NANOMETRICS INC
Form 10-Q
October 28, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 24, 2016

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number: 000-13470

NANOMETRICS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	94-2276314
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
1550 Buckeye Drive	
Milpitas, California	95035
(Address of principal executive offices)	(Zip Code)

Registrant’s telephone number, including area code: (408) 545-6000

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 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 or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	Accelerated filer
Non-accelerated filer	Smaller reporting company

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

As of October 21, 2016, there were 24,916,470 shares of common stock, $0.001 par value, issued and outstanding.

NANOMETRICS INCORPORATED

INDEX TO QUARTERLY REPORT ON FORM 10-Q

FOR THE QUARTER ENDED SEPTEMBER 24, 2016

PART I — FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS
NANOMETRICS INCORPORATED

CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands except share and per share amounts)

(Unaudited)

	September 24, 2016	December 26, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 37,421	$ 38,154
Marketable securities	81,106	44,931
Accounts receivable, net of allowances of $92 and $150, respectively	41,182	37,832
Inventories	39,260	47,749
Inventories-delivered systems	4,416	2,856
Prepaid expenses and other	5,835	6,592
Total current assets	209,220	178,114
Property, plant and equipment, net	44,324	44,493
Goodwill	9,665	9,415
Intangible assets, net	552	1,867
Deferred income tax assets	1,319	1,118
Other assets	526	533
Total assets	$ 265,606	$ 235,540
LIABILITIES AND STOCKHOLDERS’ EQUITY		
Current liabilities:		
Accounts payable	$ 8,562	$ 11,675
Accrued payroll and related expenses	11,631	10,097
Deferred revenue	16,804	12,790
Other current liabilities	8,630	8,878
Income taxes payable	278	1,771
Total current liabilities	45,905	45,211
Deferred revenue	639	827
Income taxes payable	848	775
Deferred tax liability	709	521
Other long-term liabilities	866	878
Total liabilities	48,967	48,212
Commitments and contingencies (Note 11)		
Stockholders’ equity:		

Preferred stock, $0.001 par value; 3,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock, $0.001 par value, 47,000,000 shares authorized: 24,897,878 and 24,224,286, respectively, issued and outstanding	25	24
Additional paid-in capital	268,553	258,715
Accumulated deficit	(48,828)	(66,209)
Accumulated other comprehensive income	(3,111)	(5,202)
Total stockholders' equity	216,639	187,328
Total liabilities and stockholders' equity	$ 265,606	$ 235,540

See Notes to Condensed Consolidated Financial Statements

NANOMETRICS INCORPORATED

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands except per share amounts)

(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Net revenues:				
Products	$49,631	$ 36,414	$136,290	$ 113,689
Service	9,083	9,264	25,680	30,993
Total net revenues	58,714	45,678	161,970	144,682
Costs of net revenues:				
Cost of products	22,810	19,242	62,625	59,106
Cost of service	5,066	3,749	14,714	15,158
Amortization of intangible assets	434	468	1,311	1,557
Total costs of net revenues	28,310	23,459	78,650	75,821
Gross profit	30,404	22,219	83,320	68,861
Operating expenses:				
Research and development	7,868	8,579	23,447	24,896
Selling	7,495	6,760	22,567	20,905
General and administrative	5,975	5,590	17,150	16,901
Amortization of intangible assets	—	26	24	89
Restructuring charge	—	—	—	56
Total operating expenses	21,338	20,955	63,188	62,847
Income from operations	9,066	1,264	20,132	6,014
Other (income) expense:				
Interest income	12	7	33	63
Interest expense	(92)	(86)	(276)	(252)
Other income, net	229	346	60	740
Total other income (expense), net	149	267	(183)	551
Income before income taxes	9,215	1,531	19,949	6,565
Provision for income taxes	1,332	713	2,568	1,847
Net income	$7,883	$ 818	$17,381	$ 4,718
Net income per share:				
Basic	$0.32	$ 0.03	$0.71	$ 0.20
Diluted	$0.31	$ 0.03	$0.70	$ 0.19
Weighted average shares used in per share calculation:				
Basic	24,826	24,145	24,550	24,010
Diluted	25,282	24,352	24,979	24,347

See Notes to Condensed Consolidated Financial Statements

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NANOMETRICS INCORPORATED

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)

(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Net income	$7,883	$ 818	$17,381	$ 4,718
Other comprehensive income (loss):				
Change in foreign currency translation adjustment	519	(235)	2,018	(1,980)
Net change on unrealized gains on available-for-sale investments	1	17	73	42
Other comprehensive income (loss):	520	(218)	2,091	(1,938)
Comprehensive income	$8,403	$ 600	$19,472	$ 2,780

See Notes to Condensed Consolidated Financial Statements

NANOMETRICS INCORPORATED

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

(Unaudited)

	Nine Months Ended	
	September 24, 2016	September 26, 2015
Cash flows from operating activities:		
Net income	$17,381	$ 4,718
Reconciliation of net income to net cash provided by operating activities:		
Depreciation and amortization	6,440	6,826
Stock-based compensation	5,432	4,664
Disposal of fixed assets	162	578
Inventory write-down	1,451	1,971
Deferred income taxes	(14)	173
Changes in fair value of contingent payments to Zygo Corporation	158	137
Changes in assets and liabilities:		
Accounts receivable	(986)	(14,873)
Inventories	6,652	(15,893)
Inventories-delivered systems	(1,560)	370
Prepaid expenses and other	889	4,436
Accounts payable, accrued and other liabilities	(4,310)	9,634
Deferred revenue	3,825	(688)
Income taxes payable	(1,419)	295
Net cash provided by operating activities	34,101	2,348
Cash flows from investing activities:		
Sales of marketable securities	2,093	2,884
Maturities of marketable securities	25,461	30,279
Purchases of marketable securities	(63,840)	(27,298)
Purchases of property, plant and equipment	(3,349)	(1,365)
Net cash provided by (used in) investing activities	(39,635)	4,500
Cash flows from financing activities:		
Payments to Zygo Corporation related to acquisition	(315)	(614)
Proceeds from sale of shares under employee stock option plans and purchase plan	5,984	3,642
Taxes paid on net issuance of stock awards	(1,578)	(1,104)
Repurchases of common stock	—	(1,721)
Net cash provided by financing activities	4,091	203
Effect of exchange rate changes on cash and cash equivalents	710	(166)
Net increase (decrease) in cash and cash equivalents	(733)	6,885

