UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Form 10-Q

☒ **QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended October 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)

(714) 327-3000
(Registrant's telephone number, including area code)

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 whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. Check one:

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

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

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

Number of shares of common stock, $0.001 par value, of registrant outstanding at November 6, 2017:101,815,378

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PART I. FINANCIAL INFORMATION

Item 1. ***Financial Statements (unaudited)***

TTM TECHNOLOGIES, INC.

Consolidated Condensed Balance Sheets

	As of	
	October 2, 2017	January 2, 2017
	(Unaudited) (In thousands, except par value)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 301,934	$ 256,277
Accounts receivable, net	475,056	432,788
Inventories	295,279	269,212
Prepaid expenses and other current assets	38,692	54,564
Total current assets	1,110,961	1,012,841
Property, plant and equipment, net	1,052,779	966,638
Goodwill	372,524	372,609
Definite-lived intangibles, net	108,841	126,613
Deposits and other non-current assets	28,839	21,375
	$ 2,673,944	$ 2,500,076
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt, including current portion of long-term debt	$ 4,184	$ 110,652
Accounts payable	422,549	371,610
Accrued salaries, wages and benefits	88,717	97,171
Equipment payable	63,136	12,430
Other accrued expenses	94,197	97,202
Total current liabilities	672,783	689,065
Long-term debt, net of discount and issuance costs	974,161	909,030
Other long-term liabilities	74,453	72,856
Total long-term liabilities	1,048,614	981,886
Commitments and contingencies (Note 11)		
Equity:		
Common stock, $0.001 par value; 300,000 shares authorized, 101,815 and 100,396 shares issued and outstanding in 2017 and 2016, respectively	102	100
Additional paid-in capital	771,818	758,440
Retained earnings	149,807	74,787
Statutory surplus reserve	31,832	31,849
Accumulated other comprehensive loss	(9,698)	(44,329)
Total TTM Technologies, Inc. stockholders' equity	943,861	820,847
Noncontrolling interest	8,686	8,278
Total equity	952,547	829,125
	$ 2,673,944	$ 2,500,076

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Condensed Statements of Operations
For the Quarter and Three Quarters Ended October 2, 2017 and September 26, 2016

	Quarter Ended		Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
	(Unaudited) (In thousands, except per share data)			
Net sales	$666,814	$ 641,720	$1,919,243	$ 1,826,825
Cost of goods sold	569,980	532,158	1,621,523	1,536,055
Gross profit	96,834	109,562	297,720	290,770
Operating expenses:				
Selling and marketing	16,269	15,643	48,775	49,518
General and administrative	30,470	35,641	88,377	108,249
Amortization of definite-lived intangibles	5,905	5,949	17,727	17,845
Restructuring charges	100	2,103	1,125	8,005
Impairment of long-lived assets	—	—	—	3,346
Total operating expenses	52,744	59,336	156,004	186,963
Operating income	44,090	50,226	141,716	103,807
Other income (expense):				
Interest expense	(13,598)	(18,873)	(40,116)	(60,741)
Loss on extinguishment of debt	(768)	—	(768)	—
Other, net	(6,984)	3,930	(14,519)	8,330
Total other expense, net	(21,350)	(14,943)	(55,403)	(52,411)
Income before income taxes	22,740	35,283	86,313	51,396
Income tax provision	(1,205)	(9,513)	(10,902)	(14,011)
Net income	21,535	25,770	75,411	37,385
Less: Net income attributable to the noncontrolling interest	(82)	(188)	(408)	(519)
Net income attributable to TTM Technologies, Inc. stockholders	$ 21,453	$ 25,582	$ 75,003	$ 36,866
Income per share attributable to TTM Technologies, Inc. stockholders:				
Basic income per share	$ 0.21	$ 0.26	$ 0.74	$ 0.37
Diluted income per share	$ 0.19	$ 0.23	$ 0.65	$ 0.36

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Condensed Statements of Comprehensive Income (Loss)
For the Quarter and Three Quarters Ended October 2, 2017 and September 26, 2016

	Quarter Ended		Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
	(Unaudited) (In thousands)			
Net income	$ 21,535	$ 25,770	$ 75,411	$ 37,385
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments gains (losses), net	15,669	(5,350)	34,307	(19,061)
Net unrealized gains (losses) on cash flow hedges:				
Unrealized gain (loss) on effective cash flow hedges during the period, net	30	4	194	(17)
Loss realized in the statements of operations	43	47	130	128
Net	73	51	324	111
Other comprehensive income (loss), net of tax	15,742	(5,299)	34,631	(18,950)
Comprehensive income	37,277	20,471	110,042	18,435
Less: comprehensive income attributable to the noncontrolling interest	(82)	(188)	(408)	(519)
Comprehensive income attributable to TTM Technologies, Inc. stockholders	$ 37,195	$ 20,283	$109,634	$ 17,916

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Condensed Statements of Cash Flows
For the Three Quarters Ended October 2, 2017 and September 26, 2016

	Three Quarters Ended	
	October 2, 2017	September 26, 2016
	(Unaudited) (In thousands)	
Cash flows from operating activities:		
Net income	$ 75,411	$ 37,385
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation of property, plant and equipment	109,719	117,690
Amortization of definite-lived intangible assets	17,727	17,845
Amortization of debt discount and debt issuance costs	7,977	16,400
Deferred income taxes	(4,936)	(2,696)
Stock-based compensation	13,306	7,890
Impairment of long-lived assets	—	3,346
Loss on extinguishment of debt	768	—
Other	6,971	(980)
Changes in operating assets and liabilities:		
Accounts and notes receivable, net	(42,268)	6,076
Inventories	(26,067)	(12,246)
Prepaid expenses and other current assets	(7,162)	3,132
Accounts payable	37,855	12,883
Accrued salaries, wages and benefits and other accrued expenses	(9,237)	(6,039)
Net cash provided by operating activities	180,064	200,686
Cash flows from investing activities:		
Purchase of property, plant and equipment and equipment deposits	(118,933)	(62,520)
Proceeds from sale of property, plant and equipment and assets held for sale	27,052	1,523
Release of restricted cash and cash equivalents	—	3,530
Net cash used in investing activities	(91,881)	(57,467)
Cash flows from financing activities:		
Proceeds from long-term borrowing	725,000	—
Repayment of long-term debt borrowing	(700,000)	(106,482)
Repayment of revolving loan	(63,000)	—
Payment of debt issuance costs	(5,330)	—
Payment of original issue discount	(1,750)	—
Redemption of convertible notes	(15)	—
Proceeds from exercise of stock options	74	123
Net cash used in financing activities	(45,021)	(106,359)
Effect of foreign currency exchange rates on cash and cash equivalents	2,495	(4,177)
Net increase in cash and cash equivalents	45,657	32,683
Cash and cash equivalents at beginning of period	256,277	259,100
Cash and cash equivalents at end of period	$ 301,934	$ 291,783
Noncash transactions:		
Property, plant and equipment recorded in accounts payable and equipment payable	$ 85,582	$ 21,058

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements
(Unaudited)
(Dollars and shares in thousands, except per share data)

(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 volume production of advanced technology products and offers a one-stop manufacturing solution to customers from engineering support to prototype development through final mass production. Thisone-stop manufacturing solution enables 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 aerospace and defense, automotive components, smartphones and touchscreen tablets, high-end computing, medical, industrial and instrumentation related products, as well as networking/communications infrastructure products. The Company's customers include both original equipment manufacturers (OEMs) and electronic manufacturing services (EMS) providers.

The accompanying consolidated condensed financial statements have been prepared by the Company, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Certain information and disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) have been condensed or omitted pursuant to such rules and regulations. These consolidated condensed financial statements reflect all adjustments (consisting only of normal recurring adjustments) which, in the opinion of management, are necessary to present fairly the financial position, the results of operations and cash flows of the Company for the periods presented. It is suggested that these consolidated condensed financial statements be read in conjunction with the consolidated financial statements and the notes thereto included in the Company's most recent Annual Report on Form 10-K. The results of operations for the interim periods are not necessarily indicative of the results to be expected for the full year. The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the Company's consolidated condensed financial statements and accompanying notes. Actual results could differ materially from those estimates. The Company uses a 13-week fiscal quarter accounting period with the fourth quarter ending on the Monday nearest December 31.

