $0.001 par value; 300,000 and 200,000 shares authorized for 2016 and 2015, respectively, and 100,396 and 99,137 shares issued and outstanding in 2016 and 2015, respectively	100	99
Additional paid-in capital	758,440	745,608
Retained earnings	74,787	45,963
Statutory surplus reserve	31,849	25,812
Accumulated other comprehensive income (loss)	(44,329)	1,623
Total TTM Technologies, Inc. stockholders' equity	820,847	819,105
Noncontrolling interest	8,278	7,564
Total equity	829,125	826,669
	$2,500,076	$2,640,133

See accompanying notes to consolidated financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Statements of Operations

	Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
	(In thousands, except per share amounts)		
Net sales	$2,533,359	$2,095,488	$1,325,717
Cost of goods sold	2,109,744	1,785,351	1,131,028
Gross profit	423,615	310,137	194,689
Operating expenses:			
Selling and marketing	66,366	57,361	36,919
General and administrative	147,247	167,669	100,999
Amortization of definite-lived intangibles	24,252	18,888	8,387
Impairment of long-lived assets	3,346	—	1,845
Restructuring charges	8,951	7,381	—
Gain on sale of assets	—	(2,504)	—
Total operating expenses	250,162	248,795	148,150
Operating income	173,453	61,342	46,539
Other income (expense):			
Interest expense	(76,008)	(59,753)	(23,830)
Loss on extinguishment of debt	(47,767)	(802)	(506)
Other, net	17,324	8,189	88
Total other expense, net	(106,451)	(52,366)	(24,248)
Income before income taxes	67,002	8,976	22,291
Income tax provision	(31,427)	(34,594)	(7,598)
Net income (loss)	35,575	(25,618)	14,693
Less: Net income attributable to the noncontrolling interest	(714)	(264)	—
Net income (loss) attributable to TTM Technologies, Inc. stockholders	$ 34,861	$ (25,882)	$ 14,693
Earnings (loss) per share attributable to TTM Technologies, Inc. stockholders:			
Basic earnings (loss) per share	$ 0.35	$ (0.28)	$ 0.18
Diluted earnings (loss) per share	$ 0.34	$ (0.28)	$ 0.18
Weighted-average shares used in computing per share amounts:			
Basic	100,099	92,675	83,238
Diluted	101,482	92,675	83,941

See accompanying notes to consolidated financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Statements of Comprehensive Income (Loss)

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Net income (loss)	$ 35,575	$(25,618)	$ 14,693
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments:			
Unrealized loss during the year, net	(46,044)	(27,758)	(14,841)
Gain realized in the statement of operations	—	(1,786)	—
Net	(46,044)	(29,544)	(14,841)
Net unrealized gains (losses) on cash flow hedges:			
Unrealized (loss) gain on effective cash flow hedges during the year, net	(83)	(20)	43
Loss realized in the statement of operations	175	172	146
Net	92	152	189
Net unrealized gains (losses) on available for sale securities:			
Unrealized loss on available for sale securities during the year	—	—	(20)
Loss realized in the statement of operations	—	—	83
Net	—	—	63
Other comprehensive loss, net of tax	(45,952)	(29,392)	(14,589)
Comprehensive (loss) income, net of tax	(10,377)	(55,010)	104
Less: Comprehensive income attributable to the noncontrolling interest	(714)	(264)	—
Comprehensive (loss) income attributable to TTM Technologies, Inc. stockholders	$(11,091)	$(55,274)	$ 104

See accompanying notes to consolidated financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Statements of Stockholders' Equity

	Common Stock		Additional Paid-In Capital	Retained Earnings	Statutory Surplus Reserve	Accumulated Other Comprehensive Income (Loss)	Total TTM Technologies, Inc. Stockholders' Equity	Noncontrolling Interest	Total Equity
	Shares	Amount							
					(In thousands)				
Balance, December 30, 2013	82,655	$ 83	$576,644	$ 64,272	$18,692	$ 45,604	$705,295	—	$705,295
Net income	—	—	—	14,693	—	—	14,693	—	14,693
Other comprehensive loss	—	—	—	—	—	(14,589)	(14,589)	—	(14,589)
Transfer to statutory surplus reserve	—	—	—	(2,544)	2,544	—	—	—	—
Issuance and repurchase of convertible senior notes	—	—	4,216	—	—	—	4,216	—	4,216
Purchase of convertible senior note hedge, net of tax benefit of $2,964	—	—	(4,989)	—	—	—	(4,989)	—	(4,989)
Issuance of warrants related to convertible senior notes	—	—	4,053	—	—	—	4,053	—	4,053
Tax shortfall from stock awards exercised or released	—	—	(1,015)	—	—	—	(1,015)	—	(1,015)
Issuance of common stock for performance-based restricted stock units	90	—	—	—	—	—	—	—	—
Issuance of common stock for restricted stock units	600	—	—	—	—	—	—	—	—
Stock-based compensation	—	—	7,800	—	—	—	7,800	—	7,800
Balance, December 29, 2014	83,345	83	586,709	76,421	21,236	31,015	715,464	—	715,464
Net income	—	—	—	(25,882)	—	—	(25,882)	264	(25,618)
Other comprehensive loss	—	—	—	—	—	(29,392)	(29,392)	—	(29,392)
Transfer to statutory surplus reserve	—	—	—	(4,576)	4,576	—	—	—	—
Acquisition of Viasystems, Group, Inc.	15,082	15	148,991	—	—	—	149,006	7,300	156,306
Exercise of stock options	68	—	495	—	—	—	495	—	495
Tax shortfall from stock awards exercised or released	—	—	(247)	—	—	—	(247)	—	(247)
Issuance of common stock for restricted stock units	642	1	(1)	—	—	—	—	—	—
Stock-based compensation	—	—	9,661	—	—	—	9,661	—	9,661
Balance, December 28, 2015	99,137	99	745,608	45,963	25,812	1,623	819,105	7,564	826,669
Net income	—	—	—	34,861	—	—	34,861	714	35,575
Other comprehensive loss	—	—	—	—	—	(45,952)	(45,952)	—	(45,952)
Transfer to statutory surplus reserve	—	—	—	(6,037)	6,037	—	—	—	—
Exercise of stock options	159	—	1,743	—	—	—	1,743	—	1,743
Issuance of common stock for performance-based restricted stock units	271	—	—	—	—	—	—	—	—
Issuance of common stock for restricted stock units	829	1	(1)	—	—	—	—	—	—
Stock-based compensation	—	—	11,090	—	—	—	11,090	—	11,090
Balance, January 2, 2017	100,396	$100	$758,440	$ 74,787	$31,849	$(44,329)	$820,847	$8,278	$829,125

See accompanying notes to consolidated financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Statements of Cash Flows

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Cash flows from operating activities:			
Net income (loss)	$ 35,575	$ (25,618)	$ 14,693
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation of property, plant and equipment	156,229	133,508	95,349
Amortization of definite-lived intangible assets	24,252	18,888	8,387
Amortization of debt discount and debt issuance costs	19,066	15,451	10,165
Deferred income taxes	900	23,892	2,018
Stock-based compensation	11,090	9,661	7,800
Loss on extinguishment of debt	47,767	802	506
Gain on sale of assets	—	(2,504)	—
Impairment of long-lived assets	3,346	—	1,845
Other	(4,645)	(4,396)	1,882
Payment of accreted interest on convertible senior notes	—	(8,731)	(1,324)
Changes in operating assets and liabilities, net of disposition:			
Accounts and notes receivable, net	23,212	66,062	(22,485)
Inventories	(289)	8,482	(7,113)
Prepaid expenses and other current assets	3,606	15,781	2,292
Accounts payable	(7,796)	(31,916)	23,937
Accrued salaries, wages and benefits and other accrued expenses	(13,977)	18,100	(8,142)
Net cash provided by operating activities	298,336	237,462	129,810
Cash flows from investing activities:			
Purchase of property, plant and equipment and equipment deposits	(85,139)	(99,925)	(109,624)
Proceeds from sale of property, plant and equipment and assets held for sale	3,641	21,446	1,053
Release (designation) of restricted cash and cash equivalents	3,530	(19)	—
Acquisition, net of cash acquired	—	(169,162)	—
Net cash used in investing activities	(77,968)	(247,660)	(108,571)
Cash flows from financing activities:			
Repayment of long-term debt	(1,022,625)	(276,178)	(96,204)
Proceeds from long-term borrowings	775,000	950,000	—
Proceeds from borrowings of revolving loan	30,000	80,000	—
Repayment of assumed long-term debt in acquisition	—	(669,024)	—
Proceeds from issuance of convertible senior notes	—	—	30,000
Repurchase of convertible senior notes	—	(23,664)	(5,411)
Payment of debt issuance costs	(1,227)	(34,135)	(1,626)
Payment of original issue discount	—	(33,250)	—
Purchase of convertible senior note hedge	—	—	(7,953)
Proceeds from warrants	—	—	4,053
Proceeds from exercise of stock options	1,743	495	—
Net cash used in financing activities	(217,109)	(5,756)	(77,141)
Effect of foreign currency exchange rates on cash and cash equivalents	(6,082)	(3,988)	4,390
Net decrease in cash and cash equivalents	(2,823)	(19,942)	(51,512)
Cash and cash equivalents at beginning of year	259,100	279,042	330,554
Cash and cash equivalents at end of year	$ 256,277	$ 259,100	$ 279,042
Supplemental cash flow information:			
Cash paid, net for interest	$ 72,041	$ 34,052	$ 14,072
Cash paid, net for income taxes	25,122	14,495	297
Supplemental disclosure of noncash investing and financing activities:			
Property, plant and equipment recorded in accounts payable and accrued expenses	$ 25,108	$ 24,515	$ 49,144
Common stock issued in connection with Viasystems acquisition	—	149,006	—

See accompanying notes to consolidated financial statements.

(1) Nature of Operations and Basis of Presentation

TTM Technologies, Inc. (the Company or TTM) is a leading global printed circuit board (PCB) manufacturer, focusing on quick-turn and volume production of technologically complex PCBs and electro-mechanical solutions (E-M Solutions). The Company provides time-to-market and advanced technology products and offers a one-stop manufacturing solution to customers from engineering support to prototype development through final mass production. This one-stop manufacturing solution allows the Company to align technology developments with the diverse needs of the Company's customers and to enable them to reduce the time required to develop new products and bring them to market.

The Company serves a diversified customer base in various markets throughout the world, including networking/communications infrastructure products, smartphones and touchscreen tablets, as well as the aerospace and defense, automotive components, high-end computing, and medical, industrial and instrumentation related products. The Company's customers include both original equipment manufacturers (OEMs) and electronic manufacturing services (EMS) providers.

The Company operates on a 52 or 53 week year ending on the Monday nearest December 31. Fiscal 2016 consisted of 53 weeks ended on January 2, 2017 with the additional week included in the fourth quarter. Fiscal 2015 and 2014 were 52 weeks and ended on December 28, 2015, and December 29, 2014, respectively. All references to years relate to fiscal years unless otherwise noted.

(2) Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reporting period. Such estimates include the sales return reserve; accounts receivable; inventories; goodwill; intangible assets and other long-lived assets; self insurance reserves; product warranty liabilities; environmental liabilities; legal contingencies; income taxes; and others. These estimates and assumptions are based on management's best estimates and judgment. Management evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors, including the economic environment, which management believes to be reasonable under the circumstances. Management adjusts such estimates and assumptions when facts and circumstances dictate. The actual results we experienced may differ materially and adversely from our estimates. To the extent there are material differences between the estimates and actual results, our future result of operations will be affected.

Principles of Consolidation

The consolidated financial statements include the accounts of TTM Technologies, Inc. and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Foreign Currency Translation and Transactions

The functional currency of certain of the Company's subsidiaries is either the Chinese Renminbi (RMB) or the Hong Kong Dollar. Accordingly, assets and liabilities are translated into U.S. dollars using period-end exchange rates. Sales and expenses are translated at the average exchange rates in effect during the period. The resulting translation gains or losses are recorded as a component of accumulated other comprehensive income in the consolidated statement of stockholders' equity and the consolidated statement of comprehensive income (loss). Net gains resulting from foreign currency remeasurements and transactions are included in income as a

component of other, net in the consolidated statements of operations and totaled $13,538, $6,766, and $2,378 for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively.

Cash Equivalents

The Company considers highly liquid investments with insignificant interest rate risk and original maturities to the Company of three months or less to be cash equivalents. Cash equivalents consist primarily of interest-bearing bank accounts and money market funds.