Cash and cash equivalents, beginning of period	38,154	34,676
Cash and cash equivalents, end of period	$37,421	$ 41,561
Supplemental disclosure of non-cash investing activities:		
Transfer of inventory to property, plant and equipment, net	$1,699	$ 1,068
Transfer of property, plant and equipment to inventory, net	$491	$ —

See Notes to Consolidated Financial Statements

NANOMETRICS INCORPORATED

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Note 1. Nature of Business and Basis of Presentation

Description of Business – Nanometrics Incorporated ("Nanometrics" or the "Company") and its wholly-owned subsidiaries design, manufacture, market, sell and support optical critical dimension ("OCD"), thin film and overlay dimension metrology and inspection systems used primarily in the manufacturing of semiconductors, solar photovoltaics ("solar PV") and high-brightness LEDs ("HB-LED"), as well as by customers in the silicon wafer and data storage industries. Nanometrics' metrology systems precisely measure a wide range of film types deposited on substrates during manufacturing to control manufacturing processes and increase production yields in the fabrication of integrated circuits. The Company's OCD technology is a patented critical dimension measurement technology that is used to precisely determine the dimensions on the semiconductor wafer that directly control the resulting performance of the integrated circuit devices. The thin film metrology systems use a broad spectrum of wavelengths, high-sensitivity optics, proprietary software, and patented technology to measure the thickness and uniformity of films deposited on silicon and other substrates as well as their chemical composition. The overlay metrology systems are used to measure the overlay accuracy of successive layers of semiconductor patterns on wafers in the photolithography process. Nanometrics' inspection systems are used to find defects on patterned and unpatterned wafers at nearly every stage of the semiconductor production flow. The corporate headquarters of Nanometrics is located in Milpitas, California.

Basis of Presentation – The accompanying condensed consolidated financial statements ("financial statements") have been prepared on a consistent basis with the audited consolidated financial statements as of December 26, 2015, and include all normal recurring adjustments necessary to fairly state the information set forth therein. All significant intercompany accounts and transactions have been eliminated in consolidation.

The financial statements have been prepared in accordance with the regulations of the United States Securities and Exchange Commission ("SEC") for interim periods in accordance with S-X Article 10, and, therefore, omit certain information and footnote disclosure necessary to present the statements in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). The operating results for interim periods are not necessarily indicative of the operating results that may be expected for the entire year. These financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto for the fiscal year ended December 26, 2015, which were included in the Company's Annual Report on Form 10-K filed with the SEC on February 24, 2016.

Fiscal Period – The Company uses a 52/53 week fiscal year ending on the last Saturday of the calendar year. All references to the quarter refer to Nanometrics' fiscal quarter. The fiscal quarters reported herein are 13 week periods.

Upgrade Revenue and Related Cost - Beginning the first quarter of 2016, revenues associated with upgrade sales are now included under Products Revenues, and the related costs in Cost of Products Revenue. This change was due to the types of upgrades currently being sold, which are primarily system software and hardware performance upgrades to extend the features and functionality of a product. Previously upgrades consisted of a group of parts and/or software that change the existing configuration of a product. For the three months ended September 26, 2015, $0.8 million related to upgrade sales, and $0.1 million of costs, are included in Service Revenues and Costs of Service Revenues, respectively, in the accompanying Condensed Consolidated Statement of Operations. For the nine months ended

September 26, 2015, $7.6 million related to upgrade sales, and $2.9 million of costs, are included in Service Revenues and Costs of Service Revenues, respectively, in the accompanying Condensed Consolidated Statement of Operations.

Use of Estimates – The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ materially from those estimates. Estimates are used for, but not limited to, revenue recognition, the provision for doubtful accounts, the provision for excess, obsolete, or slow moving inventories, valuation of intangible and long-lived assets, warranty accruals, income taxes, valuation of stock-based compensation, and contingencies.

Revenue Recognition – The Company derives revenue from the sale of process control metrology and inspection systems and related upgrades ("product revenue") as well as spare part sales, billable service and service contracts (together "service revenue"). Upgrades are system software and hardware performance upgrades that extend the features and functionality of a product. As discussed above, commencing in the first quarter of 2016, upgrades are included in product revenue, which consists of sales of complete, advanced process control metrology and inspection systems (the "system(s)"). Nanometrics' systems consist of hardware and software components that function together to deliver the essential functionality of the system. Arrangements for sales of systems often include defined customer-specified acceptance criteria.

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

In summary, the Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price is fixed or determinable, and collectability is reasonably assured.

For product sales to existing customers, revenue recognition occurs at the time title and risk of loss transfer to the customer, which usually occurs upon shipment from the Company's manufacturing location, if it can be reliably demonstrated that the product has successfully met the defined customer specified acceptance criteria and all other recognition criteria have been met. For initial sales where the product has not previously met the defined customer specified acceptance criteria, product revenues are recognized upon the earlier of receipt of written customer acceptance or expiration of the contractual acceptance period. In Japan, where contractual terms with the customer specify risk of loss and title transfers upon customer acceptance, revenue is recognized upon receipt of written customer acceptance, provided that all other recognition criteria have been met.