Recently Adopted and Issued Accounting Standards

In August 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*. This ASU amends and simplifies existing guidance in order to allow companies to more accurately present the economic effects of risk management activities in the financial statements. ASU 2017-12 also amends the guidance surrounding the recognition of the value of hedged instruments to include the entire change in value, rather than just the effective portion, in other comprehensive income and recognized in earnings at the same time that the hedged item affects earnings for cash flow and net investment hedges. This ASU is effective for fiscal years beginning after December 15, 2018, 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 condensed financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-04*, Intangibles (Topic 350): Goodwill and Other*. This ASU simplifies the accounting for goodwill impairment and removes Step 2 of the goodwill impairment test. Goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value limited to the total amount of goodwill allocated to that reporting unit. Entities will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. The Company elected to early adopt ASU 2017-04 on a prospective basis during the second quarter of 2017, and the adoption did not have a material impact on its consolidated condensed financial statements and related disclosures.

In October 2016, the FASB issued 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 adoption of this standard is not expected to have a material impact on the Company's consolidated condensed financial statements or related disclosures.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

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 adopted this ASU 2016-15 in the first quarter of 2017 and the adoption did not have a material impact on its consolidated condensed financial statements and related disclosures.

In March 2016, the FASB issued 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. The Company adopted ASU 2016-09 on January 3, 2017. The adoption did not have a material impact on the consolidated condensed financial statements and related disclosures.

In February 2016, the FASB issued ASU2016-02, *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. While the Company continues to evaluate the new guidance to determine the impact it may have on its consolidated condensed financial statements and related disclosures, the primary effect of adopting this update will be to record assets and obligations for current operating leases.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments—Overall (Topic 825): Recognition and Measurement of Financial Assets and Financial Liabilitie*s. This ASU amends certain aspects of recognition, measurement, presentation and disclosure of financial instruments, and supersedes the guidance to classify equity securities with readily determinable fair values into different categories (that is, trading or available-for-sale) and requires equity securities to be measured at fair value with changes in the fair value recognized through net income. This ASU is effective for annual and interim periods beginning after December 15, 2017. The Company does not anticipate the adoption will have a material impact on its consolidated condensed financial statements and related disclosures.

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. 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 October 2, 2017, management intends to apply the cumulative effect transition method. The Company has identified and implemented changes to its processes and internal controls to meet the standard update's reporting and disclosure requirements.

(2) Consolidation Plan, Restructuring and Impairment Charges

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 on May 31, 2015. 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, contract termination and other costs during the quarters and three quarters ended October 2, 2017 and September 26, 2016. 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.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

The below table summarizes such restructuring costs by reportable segment for the quarter and three quarters ended October 2, 2017:

	Quarter Ended October 2, 2017			Three Quarters Ended October 2, 2017		
	Employee separation/ severance	Contract termination and other costs	Total	Employee separation/ severance	Contract termination and other costs	Total
	(In thousands)					
Reportable Segment:						
PCB	$ 8	—	$ 8	$ 178	$ 99	$ 277
E-M Solutions	—	5	5	—	520	520
Corporate	—	87	87	32	296	328
	$ 8	$ 92	$100	$ 210	$ 915	$1,125

The below table summarizes such restructuring costs by reportable segment for the quarter and three quarters ended September 26, 2016:

	Quarter Ended September 26, 2016			Three Quarters Ended September 26, 2016		
	Employee separation/ severance	Contract termination and other costs	Total	Employee separation/ severance	Contract termination and other costs	Total
	(In thousands)					
Reportable Segment:						
PCB	$ 157	$ 778	$ 935	$ 1,425	$ 1,878	$ 3,303
E-M Solutions	222	1,072	1,294	956	3,016	3,972
Corporate	(121)	(5)	(126)	(112)	842	730
	$ 258	$ 1,845	$2,103	$ 2,269	$ 5,736	$ 8,005

The below table shows the utilization of the accrued restructuring costs during the three quarters ended October 2, 2017:

	Employee separation/ severance	Contract termination and other Costs	Total
	(In thousands)		
Accrued at January 2, 2017	$ 124	$ 1,042	$ 1,166
Charged to expense	210	915	1,125
Amount paid	(334)	$ (1,402)	(1,736)
Accrued at October 2, 2017	$ —	$ 555	$ 555

The remaining accrual for unpaid estimated contract termination and other costs as of October 2, 2017 are included as a component of other accrued expenses in the consolidated condensed balance sheet.

As of October 2, 2017, the Company had incurred approximately $17,457 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.

The Company recognized $3,346 in impairment charges during the three quarters ended September 26, 2016. As a result of the above mentioned plant closures and other plant realignment efforts, $1,393 of impairment charges were recognized in the consolidated condensed statement of operations related to machinery and equipment in the PCB reportable segment. In addition, $1,953 of impairment charges were recognized in the consolidated condensed statement of operations related to capitalized software costs in the Corporate operating segment.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

(3) Inventories

Inventories as of October 2, 2017 and January 2, 2017 consisted of the following:

	As of	
	October 2, 2017	January 2, 2017
	(In thousands)	
Inventories:		
Raw materials	$ 76,467	$ 73,497
Work-in-process	119,291	105,094
Finished goods	99,521	90,621
	$295,279	$269,212

(4) Goodwill

As of October 2, 2017 and January 2, 2017, goodwill was as follows:

	Total
	(In thousands)
Balance as of January 2, 2017	$ 372,609
Foreign currency translation adjustment	(85)
Balance as of October 2, 2017	$ 372,524

All goodwill relates to the Company's PCB reportable segment.

Goodwill balances include foreign currency translation adjustments related to foreign subsidiaries with functional currencies other than the U.S. dollar.

(5) Definite-lived Intangibles

As of October 2, 2017 and January 2, 2017, 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)
October 2, 2017:					
Customer relationships	$203,563	$ (95,433)	$ 57	$108,187	8.1
Technology	3,000	(2,346)	—	654	3.0
	$206,563	$ (97,779)	$ 57	$108,841	
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	

The October 2, 2017 and January 2, 2017 definite-lived intangible balances include foreign currency translation adjustments related to foreign subsidiaries with functional currencies other than the U.S. dollar.

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 $5,905 and $5,949 for the quarters ended October 2, 2017 and September 26, 2016, respectively, and $17,727 and $17,845 for the three quarters October 2, 2017 and September 26, 2016, respectively.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

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

	(In thousands)
Remaining 2017	$ 5,913
2018	22,841
2019	18,746
2020	18,746
2021	14,921
Thereafter	27,674
	$ 108,841

(6) Long-term Debt and Letters of Credit

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

	Interest Rate as of October 2, 2017	Principal Outstanding as of October 2, 2017	Interest Rate as of January 2, 2017	Principal Outstanding as of January 2, 2017
		(In thousands)		
Term Loan due September 2024	3.73%	$ 350,000	—	—
Senior Notes due October 2025	5.63%	375,000	—	—
Term Loan due May 2021	—	—	5.25%	$ 700,000
Convertible Senior Notes due December 2020	1.75%	249,985	1.75%	250,000
U.S. ABL Revolving Loan due May 2020	2.73%	17,000	2.27%	80,000
Asia ABL Revolving Loan due May 2020	2.63%	30,000	2.17%	30,000
Capital Lease	6.43%	1,884	6.43%	1,798
		1,023,869		1,061,798
Less: Long-term debt unamortized discount		(32,764)		(37,392)
Long-term debt unamortized debt issuance costs		(12,760)		(4,724)
		978,345		1,019,682
Less: current maturities		(4,184)		(110,652)
Long-term debt, less current maturities		$ 974,161		$ 909,030

On September 28, 2017, the Company entered into a $350,000 Term Loan Facility due 2024 (Term Loan Facility), and issued $375,000 of Senior Notes due 2025 (Senior Notes). In conjunction with the issuance of the Term Loan Facility and Senior Notes, the Company repaid in full the remaining outstanding balance of the September 27, 2016 Term Loan Credit Agreement (2016 Term Loan) and repaid $63,000 on its existing U.S. Asset-Based Lending Credit Agreement. The Company recognized a loss on extinguishment of debt of $768 primarily associated with the write off of the remaining 2016 Term Loan debt issuance costs.