The Company considers highly liquid investments with an effective maturity to the Company of more than three months and less than one year to be short-term investments.

As of December 28, 2015, the Company had $3,530 of restricted cash related to the collaterization of certain letter of credit arrangements. As of January 2, 2017, all such letter of credit arrangements requiring collaterization had expired.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are reflected at estimated net realizable value, do not bear interest and do not generally require collateral. The Company performs credit evaluations of its customers and adjusts credit limits based upon payment history and the customer's current creditworthiness. The Company maintains an allowance for doubtful accounts based upon a variety of factors. The Company reviews all open accounts and provides specific reserves for customer collection issues when it believes the loss is probable, considering such factors as the length of time receivables are past due, the financial condition of the customer, and historical experience. The Company also records a reserve for all customers, excluding those that have been specifically reserved for, based upon evaluation of historical losses.

The following summarizes the activity in the Company's allowance for doubtful accounts for the years ended January 2, 2017, December 28, 2015 and December 29, 2014:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Balance at beginning of year	$1,525	$ 696	$518
Additions charged to expense	1,560	854	214
Deductions	(223)	(26)	(34)
Effect of foreign currency exchange rates	(11)	1	(2)
Balance at end of year	$2,851	$1,525	$696

Inventories

Inventories are stated at the lower of cost (determined on a first-in, first-out and weighted average basis) or market. Assessments to value the inventory at the lower of the actual cost to purchase and / or manufacture the inventory, or the current estimated market value of the inventory, are based upon assumptions about future demand and market conditions. As a result of the Company's assessments, when the market value of inventory is less than the carrying value, the inventory cost is written down to the market value and the write down is recorded as a charge to cost of goods sold.

Property, Plant and Equipment, Net

Property, plant and equipment are recorded at cost. Depreciation expense is computed using the straight-line method over the estimated useful lives of the assets. Assets recorded under leasehold improvements are

amortized using the straight-line method over the lesser of their useful lives or the related lease term. The Company uses the following estimated useful lives:

Land use rights	50-99 years
Buildings and improvements	7-50 years
Machinery and equipment	3-12 years
Furniture and fixtures	3-7 years

Upon retirement or other disposition of property, plant and equipment, the cost and related accumulated depreciation are removed from the accounts. The resulting gain or loss is included in the determination of operating income in the period incurred. Depreciation and amortization expense on property, plant and equipment was $156,229, $133,508, and $95,349 for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively.

The Company capitalizes interest on borrowings during the active construction period of major capital projects. Capitalized interest is amortized over the average useful lives of such assets, which primarily consist of buildings and machinery and equipment. The Company capitalized interest costs of $1,876, $888, and $551 during the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively, in connection with various capital projects.

Major renewals and betterments are capitalized and depreciated over their estimated useful lives while minor expenditures for maintenance and repairs are included in operating income as incurred.

Goodwill

Goodwill represents the excess of purchase price of an acquisition over the fair value of net assets acquired. Goodwill is not amortized but instead is assessed for impairment, at a reporting unit level, annually and when events and circumstances warrant an evaluation. In making this assessment, management relies on a number of factors, including expected future operating results, business plans, economic projections, anticipated future cash flows, business trends and market conditions.

The Company has two reportable operating segments consisting of four reporting units. The Company evaluates its goodwill on an annual basis in the fourth quarter or more frequently if it believes indicators of impairment exist. The Company first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the Company concludes that it is more likely than not that the fair value of a reporting units is less than its carrying amount, it conducts a two-step quantitative goodwill impairment test. The first step of the impairment test involves comparing the fair values of the applicable reporting units with their carrying values. The Company estimates the fair values of its reporting units using a combination of the income and market approach. If the carrying amount of a reporting unit exceeds the reporting unit's fair value, the Company performs the second step of the goodwill impairment test. The second step of the goodwill impairment test involves comparing the implied fair value of the affected reporting unit's goodwill with the carrying value of that goodwill. The amount, by which the carrying value of the goodwill exceeds its implied fair value, if any, is recognized as an impairment loss. In the fourth quarter of 2016, the Company performed its annual impairment test qualitatively and concluded that goodwill was not impaired.

Intangible Assets

Intangible assets include customer relationships, technology and trade names, which are being amortized over their estimated useful lives using straight-line and accelerated methods. The estimated useful lives of such intangibles range from 3 years to 10 years.

Impairment of Long-lived Assets

Long-lived tangible assets, including property, plant and equipment, assets held for sale, and definite-lived intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of the asset or asset groups may not be recoverable. The Company regularly evaluates whether events or circumstances have occurred that indicate possible impairment and relies on a number of factors, including expected future operating results, business plans, economic projections, and anticipated future cash flows. The Company uses an estimate of the future undiscounted net cash flows of the related asset or asset group over the remaining life in measuring whether the assets are recoverable. Measurement of the amount of impairment, if any, is based upon the difference between the asset's carrying value and estimated fair value. Fair value is determined through various valuation techniques, including cost-based, market and income approaches as considered necessary. See Note 4 for information regarding the impairment of long-lived assets during the years 2016 and 2014.

The Company classifies assets to be sold as assets held for sale when (i) Company management has approved and commits to a plan to sell the asset; (ii) the asset is available for immediate sale in its present condition and is ready for sale; (iii) an active program to locate a buyer and other actions required to sell the asset have been initiated; (iv) the sale of the asset is probable; (v) the asset is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and (vi) it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. Assets classified as held for sale are recorded at the lower of the carrying amount or fair value less the cost to sell and are a component of prepaid expenses and other current assets in the consolidated balance sheet.

The Company classifies assets held for use when a decision to dispose of an asset or a business is made and the held for sale criteria are not met. Assets of the business are evaluated for recoverability in the following order: (i) assets other than goodwill, property and intangibles; (ii) property and intangibles subject to amortization; and (iii) goodwill. In evaluating the recoverability of property and intangible assets subject to amortization, in a held for use business, the carrying value is first compared to the sum of the undiscounted cash flows expected to result from the use and eventual disposition. If the carrying value exceeds the undiscounted expected cash flows, then a fair value analysis is performed. An impairment charge is recognized if the carrying value exceeds the fair value.

Revenue Recognition

The Company derives its revenue primarily from the sale of PCBs using customer supplied engineering and design plans and recognizes revenue when: (i) persuasive evidence of a sales arrangement exists; (ii) the sales terms are fixed or determinable; (iii) title and risk of loss have transferred; and (iv) collectability is reasonably assured — generally when products are shipped to the customer, except in situations in which title passes upon receipt of the products by the customer. In this case, revenues are recognized upon notification that customer receipt has occurred. The Company does not have customer acceptance provisions, but it does provide its customers a limited right of return for defective PCBs. The Company accrues an estimated amount for sales returns and allowances related to defective PCBs at the time of sale based on its ability to estimate sales returns and allowances using current and historical information. The reserve for sales returns and allowances is included as a reduction to revenue and accounts receivable, net. Shipping and handling fees and related freight costs and supplies associated with shipping products to customers are included as a component of cost of goods sold. Incremental warranty costs that are not related to sales returns are recorded in accrued expenses and cost of goods sold.

The following summarizes the activity in the Company's allowance for sales returns and allowances for the years ended January 2, 2017, December 28, 2015 and December 29, 2014:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Balance at beginning of year	$ 7,789	$ 6,890	$ 6,028
Additions charged to expense	22,060	21,728	38,440
Deductions	(21,728)	(20,832)	(37,578)
Effect of foreign currency exchange rates	(2)	3	—
Balance at end of year	$ 8,119	$ 7,789	$ 6,890

Stock-Based Compensation

The Company recognizes stock-based compensation expense in its consolidated financial statements for its incentive compensation plan awards.

The incentive compensation plan awards include performance-based restricted stock units, restricted stock units, and stock options and the associated compensation expense is based on the grant date fair value of the awards, net of estimated forfeitures, as well as an assessment of probability of the performance-based awards vesting. Compensation expense for the incentive compensation plan awards is recognized on a straight line basis over the vesting period of the awards. The fair value of performance-based restricted stock units is estimated on the grant date using a Monte Carlo simulation model based on the underlying common stock closing price as of the date of grant, the expected term, stock price volatility, and risk-free interest rates. The fair value of restricted stock units is measured on the grant date based on the quoted closing market price of the Company's common stock. The fair value of the stock options is estimated on the grant date using the Black-Scholes option pricing model based on the underlying common stock closing price as of the date of grant, the expected term, stock price volatility, and risk-free interest rates.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred income tax assets or liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be settled or realized. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Deferred income tax assets are reviewed for recoverability, and the Company records a valuation allowance to reduce its deferred income tax assets when it is more likely than not that all or some portion of the deferred income tax assets will not be realized.

The Company has various foreign subsidiaries formed or acquired to conduct or support its business outside the United States. The Company does not provide for U.S. income taxes on undistributed earnings for certain foreign subsidiaries as management expects the foreign earnings will be indefinitely reinvested in such foreign jurisdictions. For certain subsidiaries within China, indefinite investment of undistributed earnings has not been asserted between the respective subsidiaries and their foreign parent entity and therefore, a deferred tax liability for the foreign tax impacts has been recorded on the undistributed earnings of these subsidiaries.

The Company recognizes the effect of income tax positions only if those positions are more likely than not to be sustained. Recognized income tax positions are measured at the largest amount that is greater than

50 percent likely to be realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. Estimated interest and penalties related to underpayment of income taxes are recorded as a component of income tax provision in the consolidated statement of operations.

Self Insurance

The Company is primarily self insured in North America for group health insurance and workers compensation benefits provided to U.S. employees. The Company also purchases stop loss insurance to protect against annual claims per individual and at an aggregate level. The individual insured stop loss on the Company's self insurance is $350 per individual for group health insurance and $250 per individual for worker's compensation benefits. Self insurance liabilities are estimated for claims incurred but not paid based on judgment, using the Company's historical claim data and information and analysis provided by actuarial and claim advisors, the Company's insurance carrier and brokers. The Company has accrued $5,375 and $5,182 for self insurance liabilities as of January 2, 2017 and December 28, 2015, respectively, and these amounts are reflected within accrued salaries, wages and benefits in the consolidated balance sheets.

Group health insurance and workers compensation benefits for the Company's plants in China are fully insured with third parties.

Convertible Debt

The accounting standards for convertible debt instruments that may be fully or partially settled in cash upon conversion require the debt and equity components to be separately accounted for in a manner that reflects the Company's nonconvertible borrowing rate when interest expense is recognized in subsequent periods. The amount recorded as debt is based on the fair value of the debt component as a standalone instrument, determined using an average interest rate for similar nonconvertible debt issued by entities with credit ratings comparable to the Company's at the time of issuance. The difference between the debt recorded at inception and its principal amount is to be accreted to principal through interest expense through the estimated life of the note.

Value Added and Sales Tax Collected from Customers

As a part of the Company's normal course of business, value added and sales taxes are collected from customers. Such taxes collected are remitted, in a timely manner, to the appropriate governmental tax authority on behalf of the customer. The Company's policy is to present revenue and costs, net of value added and sales taxes.

Fair Value Measures

The Company measures at fair value certain of its financial and non-financial assets and liabilities by using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, essentially an exit price, based on the highest and best use of the asset or liability. The levels of the fair value hierarchy are:

Level 1 — Quoted market prices in active markets for identical assets or liabilities;

Level 2 — Significant other observable inputs (e.g., quoted prices for similar items in active markets, quoted prices for identical or similar items in markets that are not active, inputs other than quoted prices that are observable, such as interest rate and yield curves, and market-corroborated inputs); and

Level 3 — Unobservable inputs in which there is little or no market data, which require the reporting unit to develop its own assumptions.

Environmental Accrual

Accruals for estimated costs for environmental obligations generally are recognized no later than the date when the Company identifies what cleanup measures, if any, are likely to be required to address the environmental condition. Included in such obligations are the estimated direct costs to investigate and address the conditions, and the associated engineering, legal and consulting costs. In making these estimates, the Company considers information that is currently available, existing technology, enacted laws and regulations, and its estimates of the timing of the required remedial actions. Such accruals are initially measured on a discounted basis — and are adjusted as further information becomes available or circumstances change — and are accreted to the payable amount over time.

Earnings Per Share

Basic earnings per common share excludes dilution and is computed by dividing net income attributable to TTM Technologies, Inc. stockholders by the weighted average number of common shares outstanding during the period. Diluted earnings per common share reflect the potential dilution that could occur if stock options, convertible senior notes or other common stock equivalents were exercised or converted into common stock. The dilutive effect of stock options or other common stock equivalents is calculated using the treasury stock method, while the dilutive effect of convertible senior notes is calculated using the if-converted method.