The Company warrants its products against defects in manufacturing. Upon recognition of product revenue, a liability is recorded for anticipated warranty costs. On occasion, customers request a warranty period longer than the Company's standard warranty. In those instances, where extended warranty services are separately quoted to the customer, the associated revenue is deferred and recognized as service revenue ratably over the term of the contract. The portion of service contracts and extended warranty services agreements that are uncompleted at the end of any reporting period are included in deferred revenue.

The Company sells software that is considered to be an upgrade to a customer's existing systems. These standalone software upgrades are not essential to the tangible product's functionality and are accounted for under software revenue recognition rules which require vendor specific objective evidence (“VSOE”) of fair value to allocate revenue in a multiple element arrangement. Revenue from upgrades is recognized when the upgrades are delivered to the customer, provided that all other recognition criteria have been met.

Revenue related to spare parts is recognized upon shipment. Revenue related to billable services is recognized as the services are performed. Service contracts may be purchased by the customer during or after the warranty period and revenue is recognized ratably over the service contract period.

Frequently, the Company delivers products and various services in a single transaction. The Company's deliverables consist of tools, installation, upgrades, billable services, spare parts, and service contracts. The Company's typical multi-element arrangements include a sale of one or multiple tools that include installation and standard warranty. Other arrangements consist of a sale of tools bundled with service elements or delivery of different types of services. The Company's tools, upgrades, and spare parts are generally delivered to customers within a period of up to six months from order date. Installation is usually performed soon after delivery of the tool. The portion of revenue associated with installation is deferred based on relative selling price and that revenue is recognized upon completion of the installation. Billable services are billed on a time and materials basis and performed as requested by customers. Under service contract arrangements, services are provided as needed over the fixed arrangement term, which terms can be up to twelve months. The Company does not grant its customers a general right of return or any refund terms and imposes a penalty on orders cancelled prior to the scheduled shipment date.

The Company regularly evaluates its revenue arrangements to identify deliverables and to determine whether these deliverables are separable into multiple units of accounting. The Company allocates the arrangement consideration among the deliverables based on relative selling prices. The Company has established VSOE for some of its products and services when a substantial majority of selling prices falls within a narrow range when sold separately. For deliverables with no established VSOE, the Company uses best estimate of selling price to determine standalone selling price for such deliverable. The Company does not use third party evidence to determine standalone selling price since this information is not widely available in the market as the Company's products contain a significant element of proprietary technology and the solutions offered differ substantially from competitors. The Company has established a process for developing estimated selling prices, which incorporates historical selling prices, the effect of market conditions, gross margin objectives, pricing practices, as well as entity-specific factors. The Company monitors and evaluates estimated selling price on a regular basis to ensure that changes in circumstances are accounted for in a timely manner.

When certain elements in multiple-element arrangements are not delivered or accepted at the end of a reporting period, the relative selling prices of undelivered elements are deferred until these elements are delivered and/or accepted. If deliverables cannot be accounted for as separate units of accounting, the entire arrangement is accounted for as a single unit of accounting and revenue is deferred until all elements are delivered and all revenue recognition requirements are met.

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Note 2. Recent Accounting Pronouncements

In August 2016, the Financial Accounting Standards Board (the "FASB") issued an accounting standard which addresses eight specific cash flow classification issues. This update is effective for public companies for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. Early adoption is permitted, including in an interim period. If early adopted in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period, and all the amendments must be adopted in the same period. The standard is to be applied through a retrospective transition method to each period presented. If it is impracticable to apply retrospectively for some of the issues, the amendments for those issues would be applied prospectively as of the earliest date practicable. The Company is currently evaluating the impact of adopting this update on its consolidated statements of cash flows.

In June 2016, the FASB issued an accounting standard which requires measurement and timely recognition of expected credit losses for financial assets. The update is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted as of the fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The standard is to be applied through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The Company is currently evaluating the effect of this update on its consolidated financial statements.

In March 2016, the FASB issued an accounting standards update that simplifies several aspects of the accounting for share-based payment award transactions, including income tax consequences, classification of awards as equity or liability, and classification on the statement of cash flows. The standard is effective for public companies for annual reporting periods beginning after December 16, 2016, and interim periods within those annual periods. Early adoption is permitted. The Company is currently evaluating the timing and effects of the adoption of this standard on its consolidated financial statements.

In February 2016, the FASB issued an accounting standards update which requires lessees to record a right-of-use asset and a corresponding lease liability on the balance sheet (with the exception of short-term leases). For lessees, leases will continue to be classified as either operating or financing in the income statement. The standard is effective for public companies for annual reporting periods beginning after December 15, 2018, including interim periods within those fiscal years. This standard is required to be applied with a modified retrospective transition approach. Early adoption is permitted. The Company is currently evaluating the effect of this standard on its Consolidated Financial Statements and related disclosures.

In May 2014, the FASB issued an accounting standards update 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. This guidance clarifies the principles of revenue recognition to improve operability and understandability of the guidance. The standard will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. In July 2015, the FASB deferred for one year the effective date of the revenue standard update, but early adoption will be permitted. The standard will be effective for the Company on January 1, 2018. The standard permits the use of either the retrospective or cumulative effect transition method. The Company has not yet selected a transition method and is currently evaluating the timing and effects of the adoption of this standard and related updates on its consolidated financial statements and related disclosures.

Note 3. Fair Value Measurements and Disclosures

The Company determines the fair values of its financial instruments based on the fair value hierarchy established in FASB Accounting Standards Codification ("ASC") 820, Fair Value Measurement, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The classification of a financial asset or liability within the hierarchy is based upon the lowest level input that is significant to the fair value measurement. The fair value hierarchy prioritizes the inputs into the following three levels that may be used to measure fair value:

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

Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3 — Unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Such unobservable inputs include an estimated discount rate used in the Company's discounted present value analysis of future cash flows, which reflects the Company's estimate of debt with similar terms in the current credit markets. As there is currently minimal activity in such markets, the actual rate could be materially different.