Term Loan Facility

The Term Loan Facility, of which $3,500 is included in short-term debt and $346,500 is included in long-term debt, was issued at a discount at 99.5% and bears interest, at the Company's option, at a floating rate of LIBOR, plus an applicable interest margin of 2.5%, or an alternate base rate, (defined as the greater of the JP Morgan prime, the New York Fed bank rate plus 0.9% or LIBOR plus 1.0%), subject to a 1.0% floor plus an applicable margin of 1.5%. At October 2, 2017 the interest rate on the outstanding borrowings under the Term Loan Facility was 3.73%. There is no provision, other than an event of default, for the interest margin to increase. The Term Loan Facility will mature on September 28, 2024. The Term Loan Facility 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 Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes below.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

The Company is required to make scheduled payments of the outstanding Term Loan Facility balance on a quarterly basis beginning January 1, 2018. Based on certain parameters defined in the Term Loan Facility, including a First Lien Leverage Ratio, the Company may be required to make an additional principal payment on an annual basis beginning after fiscal year 2018, if the Company's First Lien Leverage Ratio is greater than 2.0. Any additional annual payments or prepayments would reduce future required scheduled payments. Any remaining outstanding balances under the Term Loan Facility are due at the maturity date of September 28, 2024.

Borrowings under the Term Loan Facility are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments and dispositions, and share payments. The Company and its domestic subsidiaries have fully and unconditionally guaranteed the full and timely payment of Term Loan Facility related obligations.

Senior Notes

The $375,000 of Senior Notes issued, which is included in long-term debt, bear interest at a rate of 5.63% per annum. Interest is payable semiannually in arrears on April 1 and October 1 of each year beginning April 1, 2018. The Senior Notes will mature on October 1, 2025. The Senior Notes are unsecured obligations and are guaranteed by the Company's subsidiaries that guarantee its senior secured credit facilities, subject to certain exceptions.

Borrowings under the Senior Notes are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments and dispositions, and share payments.

Convertible Senior Notes due 2020

The Company maintains 1.75% convertible senior notes in the amount of $249,985 due December 15, 2020. 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 unsecured obligations, are subordinated to the Senior Notes above, and would 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.

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

	As of October 2, 2017			As of January 2, 2017		
	Embedded conversion option — Convertible Senior Notes	Embedded conversion option — Convertible Senior Notes Issuance Costs	Total	Embedded conversion option — Convertible Senior Notes	Embedded conversion option — Convertible Senior Notes Issuance Costs	Total
	(in thousands)					
Convertible senior notes due 2020	$ 60,216	$ (1,916)	$ 58,300	$ 60,227	$ (1,916)	$ 58,311

The components of interest expense resulting from the convertible senior notes for the quarters and three quarters ended October 2, 2017 and September 26, 2016 are as follows:

	For the Quarter Ended		For the Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
	(In thousands)			
Contractual coupon interest	$ 1,094	$ 1,094	$ 3,281	$ 3,281
Amortization of debt discount	$ 2,159	$ 2,025	$ 6,376	$ 5,977
Amortization of debt issuance costs	$ 216	$ 202	$ 639	$ 599

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

Asset-Based Lending Agreements

The Company continues to maintain a $200,000 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 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 October 2, 2017, the interest rate on the outstanding borrowings under the U.S. ABL was 2.73%. 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 Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes above. As noted earlier, concurrent with the issuance of the Term Loan Facility and Senior Notes, the Company paid down $63,000 of the outstanding balance of its U.S. ABL. The Company and its domestic subsidiaries have fully and unconditionally guaranteed the full and timely payment of U.S. ABL related obligations. At October 2, 2017, $17,000 of the U.S. ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

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 October 2, 2017, the interest rate on the outstanding borrowings under the Asia ABL was 2.63%. 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 Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes above. 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 October 2, 2017, $30,000 of the Asia ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

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 of October 2, 2017 letters of credit in the amount of $7,612 were outstanding under the U.S. ABL and $45,026 were outstanding under the Asia ABL with various expiration dates through March 2019. Available borrowing capacity under the U.S. ABL and the Asia ABL was $175,388 and $74,974, respectively, which considers letters of credit outstanding of $7,612 and $45,026, respectively, at October 2, 2017.

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 and the Asia ABL. The Company incurred total commitment fees related to unused borrowing availability of $179 and $171 for the quarters ended October 2, 2017 and September 26, 2016, respectively, and $546 and $516 for the three quarters ended October 2, 2017 and September 26, 2016, respectively.

Under the occurrence of certain events, the ABL Revolving Loans are subject to various financial and operational covenants, including maintaining minimum fixed charge coverage ratios.

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 $31,700 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 October 2, 2017, the Chinese Revolver had not been drawn upon.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

Debt Issuance and Debt Discount

As of October 2, 2017 and January 2, 2017, remaining unamortized debt discount and debt issuance costs for the Term Loan Facility, Senior Notes, Convertible Senior Notes and 2016 Term Loan are as follows:

	As of October 2, 2017			As of January 2, 2017		
	Debt Issuance Costs	Debt Discount	Effective Interest Rate	Debt Issuance Costs	Debt Discount	Effective Interest Rate
	(in thousands)					
Term Loan due September 2024	$ 2,803	$ 1,750	3.95%	—	—	—
Senior Notes due October 2025	6,849	—	5.91%	—	—	—
Convertible Senior Notes	3,108	31,014	6.48%	$ 3,747	$37,392	6.48%
Term Loan due May 2021	—	—	—	977	—	5.48%
	$ 12,760	$32,764		$ 4,724	$37,392	

The above debt discount and debt issuance costs are recorded as a reduction of the debt and are amortized into interest expense using an effective interest rate over the duration of the debt.

Debt issuance costs for the ABL Revolving Loans of $2,672 and $3,423 as of October 2, 2017 and January 2, 2017, respectively, are included in othernon-current assets and are amortized to interest expense over the duration of the ABL Revolving Loans using the straight line method of amortization.

At October 2, 2017, the remaining weighted average amortization period for all unamortized debt discount and debt issuance costs was 4.2 years.

(7) Income Taxes

The Company's effective tax rate will generally differ from the U.S. federal statutory rate of 35% due to favorable tax rates associated with earnings from the Company's operations in lower-tax jurisdictions such as China, the apportioned state income tax rates, generation of other credits and deductions available to the Company, including research and development deductions in China, changes in valuation allowances, and certain non-deductible items.

During the quarter and three quarters ended October 2, 2017, the Company's effective tax rate was impacted by a net discrete benefit of $1,345 and $5,992, respectively, related to (i) certain tax incentives, (ii) release of uncertain tax positions due to the expiration of the statute of limitations in foreign jurisdictions, and (iii) accrued interest expense on existing uncertain tax positions. Additionally, no tax benefit was recorded on losses incurred in various jurisdictions where there were corresponding increases in the valuation allowances in those jurisdictions. The Company's foreign earnings will be indefinitely reinvested outside of the U.S. Therefore, no deferred tax liabilities for U.S. income taxes on undistributed earnings have been recorded, but deferred tax liabilities have been recorded for certain subsidiaries in China to provide for distributions up to the ultimate, foreign holding company.

Certain entities in China operated under tax incentives effective in 2017. For the quarter ended October 2, 2017, the tax incentives decreased Chinese taxes by $953, which increased both basic and dilutive earnings per share by $0.01 for the quarter ended October 2, 2017. For the three quarters ended October 2, 2017, the tax incentives decreased Chinese taxes by $6,611, which increased basic earnings per share by $0.07 and dilutive earnings per share by $0.05 for the three quarters ended October 2, 2017.

(8) Accumulated Other Comprehensive Income (Loss)

The following provides a summary of the components of accumulated other comprehensive income (loss) as of October 2, 2017 and January 2, 2017:

	Foreign Currency Translation	Gains (Losses) on Cash Flow Hedges	Total
		(In thousands)	
Ending balance at January 2, 2017	$ (43,149)	$ (1,180)	$(44,329)
Other comprehensive income before reclassifications	34,307	194	34,501
Amounts reclassified from accumulated other comprehensive income	—	130	130
Other comprehensive income	34,307	324	34,631
Ending balance at October 2, 2017	$ (8,842)	$ (856)	$ (9,698)

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

Amounts reclassified out of accumulated other comprehensive income (loss) to depreciation expense related to cash flow hedges was $43 and $47 net of tax for the quarters ended October 2, 2017 and September 26, 2016, respectively, and $130 and $128 net of tax for the three quarters ended October 2, 2017 and September 26, 2016, respectively.