Comprehensive Income

Comprehensive income includes changes to equity accounts that were not the result of transactions with stockholders. Comprehensive income is comprised of net income (loss), changes in the cumulative foreign currency translation adjustments and realized and unrealized gains or losses on hedged derivative instruments and available for sale securities.

Noncontrolling Interest Holdings

As of January 2, 2017, noncontrolling interest consists of a 5% equity interest in a manufacturing facility in Huiyang, China which was acquired along with other assets and liabilities of Viasystems.

Loss Contingencies

The Company establishes an accrual for an estimated loss contingency when it is both probable that an asset has been impaired or that a liability has been incurred and the amount of the loss can be reasonably estimated. Any legal fees expected to be incurred in connection with a contingency are expensed as incurred.

Recently Adopted and Issued Accounting Standards

In October 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory.* The objective of this update is to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory by recognizing the income tax consequences when the transfer occurs. This ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the new guidance to determine the impact it may have on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230)*. The objective of this update is to add or clarify guidance on the classification of certain cash receipts and payments in the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those annual periods and is to be applied utilizing a retrospective approach. Early adoption is permitted. The Company is currently evaluating the new guidance to determine the impact it may have on its consolidated financial statements and related disclosures.

In March 2016, the FASB issued Accounting Standards Update (ASU) 2016-09, *Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The objective of this update is to simplify several aspects of the accounting for employee share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. Early adoption is permitted. The impact on the Company's consolidated financial statements is not expected to be material.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The objective of this update is to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those annual periods and is to be applied utilizing a modified retrospective approach. The Company is currently evaluating the new guidance to determine the impact it may have on its consolidated financial statements and related disclosures.

In April 2015, the FASB issued ASU 2015-03, *Imputation of Interest*, as amended, which requires an entity to record debt issuance costs related to debt reported in the balance sheet as a direct deduction from the face amount of that debt. The update is effective for annual periods ending after December 15, 2015. The standard requires the use of the retrospective transition method. The Company adopted the new standard in the first quarter of 2016. Accordingly, as of January 2, 2017, approximately $4,724 of unamortized debt issuance costs were presented as a reduction of long-term debt on the Company's consolidated balance sheets. Furthermore, the Company reclassified approximately $31,171 of unamortized debt issuance costs that had been presented as other non-current assets as of December 28, 2015 as a reduction of long-term debt.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*, as amended, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard is effective for the Company at the beginning of fiscal year 2018, however application of the standard is allowed as early as the beginning of fiscal 2017. The standard permits the use of either the retrospective or cumulative effect transition method. The Company has assessed that the impact of the new guidance will result in a change to the timing of revenue recognition for the Company's revenue stream from "point in time" upon physical delivery to an "over time" model and believes this transition could have a material impact on the Company's consolidated financial statements upon adoption. As of January 2, 2017, management intends to apply the cumulative effect transition method. The Company has identified and is in the process of implementing changes to its systems, processes and internal controls to meet the standard update's reporting and disclosure requirements.

(3) Acquisition of Viasystems Group, Inc.

On May 31, 2015, the Company completed the acquisition of Viasystems Group, Inc. (Viasystems), for total consideration of $248,824 in cash and 15,082 shares of TTM common stock with a fair value of $149,006, and thereby acquired all of the outstanding shares of capital stock and other equity rights of Viasystems. Additionally, in connection with the completion of the acquisition, the Company assumed and refinanced Viasystems' debt, which was approximately $669,024 as of May 31, 2015. Viasystems was a worldwide provider of complex multi-layer rigid, flexible, and rigid-flex PCBs and custom electronic assemblies.

Bank fees and legal, accounting, and other professional service costs associated with the acquisition of Viasystems of $1,688, $34,448 and $5,981 for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively, have been expensed and recorded as general and administrative expense in the consolidated statements of operations.

The following summarizes the components of the purchase price:

	(In thousands)
Value of TTM common stock issued	$ 149,006
Cash consideration	248,824
	397,830
Debt assumed	669,024
Enterprise value	$1,066,854

The value of the shares of the Company's common stock used in determining the purchase price was $9.88 per share, the closing price of the Company's common stock on May 29, 2015, the last business day prior to the effective date of the acquisition.

The purchase price of the Viasystems acquisition was allocated to tangible and intangible assets acquired, liabilities assumed and noncontrolling interest based on the fair value at the date of the acquisition (May 31, 2015). The excess of the purchase price over the fair value of net assets acquired and noncontrolling interest was allocated to goodwill. The fair value assigned to intangible assets acquired was based on estimates and assumptions made by management at the time of acquisition. The Company finalized the allocation of the purchase price during the second quarter of 2016.

The fair values assigned are based on reasonable methods applicable to the nature of the assets acquired, liabilities assumed and noncontrolling interest. The following summarizes the final estimated fair values of net assets acquired and noncontrolling interest:

	(In thousands)
Cash	$ 79,662
Restricted cash	3,510
Accounts and notes receivables ($216,259 contractual gross receivables)	209,196
Inventories	132,216
Prepaid expenses and other current assets	30,633
Property, plant and equipment	427,457
Identifiable intangible assets	150,500
Goodwill	360,494
Deposits and other noncurrent assets	1,157
Current liabilities	(256,705)
Long-term debt	(669,024)
Other liabilities	(63,966)
Noncontrolling interest	(7,300)
Total	$ 397,830

Goodwill represents the excess of the Viasystems purchase price over the fair value of tangibles and identifiable intangible assets acquired, liabilities assumed and noncontrolling interest. During the first two quarters of 2016, goodwill was adjusted to reflect:

- an increase in current liabilities by $3,442 due to a reassessment of product claims and other contingent liabilities, and

- an increase in other noncurrent liabilities by $22,182 primarily related to liabilities associated with certain tax positions at certain foreign jurisdictions.

The goodwill acquired in the acquisition is not deductible for income tax purposes.

(4) Restructuring and Impairment Charges

Consolidation Plan and Restructuring Activities

On September 29, 2015, the Company announced a consolidation plan that resulted in the closure of the Company's facilities in Cleveland, Ohio, Milpitas, California and Juarez, Mexico (the Consolidation Plan) and laid off approximately 480 employees at these sites. The Consolidation Plan was part of the Company's integration strategy to improve total plant utilization, operational performance and customer focus following its acquisition of Viasystems. In accordance with the Consolidation Plan, the Company has combined its Cleveland and Milpitas facilities into its North Jackson, Ohio and Silicon Valley, California facilities, respectively, and closed its Juarez, Mexico facility.

In connection with the Consolidation Plan and other global realignment restructuring efforts, the Company recognized employee separation costs and contract termination and other costs during the years ended January 2, 2017 and December 28, 2015. Contract termination and other costs primarily represented plant closure costs for Cleveland, Ohio, Milpitas, California and Juarez, Mexico, as well as costs related to building operating leases associated with the downsizing of the St. Louis, Missouri office.

The below table summarizes such restructuring costs by operating segment for the years ended January 2, 2017 and December 28, 2015:

	For the Year Ended January 2, 2017			For the Year Ended December 28, 2015		
	Employee separation/ severance	Contract termination and other costs	Total	Employee separation/ severance	Contract termination and other costs	Total
	(In thousands)					
Operating Segment:						
PCB	$1,548	$2,141	$3,689	$2,050	$ —	$2,050
E-M Solutions	903	3,644	4,547	2,039	—	2,039
Corporate	(231)	946	715	2,743	549	3,292
	$2,220	$6,731	$8,951	$6,832	$549	$7,381

The below table shows the utilization of the accrued restructuring costs during the years ended January 2, 2017 and December 28, 2015:

	Severance	Contract Termination	Total
	(In thousands)		
Accrued at December 29, 2014	$ —	$ —	$ —
Charged to expense	6,832	549	7,381
Amount paid	(788)	(14)	(802)
Accrued at December 28, 2015	$ 6,044	$ 535	$ 6,579
Charged to expense	2,495	6,698	9,193
Adjustments to estimate	(275)	33	(242)
Amount paid	(8,140)	(6,224)	(14,364)
Accrued at January 2, 2017	$ 124	$ 1,042	$ 1,166

As of January 2, 2017, the Company has incurred approximately $16,332 of restructuring charges since the September 29, 2015 announcement. The company estimates that it will incur total charges related to the Consolidation Plan of approximately $20,000.

Additionally, the Company recognized $3,346 in impairment charges during the year ended January 2, 2017. As a result of the above mentioned plant closures and other plant realignment efforts, $1,393 of impairment charges were recognized in the consolidated statement of operations related to machinery and equipment in the PCB operating segment. In addition, $1,953 of impairment charges were recognized in the consolidated statement of operations related to capitalized software costs in the Corporate operating segment.

For the year ended December 28, 2015, the Company recorded other exit costs of $878 related to inventory write-downs associated with the consolidation of the Milpitas facility to other Silicon Valley, California facilities. These costs have been recorded as a component of cost of goods sold in the consolidated statement of operations.

Impairment and Sale of Suzhou, China Manufacturing Facility

The Company ceased manufacturing at its Meadville Aspocomp (Suzhou) Electronic Co., Ltd. subsidiary, which held its Suzhou, China manufacturing facility, and shut down its operations in 2013. As a result, the Company determined that certain long-lived assets were impaired and as such, recorded charges of $1,845 for the year ended December 29, 2014 primarily related to machinery and equipment held for sale.

During the year ended December 28, 2015, the Company sold its Meadville Aspocomp (Suzhou) Electronic Co., Ltd. subsidiary for $21,275 and recognized a gain of $2,504. The Suzhou, China manufacturing facility is included in the PCB operating segment.

(5) Composition of Certain Consolidated Financial Statement Captions

	As of	
	January 2, 2017	December 28, 2015
	(In thousands)	
Inventories:		
Raw materials	$ 73,497	$ 70,577
Work-in-process	105,094	97,193
Finished goods	90,621	101,153
	$ 269,212	$ 268,923
Property, plant and equipment, net:		
Land and land use rights	$ 69,487	$ 91,571
Buildings and improvements	436,822	446,763
Machinery and equipment	1,053,267	1,058,565
Construction-in-progress, furniture and fixtures and other	54,521	39,550
	1,614,097	1,636,449
Less: Accumulated depreciation	(647,459)	(533,382)
	$ 966,638	$1,103,067
Other accrued liabilities:		
Interest	$ 927	$ 14,473
Equipment payable	12,430	14,251
Other	96,275	73,024
	$ 109,632	$ 101,748

In the fourth quarter of 2016, the Company commenced the process of selling buildings and related land and land use rights associated with the Cleveland, Ohio and Hong Kong, China facilities and has classified and aggregate total of $23,397 as assets held for sale at January 2, 2017. Assets held for sale are included in prepaids and other current assets in the January 2, 2107 consolidated balance sheets.

(6) Goodwill

As of January 2, 2017 and December 28, 2015, goodwill was as follows:

	Total
	(In thousands)
Balance as of December 29, 2014	$ 12,111
Goodwill recognized during the year	334,870
Foreign currency translation adjustment	9
Balance as of December 28, 2015	346,990
Goodwill recognized during the year	25,624
Foreign currency translation adjustment	(5)
Balance as of January 2, 2017	$372,609

Goodwill balances include foreign currency translation adjustments related to foreign subsidiaries with functional currencies other than the U.S. Dollar. All of the Company's goodwill is included as a component of the PCB reportable operating segment.

In the fourth quarter of 2016, the Company performed its annual impairment test qualitatively and concluded that it was more likely than not that there was no impairment to goodwill. The Company will continue to evaluate its goodwill on an annual basis during its fourth fiscal quarter and whenever events or changes in circumstances — such as significant adverse changes in business climate or operating results, changes in management strategy, coupled with a decline in the market price of our stock and market capitalization — indicate that there may be a potential impairment. If factors indicate that assets are impaired, we would be required to reduce the carrying value of our goodwill and definite-lived intangible assets, which may result in an impairment charge.

(7) Definite-lived Intangibles

As of January 2, 2017 and December 28, 2015, the components of definite-lived intangibles were as follows:

	Gross Amount	Accumulated Amortization	Foreign Currency Translation Adjustment	Net Carrying Amount	Weighted Average Amortization Period
		(In thousands)			(years)
January 2, 2017:					
Customer relationships	$203,563	$ (78,473)	$119	$125,209	8.1
Technology	3,000	(1,596)	—	1,404	3.0
	$206,563	$ (80,069)	$119	$126,613	
December 28, 2015:					
Customer relationships	$ 91,492	$ (80,152)	$426	$ 11,766	9.2
Trade name	10,302	(10,313)	11	—	6.0
Acquired intangibles from Viasystems acquisition					
Customer relationships	147,500	(10,815)	—	136,685	8.1
Technology	3,000	(577)	—	2,423	3.0
	$252,294	$(101,857)	$437	$150,874	

The January 2, 2017 and December 28, 2015 definite-lived intangible balances include foreign currency translation adjustments related to foreign subsidiaries with functional currencies other than the U.S. Dollar and the removal of fully amortized intangibles reducing the gross amounts reported.