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Fair value is defined as the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The standard assumes that the transaction to sell the asset or transfer the liability occurs in the principal or most advantageous market for the asset or liability and establishes that the fair value of an asset or liability shall be determined based on the assumptions that market participants would use in pricing the asset or liability.

The following tables present the Company's assets and liabilities measured at estimated fair value on a recurring basis, excluding accrued interest components, categorized in accordance with the fair value hierarchy (in thousands), as of the following dates:

	September 24, 2016 Fair Value Measurements Using Input Types				December 26, 2015 Fair Value Measurements Using Input Types			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Cash equivalents:								
Money market funds	$840	$—	$—	$840	$590	$—	$—	$590
Commercial paper and corporate debt securities	—	4,244	—	4,244	—	4,568	—	4,568
Total cash equivalents	$840	$4,244	$—	$5,084	$590	$4,568	$—	$5,158
Marketable securities:								
U.S. Treasury securities and U.S. Government agency debt securities	—	21,256	—	21,256	4,401	20,164	—	24,565
Certificates of deposits	—	16,008	—	16,008	—	—	—	—
Commercial paper	—	23,848	—	23,848	—	1,884	—	1,884
Municipal securities and corporate debt securities	—	12,526	—	12,526	—	18,482	—	18,482
Asset-backed Securities	—	7,468	—	7,468	—	—	—	—
Total marketable securities	$—	$81,106	$—	$81,106	$4,401	$40,530	$—	$44,931
Total(1)	$840	$85,350	$—	$86,190	$4,991	$45,098	$—	$50,089
Liabilities:								
Contingent consideration payable	$—	$—	$1,333	$1,333	$—	$—	$1,490	$1,490

(1) Excludes $32.3 million and $33.0 million held in operating accounts as of September 24, 2016 and December 26, 2015, respectively.

The fair values of the marketable securities that are classified as Level 1 in the table above were derived from quoted market prices for identical assets or liabilities in active markets that the Company has the ability to access. The fair value of marketable securities that are classified as Level 2 in the table above were derived from non-binding market consensus prices that were corroborated by observable market data, quoted market prices for similar instruments, or pricing models, such as discounted cash flow techniques with all significant inputs derived from or corroborated by observable market data. There were no transfers of instruments between Level 1, Level 2 and Level 3 during the financial periods presented.

Changes in Level 3 liabilities	(in thousands)
Fair value at December 26, 2015	$ 1,490
Payments made to Zygo Corporation	(315)
Change in fair value included in earnings	158
Fair value at September 24, 2016	$ 1,333

As of September 24, 2016, the Company had liabilities of $1.3 million resulting from the acquisition of certain assets from Zygo Corporation, a wholly-owned subsidiary of AMETEK, Inc. (“Zygo”), which are measured at fair value on a recurring basis, and changes in fair value recorded in other income (expense), net. Of the $1.3 million of Zygo liabilities at September 24, 2016, $0.8 million was a current liability and $0.5 million was a long-term liability. As of December 26, 2015, the liabilities totaled $1.5 million

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

of which $0.9 million was a current liability and $0.6 million was a long-term liability. The fair values of these liabilities were determined using Level 3 inputs applying a discounted cash flow model incorporating assumptions that market participants would use in their estimates of fair value. Some of these assumptions included estimates for discount rate, and timing and the amount of cash flows.

Derivatives

The Company uses foreign currency forward contracts to mitigate variability in gains and losses generated from the re-measurement of certain monetary assets and liabilities denominated in foreign currencies. These derivatives are carried at fair value with changes recorded in other income (expense), net in the consolidated statements of operations. Changes in the fair value of these derivatives are largely offset by re-measurement of the underlying assets and liabilities. The derivatives have maturities of approximately 30 days.

The settlement of forward foreign currency contracts included in the three months ended September 24, 2016 and September 26, 2015 was a gain of $0.1 million and a loss of $0.3 million, respectively. The loss on settlement of forward foreign currency contracts included in the nine months ended September 24, 2016 and September 26, 2015 was $1.2 million and $0.3 million respectively. These are included in other income (expense), net, in the consolidated statements of operations.

The following table summarizes the Company's outstanding derivative instruments on a gross basis as of September 24, 2016:

	Notional Principal (in millions)
Undesignated Hedges:	
Forward Foreign Currency Contracts	$ 15.9

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Note 4. Cash and Investments

The following tables present cash, cash equivalents, and available-for-sale investments as of the following dates (in thousands):

September 24, 2016	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Market Value
Cash	$32,337	$ —	$ —	32,337
Cash equivalents:				
Money market funds	840	—	—	840
Commercial paper and corporate debt securities	4,245	—	(1)	4,244
Marketable securities:				
U.S. Treasury securities	6,935	9	—	6,944
U.S. Government agency securities	14,301	11	—	14,312
Certificate of deposits	15,997	11	—	16,008
Commercial paper	23,845	3	—	23,848
Municipal securities	765	—	—	765
Corporate debt securities	11,762	—	(1)	11,761
Asset-backed securities	7,470	—	(2)	7,468
Total cash, cash equivalents, and marketable securities	$118,497	$ 34	$ (4)	$118,527

December 26, 2015	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Market Value
Cash	$32,996	$ —	$ —	$32,996
Cash equivalents:				
Money market funds	590	—	—	590
Commercial paper and corporate debt securities	4,568	—	—	4,568
Marketable securities:				
U.S. Treasury securities	4,411	—	(10)	4,401
U.S. Government agency securities	20,193	1	(29)	20,165
Commercial paper	1,884	—	—	1,884

Municipal securities	3,747	1	(3)	3,745
Corporate debt securities	14,759	—	(23)	14,736
Total cash, cash equivalents, and marketable securities	$83,148	$ 2	$ (65)	$83,085

Available-for-sale marketable securities, readily convertible to cash, with maturity dates of 90 days or less are classified as cash equivalents, while those with maturity dates greater than 90 days are classified as marketable securities within short-term assets. All marketable securities as of September 24, 2016 and December 26, 2015, were available-for-sale and reported at fair value based on the estimated or quoted market prices as of the balance sheet date.