(9) Significant Customers and Concentration of Credit Risk

In the normal course of business, the Company extends credit to its customers. Most customers to which the Company extends credit are located outside the United States. 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 quarters ended October 2, 2017 and September 26, 2016, one customer accounted for approximately 21% and 17%, respectively, of the Company's net sales. For the three quarters ended October 2, 2017 and September 26, 2016, one customer accounted for approximately 18% and 13%, respectively, of the Company's net sales. There were no other customers that accounted for 10% or more of net sales for the quarters or three quarters ended October 2, 2017 and September 26, 2016.

(10) Fair Value Measures

The Company measures at fair value its financial andnon-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 at October 2, 2017 and January 2, 2017 were as follows:

	October 2, 2017		January 2, 2017	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In thousands)			
Term Loan due September 2024	$345,447	$347,594	—	—
Term Loan due May 2021	—	—	$699,023	$708,750
Senior Notes due October 2025	368,151	380,430	—	—
Convertible Senior Notes	215,863	423,050	208,861	380,875
ABL Revolving Loans	47,000	47,000	110,000	110,000
Capital Lease	1,884	1,884	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 October 2, 2017 and January 2, 2017, which are considered 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 2 inputs.

As of October 2, 2017 and January 2, 2017, 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 October 2, 2017 consisted of $95,471 held in the U.S., with the remaining $206,463 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 thenon-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.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

The Company recognized impairment charges related to long-lived assets of $3,346 in the three quarters ended September 26, 2016. The fair values of their impaired long-lived assets were based on level 3 inputs. There was no impairment of long-lived assets recognized in the quarter ended September 26, 2016 or for the quarter and three quarters ended October 2, 2017.

(11) Commitments and Contingencies

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 October 2, 2017 and January 2, 2017. However, these amounts are not material to the consolidated condensed financial statements of the Company.

Environmental Matters

The process to manufacture PCBs requires adherence to domestic and foreign jurisdictional environmental laws regulations regarding the storage, use, handling, recycling and disposal of liquid and solid wastes, as well as compliance with air quality standards and chemical use reporting. The Company believes that its facilities in North America comply in all material respects with applicable environmental laws and regulations. In China, governmental authorities have adopted new rules and regulations governing environmental issues. 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 in a timely fashion. The 2017 capital expenditure costs expected for these plans are included in the Company's capital expenditure projections.

(12) Earnings Per Share

The following is a reconciliation of the numerator and denominator used to calculate basic earnings per share and diluted earnings per share for the quarters and three quarters ended October 2, 2017 and September 26, 2016:

	Quarter Ended		Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
	(In thousands, except per share amounts)			
Basic earnings:				
Basic earning	$ 21,453	$ 25,582	$ 75,003	$ 36,866
Diluted earnings:				
Net income attributable to TTM Technologies, Inc. stockholders	$ 21,453	$ 25,582	$ 75,003	$ 36,866
Interest expense from convertible senior notes, net of tax	3,469	3,321	10,296	—
Diluted earnings	$ 24,922	$ 28,903	$ 85,299	$ 36,866
Basic shares	101,814	100,245	101,501	100,004
Dilutive effect of performance-based restricted stock units, restricted stock units and stock options	1,692	1,460	1,721	1,090
Dilutive effect of outstanding warrants	2,151	—	2,753	—
Dilutive effect of assumed conversion of convertible senior notes outstanding	25,939	25,940	25,939	—
Diluted shares	131,596	127,645	131,914	101,094
Earnings per share attributable to TTM Technologies, Inc. stockholders:				
Basic	$ 0.21	$ 0.26	$ 0.74	$ 0.37
Diluted	$ 0.19	$ 0.23	$ 0.65	$ 0.36

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

Performance-based restricted stock units (PRUs), restricted stock units (RSUs) and stock options to purchase 631 and 233 shares of common stock for the quarter ended ended October 2, 2017 and September 26, 2016, respectively, and 275 and 1,174 for the three quarters ended October 2, 2017 and September 26, 2016, 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 PRUs, RSUs or stock options was greater than the average market price of common shares during the applicable quarter and, therefore, the effect would be anti-dilutive.

For the three quarters ended September 26, 2016, the effect of shares of common stock related to the Company's convertible senior notes, based on the if-converted method, were not included in the computation of dilutive earnings per share as the impact would be anti-dilutive.

For both the quarter and three quarters ended September 26, 2016, outstanding warrants to purchase 25,940 shares 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 quarter and three quarters, and therefore, the effect would be anti-dilutive.

(13) Stock-Based Compensation

Stock-based compensation expense is recognized in the accompanying consolidated condensed statements of operations as follows:

	Quarter Ended		Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
	(In thousands)			
Cost of goods sold	$ 606	$ 412	$ 1,639	$ 1,161
Selling and marketing	369	268	1,008	749
General and administrative	3,703	2,119	10,659	5,980
Stock-based compensation expense recognized	$ 4,678	$ 2,799	$ 13,306	$ 7,890

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 will 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.

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. For the three quarters ended October 2, 2017, management determined that vesting of the PRU awards was probable. PRUs activity for the three quarters ended October 2, 2017 was as follows:

	Shares	Weighted Average Fair Value
	(In thousands)	
Outstanding target shares at January 2, 2017	406	$ 8.31
Granted	363	22.90
Change in units due to annual financial target performance achievement	(19)	22.90
Outstanding target shares at October 2, 2017	750	$ 15.01

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

Restricted Stock Units

The Company granted 1,007 and 1,814 restricted stock units during the three quarters ended October 2, 2017 and September 26, 2016, respectively. The RSUs granted have a weighted-average fair value per unit of $15.82 and $6.74 for the three quarters ended October 2, 2017 and September 26, 2016, respectively. The fair value for RSUs granted is based on the closing share price of the Company's common stock on the date of grant. There were no restricted stock units granted during the quarters ended October 2, 2017 and September 26, 2016.

Stock Options

The Company did not grant any stock option awards during the quarters and three quarters ended October 2, 2017 and September 26, 2016.

Summary of Unrecognized Compensation Costs

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

	Unrecognized Stock-Based Compensation Cost (In thousands)	Remaining Weighted Average Recognition Period (In years)
RSU awards	$ 18,921	1.4
PRU awards	5,383	1.3
Stock options	103	2.0
	$ 24,407	

(14) Segment Information

The reportable segments 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 two reportable segments: PCB and E-M Solutions. The PCB reportable segment is comprised of multiple 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 reportable 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 quarters and three quarters ended October 2, 2017 and September 26, 2016 were sales primarily from the PCB to the E-M Solutions reportable segment.

TTM TECHNOLOGIES, INC.
Notes to Consolidated Condensed Financial Statements—(Continued)

	Quarter Ended		Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
	(In thousands)			
Net Sales:				
PCB	$ 609,742	$ 598,656	$ 1,773,003	$ 1,692,175
E-M Solutions	60,620	46,246	155,187	143,151
Total sales	670,362	644,902	1,928,190	1,835,326
Inter-segment sales	(3,548)	(3,182)	(8,947)	(8,501)
Total net sales	$ 666,814	$ 641,720	$ 1,919,243	$ 1,826,825
Reportable Segment Income (loss):				
PCB	$ 70,443	$ 75,501	$ 222,134	$ 189,838
E-M Solutions	2,870	1,421	3,917	1,655
Corporate	(23,318)	(20,747)	(66,608)	(69,841)
Total reportable segment income	49,995	56,175	159,443	121,652
Amortization of definite-lived intangibles	(5,905)	(5,949)	(17,727)	(17,845)
Total operating income	44,090	50,226	141,716	103,807
Total other expense	(21,350)	(14,943)	(55,403)	(52,411)
Income before income taxes	$ 22,740	$ 35,283	$ 86,313	$ 51,396

The Corporate category includes operating expenses that are not included in the reportable segment operating performance measures. Corporate consists primarily of corporate governance functions such as finance, accounting, corporate sales, information technology, facilities, corporate operations and human resources personnel.

(15) 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 $13,225 and $12,292 for the quarters ended October 2, 2017 and September 26, 2016, respectively, and $38,886 and $42,549 for the three quarters ended October 2, 2017 and September 26, 2016, respectively.

The Company also sells PCBs to a related party which is a wholly owned subsidiary of an entity in which a significant shareholder of the Company holds an equity interest. Sales to this related party for the quarters ended October 2, 2017 and September 26, 2016 were $5 and $254, respectively, and $53 and $863 for the three quarters ended October 2, 2017 and September 26, 2016, respectively.