Definite-lived intangibles are generally amortized using the straight line method of amortization over the useful life, with the exception of certain customer relationship intangibles, which are amortized using an accelerated method of amortization based on estimated cash flows. Amortization expense was $24,252, $18,888, and $8,387 for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively.

Estimated aggregate amortization for definite-lived intangible assets for the next five years and thereafter is as follows:

	(In thousands)
2017	$ 23,647
2018	22,880
2019	18,746
2020	18,746
2021	18,746
Thereafter	23,848
	$126,613

(8) Long-term Debt and Letters of Credit

The following table summarizes the long-term debt of the Company as of January 2, 2017 and December 28, 2015:

	Average Effective Interest Rate as of January 2, 2017	January 2, 2017	Average Effective Interest Rate as of December 28, 2015	December 28, 2015
		(In thousands)		
Term loan due May 2021	5.25%	$ 700,000	—	—
Term loan due May 2021	—	—	6.00%	$ 947,625
U.S. ABL revolving loan due May 2020	2.27%	80,000	2.17%	80,000
Asia ABL revolving loan due May 2020	2.17%	30,000	—	—
Convertible Senior Notes due December 2020	1.75%	250,000	1.75%	250,000
Capital lease	6.43%	1,798	—	—
		1,061,798		1,277,625
Less: Long-term debt unamortized discount		(37,392)		(75,668)
Long-term debt unamortized debt issuance costs		(4,724)		(31,171)
		1,019,682		1,170,786
Less: current maturities		(110,652)		(157,375)
Long-term debt, less current maturities		$ 909,030		$1,013,411

The fiscal calendar maturities of long-term debt through 2021 and thereafter are as follows:

	(In thousands)
2017	$ 110,652
2018	358
2019	381
2020	250,407
2021	700,000
	$1,061,798

Term and Revolving Loans

On May 31, 2015, in conjunction with the acquisition of Viasystems, the Company entered into a $950,000 Term Loan Credit Agreement (Term Loan). Additionally, the Company entered into a $150,000 U.S. Asset-Based Lending Credit Agreement(U.S. ABL) and a $150,000 Asia Asset-Based Lending Credit Agreement (Asia ABL) (collectively the ABL Revolving Loans). The Company drew $80,000 of the U.S. ABL at the closing of the acquisition of Viasystems.

On September 27, 2016, the Company issued new $775,000 Term B Loans (Term Loan B) at an interest rate of LIBOR, with a 1.0% LIBOR floor, plus 4.25%, a reduction of 75 basis points from its previous Term Loans, and repaid in full the remaining outstanding balance of the May 31, 2015 Term Loan. This transaction was accounted for as an extinguishment of debt and accordingly, the Company recognized a loss of $47,767 primarily associated with the write off of the remaining unamortized debt discount and issuance costs.

Additionally, on September 27, 2016, the Company amended its U.S. ABL credit facility to increase the amount available to $200,000, reduce the applicable margin by 25 basis points for both Eurodollar loans and ABR loans, and reduce the Letters of Credit Facilities to $50,000. On December 22, 2016, the Company amended its Asia ABL credit facility to reduce the interest margin by 35 basis points.

The Term Loan B bears interest at a floating rate of LIBOR, with a 1.0% LIBOR floor, plus an applicable interest margin of 4.25%, or JP Morgan Chase Bank's prime rate, with a 2% floor, plus a margin of 3.25%, at the Company's option. At January 2, 2017, the weighted average interest rate on the outstanding borrowings under the Term Loan was 5.25%. There is no provision, other than an event of default, for the interest margin to increase. The Term Loan B will mature on May 31, 2021. The Term Loan B is secured by a significant amount of the assets of the Company and a pledge of 65% of voting stock of the Company's first tier foreign subsidiaries and is structurally senior to the Company's convertible senior notes. See Convertible Senior Notes below.

The amended U.S. ABL consists of three tranches comprised of a revolving credit facility of up to $200,000, a letter of credit facility of up to $50,000, and swingline loans of up to $30,000, provided that at no time may amounts outstanding under the tranches exceed in aggregate $200,000 or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the U.S. ABL agreement. Borrowings under the U.S. ABL bear interest at either a floating rate of LIBOR plus a margin of 150 basis points or JP Morgan Chase Bank's prime rate plus a margin of 50 basis points, at the Company's option. At January 2, 2017, the weighted average interest rate on the outstanding borrowings under the U.S. ABL was 2.27%. The applicable margin can vary based on the remaining availability of the facility, from 125 to 175 basis points for LIBOR-based loans and from 25 to 75 basis points for JP Morgan Chase Bank's prime rate-based loans. Other than availability and an event of default, there are no other provisions for the interest margin to increase. The U.S. ABL will mature on May 31, 2020. Loans made under the U.S. ABL are secured first by all of the Company's domestic cash, receivables and inventories as well as by a second position against a significant amount of the assets of the Company and a pledge of 65% of voting stock of the Company's first tier foreign subsidiaries and

are structurally senior to the Company's convertible senior notes. See Convertible Senior Notes below. At January 2, 2017, $80,000 of the U.S. ABL was outstanding. The Company and its domestic subsidiaries have fully and unconditionally guaranteed the full and timely payment of all Term Loan B and U.S. ABL related obligations.

The Asia ABL consists of two tranches comprised of a revolving credit facility of up to $150,000 and a letter of credit facility of up to $100,000, provided that at no time may amounts outstanding under both tranches exceed in aggregate $150,000 or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the Asia ABL agreement. Borrowings under the Asia ABL bear interest at a floating rate of LIBOR plus 140 basis points. At January 2, 2017, the weighted average interest rate on the outstanding borrowings under the Asia ABL was 2.17%. There is no provision, other than an event of default, for the interest margin to increase. The Asia ABL will mature on May 22, 2020. Loans made under the Asia ABL are secured by a portion of the Company's Asia Pacific cash and receivables and are structurally senior to the Company's domestic obligations, including the convertible senior notes. See Convertible Senior Notes below. The Company's Asia Pacific subsidiary and certain of its subsidiaries have fully and unconditionally guaranteed the full and timely payment of all Asia ABL related obligations. At January 2, 2017, $30,000 of the Asia ABL was outstanding.

During the year ended January 2, 2017, the Company made net debt principal payments totaling $217,625 representing normal principal payments as well as additional prepayments of principal. The Company is not required to make quarterly scheduled payments of the outstanding Term Loan B balance due to mandatory payments and optional loan prepayments applied to date. Based on certain parameters defined in the Term Loan B agreement, including a secured leverage ratio, the Company may be required to make an additional principal payment on an annual basis. Any remaining outstanding balances under the Term Loan B are due at the maturity date of May 31, 2021. Borrowings under the Term Loan B are subject to financial and operating covenants including maintaining a maximum total leverage ratio. Under the occurrence of certain events, the U.S. ABL and the Asia ABL are subject to financial and operational covenants, including maintaining minimum fixed charge coverage ratios. At January 2, 2017, the Company was in compliance with the covenants under the Term Loan B, the U.S. ABL and the Asia ABL.

As of January 2, 2017, remaining unamortized debt issuance costs of $977 related to the Term Loan B. As of December 28, 2015, remaining unamortized debt discount of $30,242 and debt issuance costs of $26,619 related to the Term Loan. There was no unamortized debt discount for the Term Loan B at January 2, 2017. These debt discount and debt issuance costs are recorded as a reduction of the Term Loan B and the Term Loan at January 2, 2017 and December 28, 2015, respectively, and are amortized over the duration of the Term Loan B and Term Loan into interest expense using an effective interest rate of 5.29% and 7.50%, respectively.

Additionally, remaining unamortized debt issuance costs related to the ABL Revolving Loans were $3,423 and $4,303 as of January 2, 2017 and December 28, 2015, respectively. These debt issuance costs are included in other non-current assets and are amortized to interest expense over the duration of the ABL Revolving Loans using the straight line method of amortization.

At January 2, 2017, the remaining amortization period for the unamortized debt issuance costs for both the Term Loan B and the ABL Revolving Loans was 3.6 years.

The Company is required to pay a commitment fee of 0.25% to 0.375% per annum on any unused portion of the U.S. ABL or Asia ABL based on utilization levels. Additionally, the Company also paid commitment fees of 0.5% per annum on the unused portion of the $90,000 senior secured revolving loan associated with the terminated 2012 credit agreement for the years ended December 28, 2015 and December 29, 2014. The Company incurred total commitment fees related to unused borrowing availability of $709, $763, and $600 for the years ended January 2, 2017, December 28, 2015, and December 29, 2014, respectively. As of January 2, 2017, the outstanding amount of the Term Loan B was $700,000, which is included as long-term debt. Additionally,

$80,000 of the U.S. ABL and $30,000 of the Asia ABL were outstanding as of January 2, 2017, which were classified as short-term debt. Available borrowing capacity under the U.S. ABL and Asia ABL was $113,003 and $111,663, which includes letters of credit outstanding of $6,997 and $8,337 mentioned below, respectively, at January 2, 2017.

Letters of Credit

The Company has up to $50,000 and $100,000 Letters of Credit Facilities under the U.S. ABL and the Asia ABL, respectively, as mentioned above. As of January 2, 2017, letters of credit in the amount of $6,997 were outstanding under the U.S. ABL and $8,337 were outstanding under the Asia ABL with various expiration dates through December 2017.

At December 28, 2015, certain letters of credit were securitized by cash collateral. As such the Company had recorded such cash as restricted cash on the consolidated balance sheet as of December 28, 2015. As of January 2, 2017, none of the letters of credit were securitized by cash collateral.

Convertible Senior Notes

Convertible Senior Notes due 2020

The Company issued 1.75% convertible senior notes due December 15, 2020, in a public offering for an aggregate principal amount of $250,000 in 2014. The convertible senior notes bear interest at a rate of 1.75% per annum. Interest is payable semiannually in arrears on June 15 and December 15 of each year. The convertible senior notes are senior unsecured obligations and rank equally to the Company's future unsecured senior indebtedness and are senior in right of payment to any of the Company's future subordinated indebtedness.

Conversion: At any time prior to March 15, 2020, holders may convert their convertible senior notes into cash and, if applicable, into shares of the Company's common stock based on a conversion rate of 103.7613 shares of the Company's common stock per $1 principal amount of convertible senior notes, subject to adjustment, under the following circumstances: (1) during any calendar quarter beginning after March 31, 2015 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days during the 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the applicable conversion price on each applicable trading day of such preceding calendar quarter; (2) during the five business day period after any 10 consecutive trading day period in which the trading price per note for each day of that 10 consecutive trading day period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on such day; or (3) upon the occurrence of specified corporate transactions described in the indenture governing the notes. As of January 2, 2017, the conversion criteria had been met allowing holders to give notice of conversion in the first quarter of 2017.

On or after March 15, 2020 until the close of business on the third scheduled trading day preceding the maturity date, holders may convert their notes at any time, regardless of the foregoing circumstances. Upon conversion, for each $1 principal amount of notes, the Company will pay shares of our common stock, cash or a combination of cash and shares of our common stock at its election, if applicable, based on a daily conversion value calculated on a proportionate basis for each day of the 80 trading day observation period. All conversions occurring on the same date or on or after March 15, 2020 shall be settled using the same settlement method. Additionally, in the event of a fundamental change as defined in the indenture governing the notes, or other conversion rate adjustments such as share splits or combinations, other distributions of shares, cash or other assets to stockholders, including self-tender transactions (Other Conversion Rate Adjustments), the conversion rate may be modified to adjust the number of shares per $1 principal amount of the notes. As of January 2, 2017, none of the criteria for a fundamental change or a conversion rate adjustment had been met.

The maximum number of shares issuable upon conversion, including the effect of a fundamental change and subject to Other Conversion Rate Adjustments, would be 32,425.

Note Repurchase: The Company is not permitted to redeem the convertible senior notes at any time prior to maturity. In the event of a fundamental change or certain default events, as defined in the indenture governing the notes, holders may require the Company to repurchase for cash all or a portion of their convertible senior notes at a price equal to 100% of the principal amount, plus any accrued and unpaid interest.