Realized gains and losses on sale of securities are recorded in other income, net, in the Company's statement of operations. Net realized gains and losses for three and nine months ended September 24, 2016 and September 26, 2015 were not material.

Unrealized gains or losses, net of tax effect, are recorded in accumulated other comprehensive income (loss) within stockholders' equity. Both the gross unrealized gains and gross unrealized losses for the three and nine months ended September 24, 2016 and September 26, 2015 were insignificant and no marketable securities had other than temporary impairment.

All marketable securities as of September 24, 2016 and December 26, 2015, had maturity dates of less than two years.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Note 5. Accounts Receivable

The Company maintains arrangements under which eligible accounts receivable in Japan are sold without recourse to unrelated third-party financial institutions. These receivables were not included in the consolidated balance sheets as the criteria for sale treatment had been met. The Company pays administrative fees as well as interest ranging from 0.76% to 1.68% based on the anticipated length of time between the date the sale is consummated and the expected collection date of the receivables sold. The Company sold $10.1 million and $4.3 million of receivables during the three months ended September 24, 2016 and September 26, 2015, respectively and $29.6 million and $7.3 million of receivables during the nine months ended September 24, 2016 and September 26, 2015, respectively. There were no material gains or losses on the sale of such receivables. There were no amounts due from such third party financial institutions at September 24, 2016 and December 26, 2015.

Note 6. Financial Statement Components

The following tables provide details of selected financial statement components as of the following dates (in thousands):

	At September 24, 2016	December 26, 2015
Inventories:		
Raw materials and sub-assemblies	$21,953	$26,784
Work in process	9,508	12,862
Finished goods	7,799	8,103
Inventories	39,260	47,749
Inventories-delivered systems	4,416	2,856
Total inventories	$43,676	$50,605
Property, plant and equipment, net:(1)		
Land	$15,570	$15,569
Building and improvements	20,511	20,158
Machinery and equipment	36,109	32,995
Furniture and fixtures	2,357	2,266
Software	9,007	8,245
Capital in progress	2,091	1,328
Total property, plant and equipment, gross	85,645	80,561
Accumulated depreciation and amortization	(41,321)	(36,068)

Total property, plant and equipment, net	$44,324	$44,493

(1) Total depreciation and amortization expense was $1.7 million and $1.8 million for the three months ended September 24, 2016 and September 26, 2015, respectively and $5.1 million and $5.2 million for the nine months ended September 24, 2016 and September 26, 2015, respectively.

Other Current Liabilities:		
Accrued warranty	$4,185	$4,504
Accrued restructuring	—	256
Accrued professional services	492	481
Accrued royalties	1,029	437
Fair value of current portion of contingent payments to Zygo Corporation related to acquisition	814	945
Other	2,110	2,255
Total other current liabilities	$8,630	$8,878

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Components of Accumulated Other Comprehensive Income (Loss)

	Years Ended Foreign Currency Translations	Defined Benefit Pension Plans	Unrealized Income (Loss) on Investment	Accumulated Other Comprehensive Income
Balance as of December 26, 2015	$(4,948)	$ (210)	$ (44)	$ (5,202)
Current period change	2,018	—	73	2,091
Balance as of September 24, 2016	$(2,930)	$ (210)	$ 29	$ (3,111)

The items above, except for unrealized income (loss) on investment, did not impact the Company's income tax provision. The amounts reclassified from each component of accumulated other comprehensive income into income statement line items were insignificant.

Note 7. Goodwill and Intangible Assets

The following table summarizes the activity in the Company's goodwill during the nine months ended September 24, 2016:

	(in thousands)
Balance as of December 26, 2015	$ 9,415
Foreign currency movements	250
Balance as of September 24, 2016	$ 9,665

Finite-lived intangible assets are recorded at cost, less accumulated amortization. Finite-lived intangible assets as of September 24, 2016 and December 26, 2015 consisted of the following (in thousands):

	September 24, 2016		
	Adjusted cost	Accumulated amortization	Net carrying amount
Developed technology	$16,336	$ (15,867)	$ 469
Customer relationships	9,387	(9,387)	—
Brand names	1,927	(1,927)	—
Patented technology	2,252	(2,169)	83
Trademark	80	(80)	—
Total	$29,982	$ (29,430)	$ 552

	December 26, 2015		
	Adjusted cost	Accumulated amortization	Net carrying amount
Developed technology	$16,098	$ (14,387)	$ 1,711
Customer relationships	9,364	(9,364)	—
Brand names	1,927	(1,903)	24
Patented technology	2,252	(2,120)	132
Trademark	80	(80)	—
Total	$29,721	$ (27,854)	$ 1,867

The amortization of finite-lived intangibles is computed using the straight-line method. Estimated lives of finite-lived intangibles range from two to ten years. The total amortization expense for the three months ended September 24, 2016 and September 26, 2015 was $0.4 million and $0.5 million, respectively. Total amortization expense for the nine months ended September 24, 2016 and September 26, 2015 was $1.3 million and $1.6 million, respectively.

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

There were no impairment charges related to intangible assets recorded during the three and nine months ended September 24, 2016 and September 26, 2015.