As of October 2, 2017 and January 2, 2017, the Company's consolidated condensed balance sheets included $15,490 and $15,836, respectively, in accounts payable due to related parties primarily for purchases of laminate and prepreg and such balances are included as a component of accounts payable on the consolidated condensed balance sheets. Additionally, the Company's consolidated condensed balance sheets included $9 and $192, respectively, in accounts receivable due from a related party for sales of PCBs, as mentioned above, and such balances are included as a component of accounts receivable, net on the consolidated condensed balance sheets.

(16) Noncontrolling Interest Holdings

Subsequent to October 2, 2017, the Company entered into an agreement with Desay Industrial to acquire Desay Industrial's 5% noncontrolling equity interest in the manufacturing facility in Huiyang, China otherwise owned by the Company for 56,400 Chinese RMB or approximately $8,500. Any difference between the purchase price and the carrying value of the noncontrolling interest will be recorded in additional paid in capital. The Company expects this transaction to be completed by the end of 2017.

Item 2. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated condensed financial statements and the related notes and the other financial information included in this Quarterly Report on Form 10-Q. This Quarterly Report on Form 10-Q contains forward-looking statements regarding business strategies, market potential, future events, our future financial and operational performance, and other matters. Forward-looking statements include all statements that are not historical facts, including statements regarding markets for our products; trends in net sales, gross profits and estimated expense levels; liquidity and anticipated cash needs and availability. The words "anticipate," "believe," "plan," "forecast," "foresee," "estimate," "project," "expect," "seek," "target," "intend," "goal" and other similar expressions, among others, generally identify "forward-looking statements," which speak only as of the date the statements were made and are not guarantees of performance. The forward-looking statements included in this report reflect our current expectations and beliefs expressed in good faith, and we believe such statements to have a reasonable basis. We do not undertake publicly to update or revise these statements except as required by law, 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. Factors, risks, trends, and uncertainties that could actual results or events to differ materially from those projected, anticipated, or implied include the matters described below under "Management's Discussion and Analysis of Financial Condition and Results of Operations," the statements made under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in our 2016 Annual Report on Form 10-K, and the following other factors, risks, trends and uncertainties:

- *Business conditions and growth or decline in our customers' industries, the printed circuit board industry, and general economic trends and conditions;*
- *Risks and uncertainties related to strategic acquisitions or investments, including distraction of management attention, incurrence of additional debt, integration challenges, and failure to realize expected benefits or synergies or to operate businesses effectively following acquisitions;*
- *Variability in the exchange rate relative to the U.S. dollar of currencies in foreign jurisdictions in which we operate, particularly regarding the Chinese Renminbi;*
- *Our substantial international operations, and the resulting risks related to our operating internationally, including weak global economic conditions, instability in global credit markets, and governmental restrictions on the transfer of funds to us from our operations outside the U.S.;*
- *Our dependence on a small number of OEM customers and on certain industries;*
- *Adverse outcomes in litigation or proceedings with governmental authorities or administrative agencies, or changes in the regulatory environment, any of which could encumber or impede our efforts to improve operating results or the value of assets;*
- *Our ability to maintain our engineering, technological and manufacturing process expertise;*
- *Competitive pressures in the markets in which we operate;*
- *Our ability to protect our intellectual property or defend successfully against infringement claims;*
- *Potential disruption or interruption of our Information Technology (IT) systems due to accidents, extraordinary weather events, civil unrest, political events, terrorism or cyber security attacks;*
- *The susceptibility of our production levels to the variability of customer requirements, including seasonal influences on the demand for certain end products; and*
- *Other uncertainties relating to general economic, political, business, industry, regulatory and market conditions.*

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 enables 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 1,700 customers in various markets throughout the world, including aerospace and defense, automotive components, smartphones and touchscreen tablets, high-end computing, medical, industrial and instrumentation related products, as well as networking/communications infrastructure products. Our customers include both original equipment manufacturers (OEMs) and electronic manufacturing services (EMS) providers.

On September 28, 2017, we entered into a new $350.0 million Term Loan Facility due 2024 (Term Loan Facility) at a floating rate of LIBOR plus an applicable margin of 2.5%, or 3.73% at October 2, 2017, and issued $375.0 million of Senior Notes due 2025 (Senior Notes) at a rate of 5.63%. In conjunction with the issuance of the Term Loan Facility and Senior Notes, we repaid in full the remaining outstanding balance of the September 27, 2016 Term Loan Credit Agreement (2016 Term Loan), which had a floating rate of LIBOR, with a 1.0% LIBOR floor, plus a margin of 3.25% and repaid $63.0 million on our existing U.S. Asset-Based Lending Credit Agreement (U.S. ABL).

In the normal course of operations, we are exposed to risks associated with fluctuations in foreign currency exchange rates. Specifically, we are subject to risks associated with transactions that are denominated in currencies other than our functional currencies. Our primary foreign exchange exposure is to the Chinese Renminbi (RMB). For the quarter and three quarters ended October 2, 2017, our consolidated condensed statement of operations included a foreign exchange loss of approximately $7.4 million and $17.6 million, respectively, due primarily to the rapid appreciation of the RMB against the U.S. dollar. We do not engage in hedging to manage foreign currency risk related to revenue and expenses denominated in RMB 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.

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 10 largest customers accounted for 50% and 46% of our net sales for the quarters ended October 2, 2017 and September 26, 2016, respectively, and 46% and 42% for the three quarters ended October 2, 2017 and September 26, 2016, 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:

	Quarter Ended		Three Quarters Ended	
End Markets(1)(2)	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
Aerospace and Defense	16%	15%	16%	15%
Automotive	20	19	20	20
Cellular Phone(2)	17	17	15	12
Computing/Storage/Peripherals(2)	14	12	14	13
Medical/Industrial/Instrumentation	14	14	14	15
Networking/Communications	17	21	19	23
Other(2)	2	2	2	2
Total	100%	100%	100%	100%

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

(2) Smartphones are included in the Cellular Phone end market, tablets are included in the Computing/Storage/Peripherals end market and other consumer devices that include wearables, portable video devices and personal headphones are included in Other end market.

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, 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.

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CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our consolidated condensed financial statements included in this report have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires management 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.

See Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, in our Annual Report on Form10-K for the fiscal year ended January 2, 2017 for further discussion of critical accounting policies and estimates. There were no material changes to our critical accounting policies and estimates since January 2, 2017.

RESULTS OF OPERATIONS

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

	Quarter Ended		Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
Net sales	100.0%	100.0%	100.0%	100.0%
Cost of goods sold	85.5	82.9	84.5	84.1
Gross profit	14.5	17.1	15.5	15.9
Operating expenses:				
Selling and marketing	2.4	2.4	2.5	2.7
General and administrative	4.6	5.6	4.6	5.9
Amortization of definite-lived intangibles	0.9	0.9	0.9	1.0
Restructuring charges	—	0.4	0.1	0.4
Impairment of long-lived assets	—	—	—	0.2
Total operating expenses	7.9	9.3	8.1	10.2
Operating income	6.6	7.8	7.4	5.7
Other income (expense):				
Interest expense	(2.0)	(2.9)	(2.1)	(3.3)
Loss on extinguishment of debt	(0.1)	—	—	—
Other, net	(1.1)	0.6	(0.8)	0.4
Total other expense, net	(3.2)	(2.3)	(2.9)	(2.9)
Income before income taxes	3.4	5.5	4.5	2.8
Income tax provision	(0.2)	(1.5)	(0.6)	(0.8)
Net income	3.2	4.0	3.9	2.0
Less: Net income attributable to noncontrolling interest	—	—	—	—
Net income attributable to TTM Technologies, Inc. stockholders	3.2%	4.0%	3.9%	2.0%

We have two reportable segments: PCB and E-M Solutions. 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 following table compares net sales by reportable segment for the quarters and three quarters ended October 2, 2017 and September 26, 2016:

	Quarter Ended		Three Quarters Ended	
	October 2, 2017	September 26, 2016	October 2, 2017	September 26, 2016
	(In thousands)			
Net Sales:				
PCB	$ 609,742	$ 598,656	$ 1,773,003	$ 1,692,175
E-M Solutions	60,620	46,246	155,187	143,151
Total sales	670,362	644,902	1,928,190	1,835,326
Inter-segment sales	(3,548)	(3,182)	(8,947)	(8,501)
Total net sales	$ 666,814	$ 641,720	$ 1,919,243	$ 1,826,825

Net Sales

Total net sales increased $25.1 million, or 3.9%, from $641.7 million for the third quarter of 2016 to $666.8 million for the third quarter of 2017. Net sales for the PCB reportable segment, excluding inter-segment sales, increased $10.7 million, or 1.8%, from $595.5 million for the third quarter of 2016 to $606.2 million for the third quarter of 2017. This increase was primarily due to higher demand in our Computing/Storage/Peripherals, Aerospace/Defense, Medical/Industrial/Instrumentation and Cellular Phone end markets compared to the third quarter of 2016, partially offset by lower demand in our Networking/Communications end market. While these changes resulted in a 2.4% decrease in PCB shipments as compared to the third quarter of 2016, average PCB selling price increased by 4.9%, which was driven by a product mix shift. Net sales for the E-M Solutions reportable segment increased $14.4 million, or 31.2%, from $46.2 million for the third quarter of 2016 to $60.6 million for the third quarter of 2017. This increase was primarily due to higher demand in our Automotive end market.