Convertible Note Hedge and Warrant Transaction: In connection with the issuance of the convertible senior notes due 2020, the Company entered into a convertible note hedge and warrant transaction (Call Spread Transaction), with respect to the Company's common stock. The convertible note hedge consists of the Company's option to purchase up to 25,940 common stock shares at a price of $9.64 per share. The hedge expires on December 15, 2020 and can only be executed upon the conversion of the above mentioned convertible senior notes due 2020. Additionally, the Company sold warrants to purchase 25,940 shares of its common stock at a price of $14.26 per share. The warrants expire ratably from March 2021 through January 2022. The 2020 Call Spread Transaction has no effect on the terms of the convertible senior notes due 2020 and reduces potential dilution by effectively increasing the conversion price of the convertible senior notes due 2020 to $14.26 per share of the Company's common stock.

Convertible Senior Notes due 2015

The Company issued 3.25% convertible senior notes due on May 15, 2015, in a public offering for an aggregate principal amount of $175,000. In May 2015, the outstanding principal of $32,395 plus accrued interest was paid in full.

As of January 2, 2017 and December 28, 2015, the following summarizes the equity components of the convertible senior notes included in additional paid-in capital:

	As of January 2, 2017 and December 28, 2015		
	Embedded conversion option — Convertible Senior Notes	Embedded conversion option — Convertible Senior Notes Issuance Costs	Total
		(in thousands)	
Convertible senior notes due 2020	$60,227	$(1,916)	$58,311

The components of interest expense resulting from the convertible senior notes for the years ended January 2, 2017, December 28, 2015 and December 29, 2014 were as follows:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Contractual coupon interest			
Convertible Senior Notes due 2020	$4,375	$4,375	$4,367
Convertible Senior Notes due 2015	—	395	1,053
	$4,375	$4,770	$5,420
Amortization of debt discount			
Convertible Senior Notes due 2020	$8,034	$7,532	$7,102
Convertible Senior Notes due 2015	—	554	1,395
	$8,034	$8,086	$8,497
Amortization of debt issuance costs			
Convertible Senior Notes due 2020	$ 805	$ 755	$ 712
Convertible Senior Notes due 2015	—	56	141
	$ 805	$ 811	$ 853

As of January 2, 2017 and December 28, 2015, remaining unamortized debt discount of $37,392 and $45,426, respectively, and debt issuance costs of $3,747 and $4,552, respectively, related to the convertible senior notes. These debt discount and debt issuance costs are recorded as a reduction of the convertible senior notes and are being amortized to interest expense over the term of the convertible senior notes using the effective interest rate method. At January 2, 2017, the remaining weighted average amortization period for the unamortized senior convertible note discount and debt issuance costs was 4 years.

For the years ended January 2, 2017, December 28, 2015 and December 29, 2014, the amortization of the convertible senior notes due 2020 debt discount and debt issuance costs was based on an effective interest rate of 6.48%. For the years ended December 28, 2015 and December 29, 2014, the amortization of the convertible senior notes due 2015 debt discount and debt issuance costs was based on an effective interest rate of 8.37%.

Loss on Extinguishment of Debt

During the year ended January 2, 2017 and as mentioned previously, the Company repaid the remaining outstanding balances of its Term Loan. As a result, the Company recognized losses of $47,767 primarily associated with the write off of the remaining unamortized debt discount and debt issuance costs.

During the year ended December 28, 2015, the Company paid in full the remaining outstanding amount of $225,700 under an existing 2012 credit agreement. As a result, the Company recognized losses of approximately $802 resulting from the write off of the remaining unamortized debt issuance costs associated with the terminated 2012 credit agreement.

During the year ended December 29, 2014, the Company repurchased $6,541 of its convertible senior notes due 2015 at approximately 103.4% of their principal amounts. The repurchases were accounted for as extinguishments of debt and, accordingly, the Company recognized losses of approximately $506 primarily associated with the premium paid to repurchase the convertible senior notes and the recognition of related unamortized debt discount and issuance costs.

Other Credit Facility

Additionally, the Company is party to a revolving loan credit facility (Chinese Revolver) with a lender in China. Under this arrangement, the lender has made available to the Company approximately $30,200 in unsecured borrowing with all terms of the borrowing to be negotiated at the time the Chinese Revolver is drawn upon. There are no commitment fees on the unused portion of the Chinese Revolver, and this arrangement expires in January 2018. As of January 2, 2017, the Chinese Revolver had not been drawn upon.

(9) Income Taxes

The components of income (loss) before income taxes for the years ended January 2, 2017, December 28, 2015 and December 29, 2014 are:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
United States	$ (85,323)	$(104,068)	$ (3,201)
Foreign	152,325	113,044	25,492
Income before income taxes	$ 67,002	$ 8,976	$22,291

The Company expects its foreign earnings attributable to all foreign subsidiaries will be indefinitely reinvested in such foreign jurisdictions and, therefore, no deferred tax liabilities for U.S. income taxes on undistributed earnings are recorded. The undistributed earnings of the foreign subsidiaries amounted to approximately $717,854 as of January 2, 2017. The determination of unrecognized deferred tax liability related to these undistributed earnings is not practicable. Foreign earnings attributable to certain manufacturing subsidiaries within China may be repatriated to the parent holding company located in Hong Kong, and therefore, a deferred tax liability of approximately $6,903 for the foreign tax impact has been recorded on the undistributed earnings of these subsidiaries.

The components of income tax provision for the years ended January 2, 2017, December 28, 2015 and December 29, 2014 are:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Current (provision) benefit:			
Federal	$ (342)	$ 477	$ 1,717
State	(512)	(345)	(216)
Foreign	(29,672)	(19,379)	(5,385)
Total current	(30,526)	(19,247)	(3,884)
Deferred (provision) benefit:			
Federal	715	(10,084)	(829)
State	—	(2,184)	133
Foreign	(1,616)	(3,079)	(3,018)
Total deferred	(901)	(15,347)	(3,714)
Total provision	$(31,427)	$(34,594)	$(7,598)

The following is a reconciliation of the provision for income taxes at the statutory federal income tax rate compared to the Company's provision for income taxes for the years ended January 2, 2017, December 28, 2015 and December 29, 2014:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Statutory federal income tax	$(22,780)	$ (3,052)	$(7,579)
State income taxes, net of federal benefit and state tax credits	906	(345)	(84)
Foreign deemed dividends	(4,585)	(5,691)	—
Acquisition related expenses	(591)	(7,692)	—
Intercompany profit in inventory elimination	(335)	596	—
Permanently reinvested earnings assertion	—	8,281	—
Foreign tax differential on foreign earnings	17,530	15,543	(6,243)
Change in valuation allowance	(19,119)	(39,148)	5,321
Uncertain tax positions	(3,464)	(3,911)	—
Federal research and development credits	1,270	1,270	1,020
Loss on extinguishment of debt	—	—	—
Other	(259)	(445)	(33)
Total provision for income taxes	$(31,427)	$(34,594)	$(7,598)

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The significant components of the net deferred income tax assets as of January 2, 2017 and December 28, 2015 are as follows:

	As of	
	January 2, 2017	December 28, 2015
	(In thousands)	
Deferred income tax assets:		
Net operating loss carryforwards	$ 212,553	$ 223,456
Reserves and accruals	32,420	36,137
Tax credit carryforwards	18,148	19,719
Stock-based compensation	4,965	4,609
Original issue discount on convertible senior notes	15,329	18,876
Property, plant and equipment	13,398	12,945
Other deferred income tax assets	2,036	3,172
	298,849	318,914
Less: valuation allowance	(221,951)	(234,192)
	76,898	84,722
Deferred income tax liabilities:		
Discount on convertible senior notes	(13,410)	(16,495)
Repatriation of foreign earnings	(6,903)	(4,776)
Property, plant and equipment basis differences	(32,582)	(34,716)
Goodwill and intangible amortization	(36,097)	(41,790)
Other deferred income tax assets	(1,955)	(93)
Net deferred income tax liabilities	$ (14,049)	$ (13,148)
Deferred income tax liabilities, net:		
Current deferred income taxes	$ —	$ —
Noncurrent deferred income taxes	(14,049)	(13,148)

As of January 2, 2017, the Company had the following net operating loss ("NOL") carryforwards: $510,093 in the U.S. for federal, $561,708 in various U.S. states, $51,694 in China, $36,205 in Hong Kong and $164 in the Netherlands. The U.S. federal NOLs expire in 2019 through 2036, the various U.S. states' NOLs expire in 2017 through 2036, the China NOLs expire in 2017 through 2021, the Hong Kong NOLs carryforward indefinitely, and the Netherlands NOLs expire in 2017. Further, the Company's tax credits were approximately $26,451 of which $8,481 carryforward indefinitely.

In connection with the Company's acquisition of Viasystems, there was more than a 50% change in ownership under Section 382 of the Internal Revenue Code of 1986, as amended, and regulations issued there under. As a consequence, the utilization of the acquired Viasystems U.S. NOLs is limited to approximately $9,826 per year. In addition, the Company recognized certain gains built in at the time of the ownership change, which increase the limitation by approximately $47,463 for each of the first 5 years after the acquisition. Any unused limitation in a year can be carried over to succeeding years.

A valuation allowance is provided when it is more likely than not that all or some portion of the deferred income tax assets will not be realized. Based on historical performance and future expectations, the Company has

a full valuation allowance on its net U.S. deferred tax assets. Certain subsidiaries within China continue to have NOL carryforwards in various tax jurisdictions that the Company has determined are not more likely than not to be utilized. As a result, a full valuation allowance has been recorded for these subsidiaries at January 2, 2017. For the remaining net deferred income tax asset, management has determined that it is more likely than not that the results of future operations will generate sufficient taxable income to realize the net deferred tax asset.

The following summarizes the activity in the Company's valuation allowance for the years ended January 2, 2017, December 28, 2015 and December 29, 2014:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Balance at beginning of year	$234,192	$ 38,839	$ 44,160
(Reduction) additions related to acquisition	(18,234)	177,699	—
Additions charged to expense	5,993	39,149	6,458
Reduction related to sale of foreign subsidiary	—	(21,495)	—
Deductions	—	—	(11,779)
Balance at end of year	$221,951	$234,192	$ 38,839

Certain entities within China operated under the high and new technology enterprise (HNTE) status enabling those entities to enjoy certain tax holidays, which were effective for the years ended January 2, 2017, December 28, 2015 and December 29, 2014. The tax holidays as well as enhanced research and development (R&D) deductions decreased Chinese taxes by $7,666, $7,600 and $1,877, which (decreased) increased both basic and dilutive (loss) earnings per share by $(0.08), $(0.08) and $0.02, for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively. HTNE status and the related tax holidays expire at various dates through 2017, but the Company expects to continue to file for renewal of such HNTE status for the foreseeable future.

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

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Beginning balance	$15,404	$ 2,441	$2,298
Additions related to acquisition	22,182	11,293	—
Additions based on tax positions related to the current year	5,389	3,349	220
Additions for tax positions of prior years	1,545	14	286
Reductions for tax positions of prior years	(2,286)	(1,371)	—
Lapse of statute	(2,507)	(322)	(363)
Ending balance	$39,727	$15,404	$2,441

As of January 2, 2017 and December 28, 2015, the Company recorded unrecognized tax benefits of $28,037 and $10,649, respectively, as well as interest and penalties of $10,754 and $12,202, respectively, to other long-term liabilities. The Company has also recorded unrecognized tax benefits of $11,689 and $4,755 against certain deferred tax assets as of January 2, 2017 and December 28, 2015, respectively. The amount of unrecognized tax benefits that would, if recognized, reduce the Company's effective income tax rate in any future periods is

$38,791 including interest and penalties. The Company expects its unrecognized tax benefits to decrease by $641 along with related interest of $987 over the next 12 months due to expiring statutes.

As of January 2, 2017, the Company is subject to (i) U.S. federal income tax examination and / or NOL adjustment for tax years from 1999 to 2016, (ii) state and local income tax examination for tax years 1999 to 2016, and (iii) foreign income tax examinations generally for tax years from 2006 to 2016.