The estimated future amortization expense of finite intangible assets as of September 24, 2016 is as follows (in thousands):

Fiscal Years	Amounts
2016 (remaining three months)	$ 140
2017	206
2018	140
2019	66
Thereafter	—
Total future amortization expense	$ 552

Note 8. Warranties

The Company sells the majority of its products with a 12 months repair or replacement warranty from the date of acceptance or shipment date. The Company provides an accrual for estimated future warranty costs based upon the historical relationship of warranty costs to the cost of products sold. The estimated future warranty obligations related to product sales are recorded in the period in which the related revenue is recognized. The estimated future warranty obligations are affected by the warranty periods, sales volumes, product failure rates, material usage, and labor and replacement costs incurred in correcting a product failure. If actual product failure rates, material usage, labor or replacement costs were to differ from the Company's estimates, revisions to the estimated warranty obligations would be required. For new product introductions where limited or no historical information exists, the Company may use warranty information from other previous product introductions to guide it in estimating its warranty accrual.

Components of the warranty accrual, which were included in the accompanying condensed consolidated balance sheets with other current liabilities, were as follows (in thousands):

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Balance as of beginning of period	$4,556	$ 3,792	$4,504	$ 2,953
Accruals for warranties issued during period	1,100	2,288	3,529	6,240
Settlements during the period	(1,471)	(1,789)	(3,848)	(4,902)
Balance as of end of period	$4,185	$ 4,291	$4,185	$ 4,291

Note. 9. Restructuring

There were no restructuring charges recorded during the nine months ended September 24, 2016.

The Company recorded a restructuring charge of approximately $0.1 million during the nine months ended September 26, 2015 as a result of its decision to consolidate and reorganize certain of its operations, primarily in the U.K. The Company completed this restructuring plan in March 2015. Other related costs will be recognized as incurred.

As of September 24, 2016, the components of the Company’s restructuring reserves were included in other current liabilities and were as follows (in thousands):

	Employee severance and benefits	Facility termination costs	Other	Total
Balance as of December 26, 2015	$ —	$ 249	$ 7	$ 256
Charges	—	—	—	—
Cash Payments	—	(249)	(7)	(256)
Balance as of September 24, 2016	$ —	$ —	$ —	$ —

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NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

	Employee severance and benefits	Facility termination costs	Other	Total
Balance as of December 27, 2014	$ 383	$ 583	$ 31	$ 997
Charges	45	—	11	56
Cash Payments	(428)	(249)	(35)	(712)
Balance as of September 26, 2015	$ —	$ 334	$ 7	$ 341

Note 10. Line of Credit and Debt Obligations

Line of Credit - The Company's revolving line of credit facility of up to $12.0 million expired on May 30, 2016 and was not renewed.

Note 11. Commitments and Contingencies

Intellectual Property Indemnification Obligations – The Company will, from time to time, in the normal course of business, agree to indemnify certain customers, vendors or others against third party claims that the Company's products, when used for their intended purpose(s), or the Company's intellectual property, infringe the intellectual property rights of such third parties or other claims made against parties with whom it enters into contractual relationships. It is not possible to determine the maximum potential amount of liability under these indemnification obligations due to the limited history of prior indemnification claims and the unique facts and circumstances that are likely to be involved in each particular claim. Historically, the Company has not made payments under these obligations and believes that the estimated fair value of these agreements is immaterial. Accordingly, no liabilities have been recorded for these obligations in the accompanying condensed consolidated balance sheets as of September 24, 2016 and December 26, 2015.

Note 12. Net Income Per Share

The Company presents both basic and diluted net income per share on the face of its condensed consolidated statements of operations. Basic net income per share excludes the effect of potentially dilutive shares and is computed by dividing net income by the weighted-average number of shares of common stock outstanding for the period. Diluted net income per share is computed using the weighted-average number of shares of common stock outstanding for the period plus the effect of all dilutive securities representing potential shares of common stock outstanding during the period.

A reconciliation of the share denominator of the basic and diluted net income per share computations for three and nine months ended September 24, 2016 and September 26, 2015 is as follows (in thousands):

	Three Month Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Weighted average common shares outstanding used in basic net income (loss) per share calculation	24,826	24,145	24,550	24,010
Potential dilutive common stock equivalents, using treasury stock method	456	207	429	337
Weighted average shares used in diluted net income (loss) per share calculation	25,282	24,352	24,979	24,347

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NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Note 13. Stockholders' Equity and Stock-Based Compensation

Options and Employee Stock Purchase Plan ("ESPP") Awards

The fair value of each option and ESPP award is estimated on the grant date using the Black-Scholes valuation model and the assumptions noted in the following table. The expected lives of options granted were calculated using the simplified method allowed by the Staff Accounting Bulletin No. 107, Share-Based Payment. The risk-free rates were based on the U.S Treasury rates in effect during the corresponding period of grant. The expected volatility was based on the historical volatility of the Company's stock price. The dividend yield reflects that the Company has not paid any cash dividends since inception and does not intend to pay any cash dividends in the foreseeable future.

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Employee Stock Purchase Plan:				
Expected life	0.5 years	0.5 years	0.5 years	0.5 years
Volatility	38.2%	36.7%	38.7%	36.9%
Risk free interest rate	0.37%	0.13%	0.44%	0.12%
Dividends	—	—	—	—

No stock options were awarded during the nine months ended September 24, 2016 and September 26, 2015, respectively.