Total net sales increased $92.4 million, or 5.1%, from $1,826.8 million for the three quarters of 2016 to $1,919.2 million for the three quarters of 2017. Net sales for the PCB reportable segment, excluding inter-segment sales, increased $80.4 million, or 4.8%, from $1,683.7 million for the three quarters of 2016 to $1,764.1 million for the three quarters of 2017. The increase was primarily due to higher demand in our Cellular Phone, Computing/Storage/Peripherals and Aerospace/Defense end markets, partially offset by a decline in our Networking/Communications end market. These changes resulted in a 2.7% increase in PCB shipments as compared to the three quarters of 2016, and an average PCB selling price increase of 1.9%, which was driven by a product mix shift. Net sales for the E-M Solutions reportable segment increased $12.0 million, or 8.4%, from $143.2 million for the three quarters of 2016 to $155.2 million for the three quarters of 2017. The increase was primarily due to higher demand in our Automotive end market, partially offset by lower demand in our Networking/Communications and Medical/Industrial/Instrumentation end market.

Gross Margin

Overall gross margin decreased from 17.1% for the third quarter of 2016 to 14.5% for the third quarter of 2017. Gross margin for the PCB reportable segment decreased from 17.7% for the third quarter of 2016 to 15.5% for the third quarter of 2017, primarily due to the change in classification of certain facilities and labor support related costs from general and administrative expenses to cost of goods sold due to changes in our business structure and higher costs in our Cellular Phone focused facilities due to multiple new products ramping using a new technology. Gross margin for the E-M Solutions reportable segment decreased from 11.0% for the third quarter of 2016 to 8.7% for the third quarter of 2017, primarily due to mix shift toward higher direct material content work.

Overall gross margin decreased from 15.9% for the three quarters of 2016 to 15.5% for the three quarters of 2017. Gross margin for the PCB reportable segment decreased from 16.9% for the three quarters of 2016 to 16.6% for the three quarters of 2017, primarily due to the change of certain facilities and labor support related costs from general and administrative expenses to cost of goods sold due to changes in our business structure and higher costs in our Cellular Phone focused facilities due to multiple new products ramping using a new technology, partially offset by higher net sales due to increased volumes at our Cellular Phone and Computing/Storage/ Peripherals focused facilities. Gross margin for the E-M Solutions reportable segment decreased from 8.6% for the three quarters of 2016 to 7.5% for the three quarters of 2017, primarily due to mix shift toward revenue with a higher direct material content work.

Capacity utilization is a key driver for us, particularly in our high volume Asia facilities, as a significant portion of our operating costs are fixed in nature. Capacity utilization for the third quarter of 2016 in our Asia and North America PCB facilities was 86% and 58%, respectively, compared to 86% and 55%, respectively, in the third quarter of 2017. Capacity utilization for the three quarters of 2016 in our Asia and North America PCB facilities was 79% and 58%, respectively, compared to 83% and 55%, respectively, in the third quarter of 2017.

Selling and Marketing Expenses

Selling and marketing expenses increased $0.7 million, from $15.6 million for the third quarter of 2016 to $16.3 million for the third quarter of 2017. As a percentage of net sales, selling and marketing expenses was 2.4% for both the third quarter of 2016 and the third quarter of 2017. The increase in selling and marketing expense primarily related to higher sales commission expenses due to higher sales.

Selling and marketing expenses decreased $0.7 million, from $49.5 million for the three quarters of 2016 to $48.8 million for the three quarters of 2017. As a percentage of net sales, selling and marketing expenses was 2.7% for the three quarters of 2016, as compared to 2.5% for the three quarters of 2017. The decrease in selling and marketing expense primarily related to reduced headcount and lower travel expenses.

General and Administrative Expenses

General and administrative expenses decreased $5.1 million from $35.6 million, or 5.6% of net sales, for the third quarter of 2016 to $30.5 million, or 4.6% of net sales, for the third quarter of 2017. General and administrative expenses decreased $19.8 million from $108.2 million, or 5.9% of net sales, for the three quarters of 2016 to $88.4 million, or 4.6% of net sales, for the three quarters of 2017. The decrease in expense for both comparative periods primarily related to the change in classification of certain facilities and labor support related costs to cost of goods sold due to changes in our business structure and lower bad debt expense.

Other Income (Expense)

Other expense, net increased $6.5 million from $14.9 million for the third quarter of 2016 to $21.4 million for the third quarter of 2017, resulting in an overall increase of $3.0 million from $52.4 million for the three quarters of 2016 to $55.4 million for the three quarters of 2017. The net increase in other expense for the third quarter and three quarters of 2017 was primarily due to a $7.4 million and $17.6 million foreign currency loss, respectively, which was partially offset in the case of the third quarter of 2017, and substantially offset in the case of the three quarters of 2017, by a decrease in interest expense. The foreign currency loss is primarily due to the appreciation of the RMB, which is the functional currency at certain of our Asia facilities. The decrease in interest expense for both the quarter and three quarters of 2017 is due to lower principal outstanding resulting from net debt principal payments of $161.1 million during the fourth quarter of 2016 and the first two quarters of 2017, a lower 2016 Term Loan interest rate by 75 basis points, and lower amortization of debt issuance costs and debt discount after the full repayment of our prior term loan in the fourth quarter of 2016.

Income Taxes

The provision for income taxes decreased by $8.3 million from $9.5 million of tax expense for the third quarter of 2016 to a provision of $1.2 million for the third quarter of 2017. The decrease in income tax expense in the third quarter of 2017 was primarily due to decreased operating income and an increase in tax benefits from tax incentives, including a change in estimate of research and development deductions in China.

The provision for income taxes decreased by $3.1 million from $14.0 million of tax expense for the three quarters of 2016 to $10.9 million of tax expense for the three quarters of 2017. The decrease in income tax expense for the three quarters of 2017 was primarily due to increased operating income in lower tax rate jurisdictions combined with an increase in tax benefits from tax incentives, including a change in estimate of research and development deductions in China, partially offset by a reduction of benefits from the release of uncertain tax positions for the three quarters of 2017 compared to the benefits for the three quarters of 2016.

Our effective tax rate was primarily impacted by tax rates in the U.S. (federal and apportioned state income), China and Hong Kong, the generation of other credits and deductions and certain non-deductible items. U.S. federal and state and certain foreign 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 October 2, 2017, we had net deferred income tax liabilities of approximately $9.1 million and as of January 2, 2017, we had net deferred income tax liabilities of approximately $14.0 million.

LIQUIDITY AND CAPITAL RESOURCES

Our principal sources of liquidity have been cash provided by operations, the issuance of convertible senior notes, senior notes, term loans, and revolving debt. Our principal uses of cash have been to finance acquisitions and capital expenditures, meet debt service requirements, fund working capital requirements, and repay 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 three quarters of 2017 was $180.1 million compared to $200.7 million for the same period in 2016. The decrease in cash flow was due to increased investment in working capital somewhat offset by higher net income. Cash cycle days were 45 days for the third quarter of 2017 as compared to 46 days for the same quarter of 2016. As of October 2, 2017, we had net working capital of approximately $438.2 million compared to $323.8 million as of January 2, 2017.

Net cash used in investing activities was approximately $91.9 million for the three quarters of 2017 primarily reflecting purchases of property, plant and equipment of $118.9 million less proceeds from sale of property, plant and equipment and assets held for sale of $27.0 million. Net cash used in investing activities was approximately $57.5 million for the three quarters of 2016 primarily reflecting purchases of property, plant and equipment, net of proceeds from sales of property, plant and equipment and assets held for sale of $61.0 million, less release of restricted cash to cash and cash equivalents of $3.5 million.