(10) Accumulated Other Comprehensive Income

The following provides a summary of the components of accumulated other comprehensive income (loss), net of tax as of January 2, 2017, December 28, 2015 and December 29, 2014:

	Foreign Currency Translation	Gains (Losses) on Cash Flow Hedges	Total
		(In thousands)	
Ending balance at December 29, 2014	$ 32,439	$(1,424)	$ 31,015
Other comprehensive loss before reclassifications	(27,758)	(20)	(27,778)
Amounts reclassified from accumulated other comprehensive income	(1,786)	172	(1,614)
Net year to date period other comprehensive income (loss)	(29,544)	152	(29,392)
Ending balance at December 28, 2015	2,895	(1,272)	1,623
Other comprehensive loss before reclassifications	(46,044)	(83)	(46,127)
Amounts reclassified from accumulated other comprehensive income	—	175	175
Net year to date period other comprehensive income (loss)	(46,044)	92	(45,952)
Ending balance at January 2, 2017	$(43,149)	$(1,180)	$(44,329)

The following provides a summary of reclassifications out of accumulated other comprehensive income, net of tax for the years ended January 2, 2017, December 28, 2015 and December 29, 2014:

Details about Accumulated Other Comprehensive Income Components	Statement of Operations Location	Amount Reclassified from Accumulated Other Comprehensive Income For the Year Ended		
		January 2, 2017	December 28, 2015	December 29, 2014
Loss on foreign currency forwards cash flow hedges	Depreciation expense, net of tax	$175	$ 172	$146
Gain on foreign currency translation	Gain on sale of assets, net of tax	$ —	$(1,786)	$ —
Loss on available for sale securities	Other, net, net of tax	$ —	$ —	$ 83

(11) Significant Customers and Concentration of Credit Risk

In the normal course of business, the Company extends credit to its customers, which are concentrated primarily in the automotive, cellular phone, computer, networking and communications and aerospace and defense industries. Most customers to which the Company extends credit are located outside the United States, with the exception of certain customers in the aerospace and defense industries. The Company performs ongoing

credit evaluations of customers, does not require collateral, and considers the credit risk profile of the entity from which the receivable is due in further evaluating collection risk.

The Company's customers include both OEMs and EMS companies. The Company's OEM customers often direct a significant portion of their purchases through EMS companies. While the Company's customers include both OEM and EMS providers, the Company measures customer concentration based on OEM companies, as they are the ultimate end customers.

For the years ended January 2, 2017, December 28, 2015 and December 29, 2014, one customer accounted for approximately 15%, 20% and 21%, respectively, of the Company's net sales. There were no other customers that accounted for 10% or more of net sales for the years ended January 2, 2017, December 28, 2015 and December 29, 2014.

(12) Fair Value Measures

The Company measures at fair value its financial and non-financial assets by using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, essentially an exit price, based on the highest and best use of the asset or liability.

The carrying amount and estimated fair value of the Company's financial instruments as of January 2, 2017 and December 28, 2015 were as follows:

	As of			
	January 2, 2017		December 28, 2015	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In thousands)			
Term and Revolving Loans	$809,023	$818,750	$970,764	$935,000
Convertible Senior Notes due 2020	208,861	380,875	200,022	230,950
Capital lease	1,798	1,798	—	—

The fair value of the long-term debt was estimated based on quoted market prices or discounting the debt over its life using current market rates for similar debt as of January 2, 2017 and December 28, 2015, which are considered Level 1 and Level 2 inputs.

The fair value of the convertible senior notes was estimated based on quoted market prices of the securities on an active exchange, which are considered Level 1 and Level 2 inputs.

As of January 2, 2017 and December 28, 2015, the Company's other financial instruments also included cash and cash equivalents, accounts receivable, accounts payable and equipment payables. Due to short-term maturities, the carrying amount of these instruments approximates fair value. Our cash and cash equivalents at January 2, 2017 consisted of $50,227 held in the U.S., with the remaining $206,050 held by foreign subsidiaries.

The majority of the Company's non-financial assets and liabilities, which include goodwill, intangible assets, inventories, and property, plant and equipment, are not required to be carried at fair value on a recurring basis. However, if certain triggering events occur (or are tested at least annually in the case of goodwill) such that a non-financial instrument is required to be evaluated for impairment, based upon a comparison of the non-financial instrument's fair value to its carrying value, an impairment is recorded to reduce the carrying value to the fair value, if the carrying value exceeds the fair value.

For the years ended January 2, 2017 and December 29, 2014, the following assets were measured at fair value on a nonrecurring basis using the type of inputs shown:

		Fair Value Measurements Using:			
	January 2, 2017	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Total Losses for the year Ended January 2, 2017
			(In thousands)		
Long-lived assets held and use	$2,254	$ —	$ —	$2,254	$1,953
Assets held for sale	—	—	—	—	1,393
					$3,346

		Fair Value Measurements Using:			
	December 29, 2014	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Total Losses for the Year Ended December 29, 2014
			(In thousands)		
Assets held for sale	$21,031	$ —	$21,031	$ —	$1,845

There was no impairment of long-lived assets recognized in the year ended December 28, 2015.

The fair values of assets held for sale were primarily determined using appraisals and comparable prices of similar assets, which are considered to be Level 2 inputs.

Additionally, the Company has capitalized software costs in accordance with U.S. GAAP. During the year ended January 2, 2017, the Company determined that certain capitalized costs no longer had benefit primarily as a result of the Viasystems acquisition. Because the primary determination of fair value was based on management's assumptions and estimates of capitalized costs to dispose, the resulting fair value is considered a Level 3 input.

(13) Commitments and Contingencies

Operating Leases

The Company leases some of its manufacturing and assembly plants, a sales office and equipment under noncancellable operating leases that expire at various dates through 2050. Certain real property leases contain renewal provisions at the Company's option. Most of the leases require the Company to pay for certain other costs such as property taxes and maintenance. Certain leases also contain rent escalation clauses (step rents) that require additional rental amounts in the later years of the term. Rent expense for leases with step rents is recognized on a straight-line basis over the minimum lease term.

The following is a schedule of future minimum lease payments as of January 2, 2017:

	Operating Leases (In thousands)
2017	$ 7,893
2018	4,375
2019	3,156
2020	2,351
2021	1,699
Thereafter	5,016
Total minimum lease payments	$24,490

Total rent expense for the years ended January 2, 2017, December 28, 2015, and December 29, 2014, was approximately $10,329, $7,362 and $3,731, respectively.

Legal Matters

The Company is subject to various legal matters, which it considers normal for its business activities. While the Company currently believes that the amount of any reasonably possible loss for known matters would not be material to the Company's financial condition, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate potential loss could have a material adverse effect on the Company's financial condition or results of operations in a particular period. The Company has accrued amounts for its loss contingencies which are probable and estimable as of January 2, 2017 and December 28, 2015. However, these amounts are not material to the consolidated financial statements of the Company.

Environmental Matters

The process to manufacture PCBs requires adherence to city, county, state, federal, and foreign environmental regulations regarding the storage, use, handling and disposal of chemicals, solid wastes and other hazardous materials, as well as compliance with air quality standards and chemical use reporting. The Company believes that its facilities in the United States and Canada comply in all material respects with applicable environmental laws and regulations. In China, governmental authorities have adopted new rules and regulations governing environmental issues. An update to the Chinese environmental waste water law was issued in late 2012, allowing for an interim period in which plants subject to such law may install equipment that meets the new regulatory regime. Some of the Company's plants in China are not yet in full compliance with the updated environmental regulations. The Company believes it has developed plans acceptable to the Chinese government and is in the process of implementing these plans. The Company does not anticipate any immediate risk of government fines or temporary closure of its Chinese plants. The Company has established and enacted an investment plan related to the efforts to come into full compliance with the new regulations. The 2017 capital expenditure costs expected for these plans are included in the Company's capital expenditure projections.

(14) Stock-Based Compensation

Incentive Compensation Plan

The Company maintains a 2014 Incentive Compensation Plan (the Plan), which allowed for the issuance of up to 5,288 shares. In May 2016, the Plan was amended to increase the amount allowed for issuance by 5,000 shares, revising the maximum allowed for issuance to 10,288 through its expiration date of February 2024.

The Plan provides for the grant of incentive stock options and nonqualified stock options to the Company's key employees, non-employee directors and consultants. Other types of awards such as performance-based

restricted stock units (PRUs), restricted stock units (RSUs), and stock appreciation rights are also permitted. The exercise price for options and awards is determined by the compensation committee of the board of directors and, for options intended to qualify as incentive stock options, may not be less than the fair market value as determined by the closing stock price at the date of the grant. Each option and award shall vest and expire as determined by the compensation committee of the board of directors, with options, PRUs and RSUs generally vesting over three years for employees and one year for non-employee directors. Options, PRUs and RSUs do not have voting rights. Options expire no later than ten years from the grant date. All grants provide for accelerated vesting if there is a change in control, as defined in the Plan. Upon the exercise of outstanding stock options or vesting of RSUs and PRUs, the Company's practice is to issue new registered shares that are reserved for issuance under the Plan.

As of January 2, 2017, 697 PRUs, 3,104 RSUs and 87 stock options were outstanding under the Plan. Included in the 697 PRUs outstanding as of January 2, 2017 are 291 vested but not yet released. Included in the 3,104 RSUs outstanding as of January 2, 2017 are 396 vested but not yet released RSUs associated with non-employee directors. These RSUs vest over one year with release of the underlying shares of common stock deferred until retirement from the board of directors, (or until one year after retirement in the case of certain prior grants).

Performance-based Restricted Stock Units

The Company maintains a long-term incentive program for executives that provides for the issuance of PRUs, representing hypothetical shares of the Company's common stock that may be issued. Under the PRU program, a target number of PRUs is awarded at the beginning of each three-year performance period. The number of shares of common stock released at the end of the performance period may range from zero to 2.4 times the target number depending on performance during the period. The performance metrics of the PRU program are based on (a) annual financial targets, which are based on revenue and EBITDA (earnings before interest, tax, depreciation, and amortization expense), each equally weighted, and (b) an overall modifier based on the Company's total stockholder return (TSR) relative to a group of peer companies selected by the Company's compensation committee, over the three-year performance period.

Under the PRU program, financial goals are set at the beginning of each fiscal year and performance is reviewed at the end of that year. The percentage to be applied to each participant's target award ranges from zero to 160% based upon the extent to which the annual financial performance goals are achieved. If specific performance threshold levels for the annual financial goals are met, the amount earned for that element will be applied to one-third of the participants' PRU award to determine the number of units earned.

At the end of the three-year performance period, the total units earned, if any, are adjusted by applying a modifier, ranging from zero to 150% based on the Company's TSR based on stock price changes relative to a group of peer companies selected by the Company's compensation committee for the same three-year period.

The TSR modifier is intended to ensure that there are limited or no payouts under the PRU program if the Company's stock performance is significantly below the median TSR of a group of peer companies selected by the Company's compensation committee over the three-year performance period. Where the annual financial goals have been met and where there has been strong relative TSR performance over the three-year performance period, the PRU program may provide substantial rewards to participants with a maximum payout of 2.4 times the initial PRU award. However, even if all of the annual financial metric goals are achieved in each of the three years, there will be no payouts if the Company's stock performance is below that of the 10th percentile for PRUs granted in 2016, and 20th percentile for PRUs granted prior to 2016, of the group of peer companies selected by the Company's compensation committee, as appropriate.

Recipients of PRU awards generally must remain employed by the Company on a continuous basis through the end of the three-year performance period in order to receive any amount of the PRUs covered by that award.

In events such as death, disability or retirement, the recipient may be entitled to pro-rata amounts of PRUs as defined in the Plan. Target shares subject to PRU awards do not have voting rights of common stock until earned and issued following the end of the three-year performance period.

The Company records stock-based compensation expense for PRU awards granted based on management's periodic assessment of the probability of the PRU awards vesting. As of January 2, 2017, management determined that vesting of the PRU awards was probable. PRU activity for the year ended January 2, 2017 was as follows:

	Shares	Weighted Average Fair Value
	(In thousands)	
Outstanding target shares at December 28, 2015	301	$8.58
Granted	346	6.46
Vested	(291)	6.01
Change in units due to annual performance achievement	50	6.08
Outstanding target shares at January 2, 2017	406	$8.31

The fair value of PRUs granted is calculated using a Monte Carlo simulation model, as the TSR modifier contains a market condition. For the years ended January 2, 2017, December 28, 2015 and December 29, 2014, the following assumptions were used in determining the fair value:

	For the Year Ended		
	January 2, 2017(1)	December 28, 2015(2)	December 29, 2014(3)
Weighted-average fair value	$6.46	$7.22	$5.80
Risk-free interest rate	0.8%	0.5%	0.4%
Dividend yield	—	—	—
Expected volatility	40%	37%	41%
Expected term in months	24	22	23

(1) Reflects the weighted-averages for the third year of the three-year performance period applicable to PRUs granted in 2014, the second year of the three-year performance period applicable to PRUs granted in 2015 and the first year of the three-year performance period applicable to PRUs granted in 2016.