A summary of activity of stock options during the nine months ended September 24, 2016 is as follows:

	Number of Shares Outstanding (Options)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in Thousands)
Options				
Outstanding at December 26, 2015	1,051,867	$ 14.60	2.46	$ 1,916

Exercised	(352,996)	$ 13.33		
Cancelled	(166,849)	$ 15.79		
Outstanding at September 24, 2016	532,022	$ 15.06	2.32	$ 3,849
Exercisable at September 24, 2016	480,462	$ 14.91	2.15	$ 3,546

The aggregate intrinsic value in the above table represents the total pretax intrinsic value, based on the Company's closing stock price of $22.29 as of September 23,2016, the last trading day of the quarter, which would have been received by the option holders had all option holders exercised their options as of that date. The total intrinsic value of options exercised during the three months ended September 24, 2016 and September 26, 2015 was $0.5 million and $0.1 million, respectively, and during the nine months ended September 24, 2016 and September 26, 2015 was $1.9 and $1.4 million, respectively.

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Restricted Stock Units (“RSUs”)

Time-based RSUs are valued using the market value of the Company’s common stock on the date of grant, assuming no expectation of dividends paid.

A summary of activity for RSUs is as follows:

Summary of activity for RSUs	Number of RSUs	Weighted Average Fair Value
Outstanding RSUs as of December 26, 2015	713,243	$ 15.99
Granted	455,907	$ 17.15
Released	(286,260)	$ 16.11
Cancelled	(45,852)	$ 16.00
Outstanding RSUs as of September 24, 2016	837,038	$ 15.58

Market-Based Performance Stock Units (“PSUs”)

In addition to granting RSUs that vest on the passage of time only, the Company granted PSUs to an executive. The PSUs will vest in three equal tranches over one, two and three years based on the relative performance of the Company’s stock during those periods, compared to a peer group over the same period. If target stock price performance is achieved, 66.7% of the shares of the Company’s common stock subject to the PSUs will vest, and up to a maximum of 100% of the shares subject to the PSUs will vest if the maximum stock price performance is achieved for each tranche.

A summary of activity for PSUs is as follows:

Summary of activity for PSUs	Number of PSUs	Weighted Average Fair Value
Outstanding PSUs as of December 26, 2015	60,000	$ 18.35
Granted	67,500	$ 8.52
Released	(13,333)	$ 18.04
Cancelled	(6,667)	$ 18.04
Outstanding PSUs as of September 24, 2016	107,500	$ 12.24

The preceding table reflects the maximum awards that can be achieved upon full vesting.

Valuation of PSUs

On the date of grant, the Company estimated the fair value of PSUs using a Monte Carlo simulation model. The assumptions for the valuation of PSUs are summarized as follows:

	2016 Award	2015 Award
Grant Date Fair Value Per Share	$ 8.52	$ 18.35
Weighted-average assumptions/inputs:		
Expected Dividend	—	—
Range of risk-free interest rates	0.92%	0.25%-1.1%
Range of expected volatilities for peer group	22%-93%	23%-65%

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Stock-based Compensation Expense

Stock-based compensation expense for all share-based payment awards made to the Company’s employees and directors pursuant to the employee stock option and employee stock purchase plans by function were as follows (in thousands):

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Cost of products	$116	$ 96	$273	$ 229
Cost of service	138	104	355	195
Research and development	387	300	985	796
Selling	537	511	1,492	1,403
General and administrative	822	671	2,327	2,041
Total stock-based compensation expense related to employee stock options and employee stock purchases	$2,000	$ 1,682	$5,432	$ 4,664

Note 14. Income Taxes

The Company accounts for income taxes under the provisions of ASC 740, Accounting for Income Taxes. The Company adjusts its effective tax rate each quarter to be consistent with the estimated annual effective tax rate. The Company also records the tax effect of unusual or infrequently occurring discrete items, including changes in judgment about valuation allowances and effects of changes in tax laws or tax rates, in the interim period in which they occur. The Company's effective tax rate reflects the impact of a portion of its earnings being taxed in foreign jurisdictions as well as a valuation allowance maintained on certain deferred tax assets.

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

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Provision for income taxes	$1,332	$ 713	$2,568	$ 1,847

The Company recorded a tax provision of $1.3 million and $0.7 million for the three months ended September 24, 2016 and September 26, 2015, respectively, and $2.6 million and $1.8 million for the nine months ended September 24, 2016 and September 26, 2015, respectively. The increase in the tax provision for 2016 from 2015 was primarily related to an increase in the Company's earnings for the three and nine months ended September 24, 2016.

As of September 24, 2016, the Company continues to maintain a valuation allowance against its U.S. and certain foreign deferred tax assets as a result of uncertainties regarding the realization of the asset due to cumulative losses and uncertainty of future taxable income. The Company will continue to assess the realizability of the deferred tax assets in each of the applicable jurisdictions and maintain the valuation allowances until sufficient positive evidence exists to support a reversal. In the event the Company determines that the deferred tax assets are realizable, an adjustment to the valuation allowance will be reflected in the tax provision for the period such determination is made.

The Company is subject to taxation in the U.S. and various states including California, and foreign jurisdictions including Korea, Japan, Taiwan, and China. Due to tax attribute carry-forwards, the Company is subject to examination for tax years 2003 forward for U.S. tax purposes. The Company is also subject to examination in various states for tax years 2002 forward. The Company is subject to examination for tax years 2007 forward for various foreign jurisdictions.