Net cash used by financing activities was approximately $45.0 million the three quarters of 2017 reflecting proceeds from long-term debt totaling $725.0 million, offset by the repayment of $700.0 million of long-term debt, repayment of $63.0 million of a revolving loan, and payment of debt issuance costs and original issue discount of $7.1 million associated with the Term Loan Facility and Senior Notes. Net cash used in financing activities was approximately $106.4 million for the three quarters of 2016 primarily reflecting the repayment of normally scheduled principal payments as well as additional prepayments of principal of long-term debt.

As of October 2, 2017, we had cash and cash equivalents of approximately $301.9 million, of which approximately $206.5 million was held by our foreign subsidiaries, primarily Asia. Cash and cash equivalents held by our foreign locations are expected to be used in local operations.

Our 2017 net capital expenditure is expected to be in the range of $155 million to $165 million, of which 40 percent are planned for technology enhancements, 30 percent for capacity expansions and 30 percent for compliance and maintenance related expenditures.

Long-term Debt and Letters of Credit

On September 28, 2017, we entered into a $350.0 million Term Loan Facility, and issued $375.0 million of Senior Notes. In conjunction with the issuance of the Term Loan Facility and Senior Notes, we repaid in full the remaining outstanding balance of the 2016 Term Loan and repaid $63.0 million of our existing U.S. ABL. We recognized a loss on extinguishment of debt of $0.8 million primarily associated with the write off of the remaining 2016 Term Loan debt issuance costs.

Term Loan Facility

The Term Loan Facility, of which $3.5 million is included in short-term debt and $346.5 million is included in long-term debt, was issued at a discount at 99.5% and bears interest, at our option, at a floating rate of LIBOR, plus an applicable interest margin of 2.5%, or an alternate base rate, (defined as the greater of the JP Morgan prime, the New York Fed bank rate plus 0.9% or LIBOR plus 1%), subject to a 1% floor plus an applicable margin of 1.5%. At October 2, 2017 the interest rate on the outstanding borrowings under the Term Loan Facility was 3.73%. There is no provision, other than an event of default, for the interest margin to increase. The Term Loan Facility will mature on September 28, 2024. The Term Loan Facility 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 Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes below.

We are required to make scheduled payments of the outstanding Term Loan Facility balance on a quarterly basis beginning January 1, 2018. Based on certain parameters defined in the Term Loan Facility, including a First Lien Leverage Ratio, we may be required to make an additional principal payment on an annual basis beginning after fiscal year 2018, if our First Lien Leverage Ratio is greater than 2.0. Any additional annual payments or prepayments would reduce future required scheduled payments. Any remaining outstanding balances under the Term Loan Facility are due at the maturity date of September 28, 2024.

Borrowings under the Term Loan Facility are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments and dispositions, and share payments. At October 2, 2017, we were in compliance with the covenants under the Term Loan Facility. We and our domestic subsidiaries have fully and unconditionally guaranteed the full and timely payment of Term Loan Facility related obligations.

Senior Notes

The $375.0 million of Senior Notes issued, which is included in long-term debt, bear interest at a rate of 5.63% per annum. Interest is payable semiannually in arrears on April 1 and October 1 of each year beginning April 1, 2018. The Senior Notes will mature on October 1, 2025. The Senior Notes are unsecured obligations and are guaranteed by our subsidiaries that guarantee our senior secured credit facilities, subject to certain exceptions.

Borrowings under the Senior Notes are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments and dispositions, and share payments. At October 2, 2017, we were in compliance with the covenants under the Senior Notes.

Convertible Senior Notes due 2020

We maintain 1.75% convertible senior notes in the amount of $250.0 million due December 15, 2020. 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 unsecured obligations, are subordinated to the Senior Notes above, and would rank equally to our future unsecured senior indebtedness and are senior in right of payment to any of our future subordinated indebtedness.

Asset-Based Lending Agreements

We continue to maintain a $200.0 million U.S. ABL, and a $150.0 million Asia Asset-Based Lending Credit Agreement (Asia ABL) (collectively the ABL Revolving Loans).

The 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 October 2, 2017, the interest rate on the outstanding borrowings under the U.S. ABL was 2.73%. 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 Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes above. As noted earlier, concurrent with the issuance of the Term Loan Facility and Senior Notes, we paid down $63.0 million of the outstanding balance of our U.S. ABL. We and our domestic subsidiaries have fully and unconditionally guaranteed the full and timely payment of U.S. ABL related obligations. At October 2, 2017, $17.0 million of the U.S. ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

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 October 2, 2017, the interest rate on the outstanding borrowings under the Asia ABL was 2.63%. 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 cash and receivables and are structurally senior to our domestic obligations, including the Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes above. Our Asian subsidiaries and certain of their subsidiaries have fully and unconditionally guaranteed the full and timely payment of all Asia ABL related obligations. At October 2, 2017, $30.0 million of the Asia ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

We have up to $50.0 million and $100.0 million Letters of Credit Facilities under the U.S. ABL and the Asia ABL, respectively. As of October 2, 2017 letters of credit in the amount of $7.6 million were outstanding under the U.S. ABL and $45.0 million were outstanding under the Asia ABL with various expiration dates through March 2019. Available borrowing capacity under the U.S. ABL and the Asia ABL was $175.4 million and $75.0 million, respectively, which considers letters of credit outstanding of $7.6 million and $45.0 million, respectively, at October 2, 2017.

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 and the Asia ABL. We incurred total commitment fees related to unused borrowing availability of $0.2 million for both of the quarters ended October 2, 2017 and September 26, 2016, and $0.5 million for both of the three quarters ended October 2, 2017 and September 26, 2016.

Under the occurrence of certain events, the ABL Revolving Loans are subject to various financial and operational covenants, including maintaining minimum fixed charge coverage ratios. At October 2, 2017, we were in compliance with the covenants under the ABL Revolving Loans.

Other Credit Facility

Additionally, we are party to a revolving loan credit facility (Chinese Revolver) with a lender in China. Under this arrangement, the lender has made available to us approximately $31.7 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 October 2, 2017, the Chinese Revolver had not been drawn upon.

The following table provides information on our contractual obligations as of October 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	$ 773,884	$ 4,184	$ 53,899	$ 8,301	$ 707,500
Convertible debt obligations	249,985	—	—	249,985	—
Interest on debt obligations	277,664	40,478	68,544	80,591	88,051
Equipment payables	63,842	63,137	705	—	—
Purchase obligations	103,366	91,799	3,068	596	7,903
Operating lease commitments	27,990	7,963	9,304	4,428	6,295
Total contractual obligations	$ 1,496,731	$ 207,561	$ 135,520	$ 343,901	$ 809,749

(1) Unrecognized uncertain tax benefits of $41.1 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.

Item 3. ***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 related to 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. For the quarter and three quarters ended October 2, 2017, our consolidated condensed statement of operation includes $7.4 million and $17.6 million, respectively, of foreign exchange losses due to the rapid appreciation of the RMB against the U.S. dollar and the HKD. 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.

See Liquidity and Capital Resources and Long-term Debt and Letters of Credit appearing in Item 2 of this Form 10-Q for further discussion of our financing facilities and capital structure. As of October 2, 2017, approximately 61.2% of our total debt was based on fixed rates**.** Based on our borrowings as of October 2, 2017, an assumed 100 basis point change in variable rates would cause our annual interest cost to change by $4.0 million.

Debt Instruments

The table below presents information about certain of our debt instruments, based on fiscal calendar maturities, as of October 2, 2017 and January 2, 2017.

	As of October 2, 2017								
	Remaining 2017	2018	2019	2020	2021	Thereafter	Total	Fair Market Value	Weighted Average Interest Rate
	(In thousands)								
US$ Variable Rate	—	$3,500	$3,500	$ 50,500	$4,375	$335,125	$ 397,000	$ 394,594	3.61%
US$ Fixed Rate	$ 684	375	399	250,411	—	375,000	626,869	805,364	4.08%
Total	$ 684	$3,875	$3,899	$300,911	$4,375	$710,125	$ 1,023,869	$ 1,199,958	

	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	

See Item 7A, *Quantitative and Qualitative Disclosures About Market Risk*, in our Annual Report on Form 10-K for the year ended January 2, 2017 for further discussion of market risks associated with interest rates.