(2) Reflects the weighted-averages for the third year of the three-year performance period applicable to PRUs granted in 2013, the second year of the three-year performance period applicable to PRUs granted in 2014 and the first year of the three-year performance period applicable to PRUs granted in 2015.

(3) Reflects the weighted-averages for the third year of the three-year performance period applicable to PRUs granted in 2012, second year of the three-year performance period applicable to PRUs granted in 2013 and for the first year of the three-year performance period applicable to PRUs granted in 2014.

The expected term of the PRUs reflects the performance period for the PRUs granted. Expected volatility is calculated using the Company's historical stock price. The risk-free interest rate for the expected term of PRUs is based on the U.S Treasury yield curve in effect at the time of grant.

Restricted Stock Units

RSU activity for the year ended January 2, 2017 was as follows:

	Shares	Weighted Average Grant-Date Fair Value
	(In thousands)	
Non-vested RSUs outstanding at December 28, 2015	1,975	$8.77
Granted	1,827	6.78
Vested	(906)	8.65
Forfeited	(188)	8.59
Non-vested RSUs outstanding at January 2, 2017	2,708	$7.48
Vested and expected to vest at January 2, 2017	2,980	$7.79

The fair value of the Company's RSUs is determined based upon the closing common stock price on the grant date. The weighted average fair value per unit of RSUs granted was $6.78, $9.15 and $7.98 for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively. The total fair value of RSUs vested for the years ended January 2, 2017, December 28, 2015 and December 29, 2014 was $7,834, $6,396 and $7,195, respectively.

Stock Options

During the year ended January 2, 2017, the Company granted 20 stock options to a newly appointed member of the board which were estimated to have a fair value per share of $6.78. No stock options were granted by the Company for the years ended December 28, 2015 or December 29, 2014. The fair value calculation is based on stock options granted during the period using the Black-Scholes option-pricing model on the date of grant. For the year ended January 2, 2017 the fair value was determined using 1.7% as the risk-free interest rate, 51% as the expected volatility, 8.5 years as the expected term and no dividend yield.

The Company determines the expected term of its stock option awards by periodic review of its historical stock option exercise experience. This calculation considers pre-vesting forfeitures and uses assumed future exercise patterns to account for option holders' expected exercise and post-vesting termination behavior for outstanding stock options over their remaining contractual terms. Expected volatility is calculated by weighting the Company's historical stock price to calculate expected volatility over the expected term of each grant. The risk-free interest rate for the expected term of each option granted is based on the U.S. Treasury yield curve in effect at the time of grant with a period that approximates the expected term of the options.

Option activity under the Plan for the year ended January 2, 2017 was as follows:

	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
	(In thousands)		(In years)	(In thousands)
Outstanding at December 28, 2015	420	$12.37	1.7	$ 4
Granted	20	11.83		
Exercised	(159)	10.97		
Forfeited/expired	(194)	14.08		
Outstanding at January 2, 2017	87	$10.99	5.0	$228
Vested and expected to vest at January 2, 2017	87	$10.99	5.0	$228
Exercisable at January 2, 2017	67	$10.74	3.5	$192

The aggregate intrinsic values in the table above represent the total pretax intrinsic value (the difference between Company's closing stock price on the last trading day of the 2016 fiscal year and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on January 2, 2017. This amount changes based on the fair market value of the Company's stock. The total intrinsic value of options exercised for the years ended January 2, 2017 and December 28, 2015 was $127 and $131, respectively. There were no options exercised for the year ended December 29, 2014. There were no options vested for the years ended January 2, 2017 and December 28, 2015. The total fair value of the options vested for the year ended December 29, 2014 was $110.

Stock-based Compensation Expense and Unrecognized Compensation Costs

For the years ended January 2, 2017, December 28, 2015 and December 29, 2014, the amounts recognized in the consolidated financial statements with respect to the stock-based compensation plan are as follows:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Cost of goods sold	$ 1,630	$1,117	$ 866
Selling and marketing	1,054	1,135	1,109
General and administrative	8,406	7,409	5,825
Stock-based compensation expense recognized	11,090	9,661	7,800
Income tax benefit recognized	—	—	(2,018)
Stock-based compensation expense recognized	$11,090	$9,661	$ 5,782

The Company may become entitled to a deduction in its tax returns upon the future exercise of incentive stock options under certain circumstances; however, the value of this deduction will be recorded as an increase to additional paid-in capital and not as an income tax benefit. For the years ended December 28, 2015 and December 29, 2014, a net tax shortfall of $247 and $1,015, respectively, related to fully vested stock option awards exercised and vested RSUs was recorded as a decrease to additional paid-in capital. For the year ended

January 2, 2017, the Company did not record a net tax shortfall. Additionally, for the year ended January 2, 2017 and December 28, 2015, the Company did not record an income tax benefit as a result of a full valuation allowance on its deferred tax assets.

The following is a summary of total unrecognized compensation costs as of January 2, 2017:

	Unrecognized Stock-Based Compensation Cost	Remaining Weighted Average Recognition Period
	(In thousands)	(In years)
RSU awards	$11,822	1.3
PRU awards	1,631	1.5
Stock options	114	2.4
	$13,567	

(15) Employee Benefit and Deferred Compensation Plans

As of January 2, 2017, the Company has three separate retirement benefit plans: one in North America and two in China. In North America, the Company has a 401(k) savings plan (the Savings Plan) in which eligible full-time domestic employees can participate and contribute a percentage of compensation subject to the maximum allowed by the Internal Revenue Service. The Savings Plan provides for a partial match by the employer of the first 5% of employee contributions (100% of the first 3% and 50% of the following 2% of employee contributions). In China, the Company contributes to either separate trust-administered funds or various government-sponsored pension plans on a mandatory basis. For all retirement plans, the Company has no further payment obligation once the required contributions have been made. The Company recorded contributions to retirement benefit plans of $36,172, $35,427 and $18,953 during the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively.

The Company also maintains a deferred compensation plan (the Compensation Plan). The Compensation Plan is an unfunded, nonqualified deferred compensation plan and is limited to selected employees, including our named executive officers and our directors. The Compensation Plan allows participants to defer up to 100% of their annual bonus and between 5% and 100% of their annual director fees. Amounts deferred under the Compensation Plan will be credited to accounts maintained by the Company for each participant and will be credited or debited with the participant's proportionate share of any gains or losses attributable to the performance of investment options selected by the participant.

(16) Preferred Stock

The board of directors has the authority, without action by stockholders, to designate and issue preferred stock in one or more series. The board of directors may also designate the rights, preferences and privileges of each series of preferred stock, any or all of which may be superior to the rights of the common stock. As of January 2, 2017, no shares of preferred stock were outstanding.

(17) Distribution of profits

As stipulated by the relevant laws and regulations of China applicable to the Company's subsidiaries in China, each of such subsidiaries is required to make appropriations from its net income as determined in accordance with accounting principles and the relevant financial regulations of China (PRC GAAP) to a non-distributable reserve, also referred to as statutory surplus reserve. The appropriations to the statutory surplus reserve are required to be made at not less than 10% of the profit after tax as determined under PRC GAAP and are required until the balance reaches 50% of its registered capital. The statutory surplus reserve is used to offset future or past losses. These Chinese subsidiaries may, upon a resolution passed by their respective shareholders, convert the statutory surplus reserve into capital.

There were appropriations of approximately $6,037, $4,576 and $2,544 to the statutory surplus reserve of the Company's Chinese subsidiaries for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively.

(18) Segment Information

The operating segments reported below are the Company's segments for which separate financial information is available and upon which operating results are evaluated by the chief operating decision maker to assess performance and to allocate resources. The Company has reviewed its reportable operating segments and determined it continues to have two reportable operating segments: PCB and E-M Solutions. The PCB reportable segment is comprised of multiple operating segments. This determination was made based on the criteria of earning revenues and incurring expenses, the Company's organizational structure which has segment managers who report to the chief operating decision maker, discrete financial information, and the aggregation of similar operating segments into reportable operating segments. Factors considered to determine whether operating segments can be aggregated into reportable segments included similarity regarding economic characteristics, products, production processes, type or classes of customers, distribution methods, and regulatory environments.

The Company, including the chief operating decision maker, evaluates segment performance based on operating segment income, which is operating income before amortization of intangibles. Interest expense and interest income are not presented by segment since they are not included in the measure of segment profitability reviewed by the chief operating decision maker. All inter-segment transactions have been eliminated.

The Company accounts for inter-segment sales and transfers consistent with the Company's revenue recognition policy. The inter-segment sales for the year ended January 2, 2017 are sales primarily from the PCB to the E-M Solutions operating segment.

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Net Sales:			
PCB	$2,346,554	$1,944,041	$1,251,665
E-M Solutions	198,483	158,655	76,545
Total sales	2,545,037	2,102,696	1,328,210
Inter-segment sales	(11,678)	(7,208)	(2,493)
Total net sales	$2,533,359	$2,095,488	$1,325,717
Operating Segment Income (Loss):			
PCB	$ 285,046	$ 172,227	$ 77,092
E-M Solutions	4,684	1,424	3,855
Corporate	(92,025)	(93,421)	(26,021)
Total operating segment income	197,705	80,230	54,926
Amortization of definite-lived intangibles	(24,252)	(18,888)	(8,387)
Total operating income	173,453	61,342	46,539
Total other expense	(106,451)	(52,366)	(24,248)
Income before income taxes	$ 67,002	$ 8,976	$ 22,291

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Depreciation Expense:			
PCB	$149,466	$130,339	$95,027
E-M Solutions	2,540	2,079	183
Corporate	4,223	1,090	139
Total depreciation expense	$156,229	$133,508	$95,349
Capital Expenditures:			
PCB	$ 74,318	$ 72,036	$73,779
E-M Solutions	3,206	4,006	400
Corporate	5,873	1,523	2,603
Total capital expenditures	$ 83,397	$ 77,565	$76,782

	As of		
	January 2, 2017	December 28, 2015	December 29, 2014
		(In thousands)	
Segment Assets:			
PCB	$1,791,829	$1,943,577	$1,334,648
E-M Solutions	127,826	143,779	43,255
Corporate	580,421	552,777	223,386
Total assets	$2,500,076	$2,640,133	$1,601,289

The Corporate category includes operating expenses that are not included in the segment operating performance measures. Corporate consists primarily of corporate governance functions such as finance, accounting, information technology, facilities and human resources personnel, as well as global sales and marketing personnel and acquisition and integration costs associated with the acquisition of Viasystems. Bank fees and legal, accounting, and other professional service costs associated with the acquisition of Viasystems of $1,688, $34,448 and $5,981 for the years ended January 2, 2017, December 28, 2015, and December 29, 2014, respectively, are included in Corporate.

During the year ended January 2, 2017, the Company recorded impairment charges of $1,393 and $1,953 for the impairment of long-lived assets related to its PCB operating segment and Corporate operating segment, respectively. During the year ended December 29, 2014, the Company recorded impairment charges of $1,845 for the impairment of long-lived assets related to its PCB operating segment. There were no impairment charges for the year ended December 28, 2015.

The Company markets and sells its products in approximately 65 countries. Other than in the United States and China, the Company does not conduct business in any country in which its net sales in that country exceed 10% of the Company's total net sales. Net sales and long-lived assets are as follows:

	2016		2015		2014	
	Net Sales	Long-Lived Assets	Net Sales	Long-Lived Assets	Net Sales	Long-Lived Assets
	(In thousands)					
United States	$1,119,086	$ 661,058	$ 960,146	$ 654,579	$ 568,796	$103,340
China	646,844	781,678	547,999	923,219	352,385	682,739
Other	767,429	23,124	587,343	23,133	404,536	—
Total	$2,533,359	$1,465,860	$2,095,488	$1,600,931	$1,325,717	$786,079

Net sales are attributed to countries by country invoiced.

(19) Earnings Per Share

The following is a reconciliation of the numerator and denominator used to calculate basic earnings (loss) per share and diluted earnings (loss) per share for the years ended January 2, 2017, December 28, 2015 and December 29, 2014:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
	(In thousands, except per share amounts)		
Net income (loss) attributable to TTM Technologies, Inc. stockholders	$ 34,861	$(25,882)	$14,693
Weighted average shares outstanding	100,099	92,675	83,238
Dilutive effect of performance-based stock units, restricted stock units and stock options	1,383	—	703
Diluted shares	101,482	92,675	83,941
Earnings (loss) per share attributable to TTM Technologies, Inc. stockholders:			
Basic	$ 0.35	$ (0.28)	$ 0.18
Diluted	$ 0.34	$ (0.28)	$ 0.18

For the years ended January 2, 2017 and December 29, 2014, performance-based stock units (PRUs), restricted stock units (RSUs) and stock options to purchase 892 and 1,233 shares of common stock, respectively, were not considered in calculating diluted earnings per share because the options' exercise prices or the total expected proceeds under the treasury stock method for performance-based stock units, restricted stock units or stock options was greater than the average market price of common shares during the applicable year and, therefore, the effect would be anti-dilutive.

For the year ended December 28, 2015, potential shares of common stock, consisting of stock options to purchase approximately 420 shares of common stock at exercise prices ranging from $5.78 to $16.82 per share, 2,294 RSUs, and 572 PRUs were not included in the computation of diluted earnings per share because the Company incurred a net loss from operations and, as a result, the impact would be anti-dilutive.

Additionally, for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, the effect of shares of common stock related to the Company's convertible senior notes were not included in the computation of dilutive earnings per share as the impact would be anti-dilutive.

Outstanding warrants for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, to purchase common stock were not included in the computation of dilutive earnings per share because the strike price of the warrants to purchase the Company's common stock were greater than the average market price of common shares during the applicable year, and therefore, the effect would be anti-dilutive.

The below is a summary of amounts convertible to common stock related to convertible senior notes and related warrants:

	For the Year Ended		
	January 2, 2017	December 28, 2015	December 29, 2014
	(In thousands)		
Common stock related to convertible senior notes	25,940	25,940	27,970
Warrants to purchase common stock	25,940	26,408	28,020

(20) Related Party Transactions

In the normal course of business, the Company's foreign subsidiaries purchase laminate and prepreg from related parties in which a significant shareholder of the Company holds an equity interest. The Company purchased laminate and prepreg from these related parties in the amount of $55,649, $63,605 and $47,446 for the years ended January 2, 2017, December 28, 2015 and December 29, 2014, respectively.

Dongguan Shengyi Electronics Ltd. (SYE) is also a related party as it is a wholly owned subsidiary of an entity in which a significant shareholder of the Company holds an equity interest. The Company sells PCBs to SYE and purchases PCBs including various services relating to PCB manufacturing from SYE. Sales to SYE for the years ended January 2, 2017, December 28, 2015 and December 29, 2014 were $991, $4,709 and $24,120, respectively. Purchases of PCBs including various services relating to PCB manufacturing for the years ended December 28, 2015 and December 29, 2014 were $1,948 and $1,671, respectively. There were no purchases from SYE for the year ended January 2, 2017.

As of January 2, 2017 and December 28, 2015, the Company's consolidated balance sheets included $15,836 and $29,306, respectively, in accounts payable due to related parties for purchases of laminate and prepreg and various PCB manufacturing services and such balances are included as a component of accounts payable on the consolidated balance sheets. Additionally, the Company's consolidated balance sheets included $192 and $1,999, respectively, in accounts receivable due from a related party for sales of PCBs to SYE, as mentioned above, and such balances are included as a component of accounts receivable, net on the consolidated balance sheets.

Exhibit 12.1

TTM TECHNOLOGIES, INC.

Computation of Ratio of Earnings to Fixed Charges

	Year Ended				
	January 2, 2017	December 28, 2015	December 29, 2014	December 30, 2013	December 31, 2012
	(In thousands)				
Fixed Charges:					
Interest expense	$ 76,008	$ 59,753	$ 23,830	$ 24,031	$ 25,784
Interest capitalized	1,876	888	551	1,125	1,774
Estimated interest within rental expense	3,443	2,454	1,244	1,121	1,034
Total Fixed Charges	81,327	63,095	25,625	26,277	28,592
Earnings:					
Net income (loss)	35,575	(25,618)	14,693	23,893	(181,100)
Fixed charges per above	81,327	63,095	25,625	26,277	28,592
Income tax provision	31,427	34,594	7,598	15,879	12,728
Less: capitalized interest	(1,876)	(888)	(551)	(1,125)	(1,774)
Amortization of interest capitalized	641	391	316	325	278
Total earnings	147,094	71,574	47,681	65,249	(141,276)
Ratio of fixed charges	1.8x	1.1x	1.9x	2.5x	n/a(1)

(1) Earnings were not sufficient to cover fixed charges for period indicated. Additional earnings of $169,868 for the year ended December 31, 2012 would have been required to achieve a ratio of 1: 1.

Exhibit 21.1

LIST OF SUBSIDIARIES OF
TTM TECHNOLOGIES, INC.

Name of Subsidiary	State/Country of Incorporation	Parent
Power Circuits, Inc.	California	TTM Technologies, Inc.
TTM Advanced Circuits, Inc.	Minnesota	TTM Technologies, Inc.
TTM Printed Circuit Group, Inc.	Delaware	TTM Technologies, Inc.
TTM Technologies International, Inc.	Delaware	TTM Technologies, Inc.
Viasystems Group, Inc.	Delaware	TTM Technologies, Inc.
TTM Technologies International (Switzerland) GmbH	Switzerland	TTM Technologies International, Inc.
TTM Iota Limited	Bermuda	TTM Technologies International (Switzerland) GmbH
TTM Technologies (Shanghai) Co. Ltd.	China	TTM Iota Limited
TTM Technologies (Asia Pacific) Limited	Hong Kong	TTM Technologies International, Inc.
MTG Flex (BVI) Limited	British Virgin Islands	TTM Technologies (Asia Pacific) Limited
OPC Flex Limited	Hong Kong	MTG Flex (BVI) Limited
OPC Flex (HK) Limited	Hong Kong	MTG Flex (BVI) Limited
MTG (PCB) No. 2 (BVI) Limited	British Virgin Islands	TTM Technologies (Asia Pacific) Limited
Meadville Aspocomp (BVI) Holdings Limited	British Virgin Islands	MTG (PCB) No. 2 (BVI) Limited
Meadville Aspocomp Limited	Hong Kong	Meadville Aspocomp (BVI) Holdings Limited
Meadville Aspocomp International Limited	Hong Kong	Meadville Aspocomp (BVI) Holdings Limited
Asia Rich Enterprises Limited	British Virgin Islands	Meadville Aspocomp (BVI) Holdings Limited
Aspocomp Electronics India Private Limited	India	Asia Rich Enterprises Limited
MA Investment Holding Limited	Hong Kong	Meadville Aspocomp (BVI) Holdings Limited
MTG Management (BVI) Limited	British Virgin Islands	TTM Technologies (Asia Pacific) Limited
Oriental Printed Circuits (USA), Inc.	Delaware	MTG Management (BVI) Limited
Oriental Printed Circuits Limited	Hong Kong	MTG Management (BVI) Limited
Oriental Printed Circuits, Inc.	California	Oriental Printed Circuits Limited
Meadville International Trading (Shanghai) Co., Ltd.	China	Oriental Printed Circuits Limited
TTM Technologies Enterprises (HK) Limited	Hong Kong	MTG Management (BVI) Limited
State Link Trading Limited	British Virgin Islands	MTG Management (BVI) Limited
MTG PCB (BVI) Limited	British Virgin Islands	TTM Technologies (Asia Pacific) Limited
TTM Technologies China Limited	Hong Kong	MTG PCB (BVI) Limited
OPC Manufacturing Limited	Hong Kong	TTM Technologies China Limited
Circuit Net Technology Limited	British Virgin Islands	TTM Technologies China Limited
Guangzhou Meadville Electronics Co., Ltd.	China	TTM Technologies China Limited
Shanghai Meadville Science & Technology Co., Ltd.	China	TTM Technologies China Limited
Shanghai Meadville Electronics Co., Ltd.	China	TTM Technologies China Limited
Shanghai Kaiser Electronics Co., Ltd.	China	TTM Technologies China Limited
Dongguan Meadville Circuits Limited	China	TTM Technologies China Limited
TTM Technologies Trading (Guangzhou) Co., Ltd.	China	TTM Technologies China Limited
Oriental Printed Circuits Singapore Pte. Limited	Singapore	MTG Management (BVI) Limited
Viasystems, Inc.	Delaware	Viasystems Group, Inc.
Viasystems Technologies Corp., L.L.C.	Delaware	Viasystems, Inc.
Coretec Building Inc.	Colorado	Viasystems Technologies Corp., L.L.C.
DDi Cleveland Holdings Corp.	Delaware	Viasystems Technologies Corp., L.L.C.
DDi Electronics Services (Shenzhen) Co. Ltd.	China	Viasystems Technologies Corp., L.L.C.
Wirekraft Industries, LLC	Delaware	Viasystems Technologies Corp., L.L.C.
Viasystems Europe Limited	United Kingdom	Viasystems Technologies Corp., L.L.C.
Merix Caymans Trading Company Limited	Cayman Islands	Viasystems Technologies Corp., L.L.C.
Viasystems Toronto, Inc.	Ontario	Viasystems Technologies Corp., L.L.C.
Trumauga Properties, Ltd.	Ohio	DDi Cleveland Holdings Corp.
TTM Technologies Trading (Asia) Company	Hong Kong	Merix Caymans Trading Company Limited
Viasystems Canada Holdings, ULC	Nova Scotia	Merix Caymans Trading Company Limited

Name of Subsidiary	State/Country of Incorporation	Parent
Viasystems Services (Singapore) PTE Ltd.	Singapore	Merix Caymans Trading Company Limited
Merix Printed Circuits Technology Limited	China	Viasystems Services (Singapore) PTE Ltd.
Viasystems (BVI) Limited	British Virgin Islands	Merix Caymans Trading Company Limited
Termbray Circuit Board Company Limited	Hong Kong	Viasystems (BVI) Limited
Kalex Circuit Board (Guangzhou) Limited	Hong Kong	Termbray Circuit Board Company Limited
Guangzhou Termbray Circuit Board Limited	China	Kalex Circuit Board (Guangzhou) Limited
Viasystems Kalex Printed Circuit Board Limited	Hong Kong	Viasystems (BVI) Limited
Termbray Laminate Company Limited	Hong Kong	Viasystems (BVI) Limited
Viasystems Asia Pacific Property (B.V.I.) Limited	British Virgin Islands	Viasystems (BVI) Limited
Viasystems Asia Pacific Company Limited	Hong Kong	Viasystems (BVI) Limited
Kalex Circuit Board (China) Limited	Hong Kong	Viasystems (BVI) Limited
Guangzhou Kalex Laminate Company Limited	China	Termbray Laminate Company Limited
Guangzhou Viasystems Commercial Technology Co. Limited	China	Viasystems Asia Pacific Property (B.V.I.) Limited
Viasystems EMS (Shenzhen) Co. Ltd.	China	Viasystems Asia Pacific Company Limited
Shanghai Viasystems EMS Co. Ltd.	China	Viasystems Asia Pacific Company Limited
Guangzhou Termbray Electronics Technologies Company Limited	China	Kalex Circuit Board (China) Limited
Kalex Multilayer Circuit Board (Zhongshan) Ltd.	China	Kalex Circuit Board (China) Limited
Zhongshan Viasystems Printed Circuit Board Company Limited	China	Kalex Circuit Board (China) Limited

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
TTM Technologies, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-46454, 333-138219, 333-198117, and 333-211744) on Form S-8, and (No. 333-214592) on Form S-3 of TTM Technologies, Inc. and subsidiaries of our reports dated February 24, 2017, with respect to the consolidated balance sheets of TTM Technologies, Inc. and subsidiaries as of January 2, 2017 and December 28, 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended January 2, 2017, and the effectiveness of internal control over financial reporting as of January 2, 2017, which reports appear in the January 2, 2017, annual report on Form 10-K of TTM Technologies, Inc.

/s/ KPMG LLP

Irvine, California
February 24, 2017

Exhibit 31.1

CERTIFICATION

I, Thomas T. Edman, certify that:

1. I have reviewed this annual report on Form 10-K of TTM Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Thomas T. Edman

Thomas T. Edman
President and Chief Executive Officer
(Principal Executive Officer)

Date: February 24, 2017

Exhibit 31.2

CERTIFICATION

I, Todd B. Schull, certify that:

1. I have reviewed this annual report on Form 10-K of TTM Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Todd B. Schull

Todd B. Schull
Executive Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Date: February 24, 2017

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of TTM Technologies, Inc. (the "Company") for the year ended January 2, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Thomas T. Edman, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

By: /s/ Thomas T. Edman
Thomas T. Edman
President and Chief Executive Officer
(Principal Executive Officer)

February 24, 2017

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of TTM Technologies, Inc. (the "Company") for the year ended January 2, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Todd B. Schull, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

By: /s/ Todd B. Schull
Todd B. Schull
Executive Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

February 24, 2017