Item 4. ***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 Rules 13a-15(e) and 15d-15(e) under the Exchange Act of 1934, as amended (the Exchange Act)) as of the end of the period covered by this report. Based on this evaluation, our CEO and CFO have concluded that, as of October 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.

In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their desired control objectives, and our management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Control Over Financial Reporting

There have been no material changes in our internal control over financial reporting (as defined in Rules13a-15(f) and 15d-15(f) under the Exchange Act) during the three quarters ended October 2, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. ***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 or probable 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 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 report or the other documents we file with the SEC, or our annual or quarterly reports to stockholders, future press releases, or orally, whether in presentations, responses to questions, or otherwise.

Risks Related to our Business

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 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.

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, mSAP, 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, failure to adopt and implement technological improvements quickly may cause inefficiencies as our product yields or quality may decrease, resulting in increased costs.

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.

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.

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.

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. We entered into a new $350.0 million Term Loan Facility due 2024 (Term Loan Facility) at a floating rate of LIBOR plus 2.5%, issued $375.0 million of Senior Notes due 2025 (Senior Notes) at an interest rate of 5.63%, and we continue to maintain a $200.0 million U.S. Asset-Based Lending Credit Agreement (U.S ABL), and a $150.0 million Asia Asset-Based Lending Credit Agreement (Asia ABL). 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 First Lien 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 three quarters ended October 2, 2017, we repaid in full the remaining outstanding balance of the September 27, 2016 Term Loan Credit Agreement and paid down $63.0 million of the outstanding balance of our U.S. ABL through the issuance of a $350.0 million Term Loan Facility and $375.0 million of Senior Notes. We are required to make scheduled payments of the outstanding Term Loan Facility balance on a quarterly basis beginning January 1, 2018. Based on certain parameters defined in the Term Loan Facility, including a First Lien Leverage Ratio, we may be required to make an additional principal payment on an annual basis, beginning after fiscal year 2018, if our First Lien Leverage Ratio is greater than 2.0.

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.

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 October 2, 2017, we had an aggregate of approximately $182.2 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 receivables or indebtedness denominated in the U.S. dollar or in the HKD, the fluctuation 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. For the quarter and three quarters ended October 2, 2017, our consolidated condensed statement of operations included a foreign exchange loss of approximately $7.4 million and $17.6 million, respectively, due primarily to the appreciation of the RMB against the U.S. dollar and the HKD. 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 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 38% and approximately 35% of our net sales for the quarters ended October 2, 2017 and September 26, 2016, respectively, and one customer represented approximately 21% of our sales for the quarter ended October 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.

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. The automotive industry has historically experienced multi-year cycles of growth and decline. In recent years, we have witnessed a growth cycle. If sales of automobiles should decline or go into a cyclical down turn, our sales could decline and this could have a materially adverse impact on our business, financial condition and result 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.

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 may have a material adverse effect on our business, financial condition, and results of operations.

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 results of operations.

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.

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.

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 non-cash charge to earnings, which may be material and would also reduce our stockholders' equity.

As of October 2, 2017, our consolidated balance sheet reflected $481.4 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 of our common stock, when aggregated with the November 2016 and February 2017 secondary sales of our share, 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 itspre-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 February 2017 and November 2016, 4,000,000 and 13,800,000 shares of common stock, respectively, were sold by Su Sih, our largest shareholder and a "5-percent shareholder." 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 31% and approximately 34% of our net sales for the quarters ended October 2, 2017 and September 26, 2016, 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 Canada 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 quarter ended October 2, 2017, we generated approximately 73% of our net sales fromnon-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 quarter ended October 2, 2017, aerospace and defense sales accounted for approximately 16% 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.

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 provide our customers withhigh-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 for the past four years, most recently on May 30, 2017. 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.

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, cyberattacks, 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, loss of customers, 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.

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 31% and approximately 34% of our net sales for the quarters ended October 2, 2017 and September 26, 2016, 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. Anynon-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 domestic 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, recycling, 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, or 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, or 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 domestic and foreign environmental regulations regarding the storage, use, handling, recycling, 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. Our plants in China are not yet in full compliance with the newly adopted 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 our Chinese plants. However, 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 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 information technology 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 barred 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.

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.

Infringement of our intellectual property rights could negatively affect us, and we may be exposed to intellectual property infringement claims from 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 establish and protect our proprietary and confidential information. All of these measures afford only limited protection. These measures may be invalidated, circumvented, breached, or challenged, and others may develop intellectual property, technologies or processes that are similar, or superior to, our intellectual property or technology. We may not have adequate controls and procedures in place to protect our proprietary and confidential information. Despite our efforts to protect our intellectual property and proprietary rights, unauthorized parties may attempt to copy, and succeed in, copying, our products or may obtain or use information that we regard as proprietary or confidential. If it becomes necessary for us to resort to litigation to protect our intellectual

property rights, any proceedings could be burdensome, costly, and distracting to management, and we may not prevail. Further, adequate remedies may not be available in the event of an unauthorized use or disclosure of our proprietary or confidential information. Failure to successfully establish or enforce our intellectual property rights could materially and 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 over 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, whether or not they have merit, are brought against our customers for such infringement, 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, and may be required to modify or cease marketing our products or services, which could disrupt the production processes, damage our reputation, and materially and 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 priority 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 sell 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,* in our Annual Report Form10-K for the fiscal year ended January 2, 2017.

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 shareholder 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. Subsequent to October 2, 2017, we entered into an agreement with our noncontrolling interest holder to purchase their 5% noncontrolling equity interest in the manufacturing facility in Huiyang, China otherwise owned by us for 56.4 million Chinese RMB or approximately $8.5 million. We expect this transaction to be completed by the end of 2017.

Security breaches and other disruptions of our information technology networks and system 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 secured collection, processing, storage, 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 or third party (including our suppliers and business partners) error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, altered, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in costs, fines, legal or regulatory 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 6. *Exhibits*

Exhibit Number	Exhibits
4.1	Indenture dated as of September 28, 2017, by and among the Company, the Guarantors named therein, and Wilmington Trust, National Association, as Indenture Trustee(1)
10.1	Second Amendment to 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, Deutsche Bank Securities Inc. and Sun Trust Bank, as Co-Documentation Agents, and Sun Trust Bank, as participant, dated as of September 28, 2017(2)
31.1	CEO Certification Pursuant to Section 302 of the Sarbanes — Oxley Act of 2002.
31.2	CFO Certification Pursuant to Section 302 of the Sarbanes — Oxley Act of 2002.
32.1	CEO Certification Pursuant to Section 906 of the Sarbanes — Oxley Act of 2002.
32.2	CFO Certification Pursuant to Section 906 of the Sarbanes — Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Documents
101.DEF	XBRL Taxonomy Extension Definition Linkbase Documents
101.LAB	XBRL Taxonomy Extension Label Linkbase Documents
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Documents

(1) Incorporated by reference to Exhibit 4.1 of the Registrant’s Form8-K as filed with the Securities and Exchange Commission (the “Commission”) on September 29, 2017.
(2) Incorporated by reference to Exhibit 10.1 of the Registrant’s Form 8-K as filed with the Securities and Exchange Commission (the “Commission”) on September 29, 2017.

EXHIBIT INDEX

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(1) Incorporated by reference to Exhibit 4.1 of the Registrant’s Form8-K as filed with the Securities and Exchange Commission (the “Commission”) on September 29, 2017.
(2) Incorporated by reference to Exhibit 10.1 of the Registrant’s Form8-K as filed with the Securities and Exchange Commission (the “Commission”) on September 29, 2017.

SIGNATURES

Pursuant to the requirements 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.

/s/ Thomas T. Edman

Dated: November 8, 2017

Thomas T. Edman
President and Chief Executive Officer

/s/ Todd B. Schull

Dated: November 8, 2017

Todd B. Schull
Executive Vice President and Chief Financial Officer

Exhibit 31.1

CERTIFICATION

I, Thomas T. Edman, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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 Rules13a-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 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: November 8, 2017

Exhibit 31.2

CERTIFICATION

I, Todd B. Schull, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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 Rules13a-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 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: November 8, 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 Quarterly Report on Form10-Q of TTM Technologies, Inc. (the “Company”) for the quarter ended October 2, 2017, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Thomas T. Edman, President and 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

November 8, 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 Quarterly Report on Form10-Q of TTM Technologies, Inc. (the "Company") for the quarter ended October 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)

November 8, 2017