The Company accrues interest and penalties related to unrecognized tax benefits in its provision for income taxes. The total amount of penalties and interest were not material as of September 24, 2016 and September 26, 2015. During the next twelve months, the Company anticipates increases in its unrecognized tax benefits of approximately $0.1 million.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(Unaudited)

Note 15. Segment, Geographic, Product and Significant Customer Information

The Company has one operating segment, which is the sale, design, manufacture, marketing and support of optical critical dimension and thin film systems. The following tables summarize total net revenues and long-lived assets (excluding intangible assets) attributed to significant countries (in thousands):

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Total net revenues [1]:				
China	$ 15,710	$ 6,731	$ 35,226	$ 12,357
South Korea	11,765	6,794	24,669	28,807
United States	8,211	7,985	24,306	32,115
Singapore	7,364	2,988	33,883	15,875
Taiwan	6,334	11,331	16,962	35,173
Japan	5,078	7,778	18,645	15,919
Other	4,252	2,071	8,279	4,436
Total net revenues	$ 58,714	$ 45,678	$ 161,970	$ 144,682

	September 24, 2016	December 26, 2015
Long-lived tangible assets:		
United States	$ 42,603	$ 42,581
International	1,721	1,912
Total long-lived tangible assets	$ 44,324	$ 44,493

The following customers accounted for 10% or more of total accounts receivable, net:

	At September 24, 2016	December 26, 2015
Taiwan Semiconductor Manufacturing Company Limited	20.0 %	25.6 %
Micron	15.3 %	***
Intel	13.6 %	***
United Semiconductor (Xiamen) Co., Ltd.	10.6 %	***
Toshiba Corporation	***	27.1 %

*** The customer accounted for less than 10% of total accounts receivable, net, as of that period end.
The following customers accounted for 10% or more of total net revenues:

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
SK Hynix	18.8 %	15.0 %	14.0 %	13.0 %
Intel Corporation	18.5 %	***	19.4 %	***
Micron	14.6 %	14.0 %	25.2 %	18.0 %
Toshiba Corporation	***	13.0 %	***	***
Taiwan Semiconductor Manufacturing Company Limited	***	17.0 %	***	19.0 %
Samsung Electronics Co. Ltd.	***	***	***	16.0 %

*** The customer accounted for less than 10% of total net revenues during the period.

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q contains forward-looking statements that involve risks and uncertainties. The statements contained in this document that are not purely historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, including, without limitation, statements regarding future periods, financial results, revenues, margins, growth, customers, tax rates, product performance, and the impact of accounting rules on our business and the future implications of our statements regarding goals, strategy, and similar terms. We may identify these statements by the use of words such as "anticipate," "believe," "continue," "could," "estimate," "expect," "may," "might," "project," "will," and other similar expressions. All forward-looking statements included in this document are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements, except as may otherwise be required by law.

Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain risks, uncertainties and changes in circumstances, many of which may be difficult to predict or beyond our control, including those factors referenced in this document, and in Part I, Item 1A, Risk Factors, in our Annual Report on Form 10-K for the fiscal year ended December 26, 2015,filed with the Securities and Exchange Commission ("SEC") on February 24, 2016 (our "Annual Report"). In particular, our results could vary significantly based on: changes in customer and industry spending; rate and extent of changes in product mix; adoption of new products; timing of orders, shipments, and acceptance of products; our ability to secure volume supply agreements; and general economic conditions. In evaluating our business, investors should carefully consider these factors in addition to any other risks and uncertainties set forth elsewhere. The occurrence of the events described in the risk factors of our Annual Report and elsewhere in this report as well as other risks and uncertainties could materially and adversely affect our business, operating results and financial condition. While management believes that the discussion and analysis in this report is adequate for a fair presentation of the information presented, we recommend that you read this discussion and analysis in conjunction with (i) our audited consolidated financial statements and notes thereto for the fiscal year ended December 26, 2015, which were included in our Annual Report, (ii) the section captioned "Risk Factors" in our Annual Report, and (iii) our other filings with the SEC.

We are an innovator in the field of metrology and inspection systems for semiconductor manufacturing and other industries. Our systems are designed to precisely monitor optical critical dimensions and film thickness that are necessary to control the manufacturing process and to identify defects that can affect production yields and performance.

Principal factors that impact our revenue growth include capital expenditures by manufacturers of semiconductors to increase capacity and to enable their development of new technologies, and our ability to improve market share. The increasing complexity of the manufacturing processes for semiconductors is an important factor in the demand for our innovative metrology systems, as are the adoption of optical critical dimension ("OCD") metrology across fabrication processes, immersion lithography and multiple patterning, new types of thin film materials, advanced packaging strategies and wafer backside inspection, and the need for improved process control to drive process efficiencies. Our strategy is to continue to innovate organically as well as to evaluate strategic acquisitions to address business challenges and opportunities.

Our revenues are derived primarily from product sales and system upgrades but are also derived from customer service for the installed base of our products. For the nine months ended September 24, 2016, we derived 84% of our total net revenues from product sales and upgrades, and 16% of our total net revenues from services.

Overview

Together with our subsidiaries, we are a leading provider of advanced, high-performance process control metrology and inspection systems used primarily in the fabrication of integrated circuits, sensors, discrete components, high-brightness LEDs (“HB-LED”), and data storage devices. Our automated and integrated systems address numerous process control applications, including critical dimension and film thickness measurement, device topography, defect inspection, and analysis of various other film properties such as optical, electrical and material characteristics. Our process control solutions are deployed throughout the fabrication process, from front-end-of-line substrate manufacturing, to high-volume production of semiconductors and other devices, to advanced wafer-scale packaging applications. Our systems enable device manufacturers to improve yields, increase productivity and lower their manufacturing costs.

Nanometrics Products

We offer a diverse line of systems to address the broad range of process control requirements of the semiconductor manufacturing industry. In addition, we believe that our engineering expertise and strategic acquisitions enable us to develop and offer advanced process control solutions that, in the future, should address industry advancement and trends.

Automated Systems

Our automated systems primarily consist of fully automated metrology systems that are employed in semiconductor production environments. The Atlas® III, Atlas II+, Atlas II and Atlas XP/Atlas XP+ represent our line of high-performance metrology systems providing optical critical dimension (“OCD”), thin film metrology and wafer stress for transistor and interconnect metrology applications. The OCD technology is supported by our NanoCD® suite of solutions including our NanoDiffract® software and NanoGen™ scalable computing engine that enables visualization, modeling, and analysis of complex structures. The UniFire™ system measures multiple parameters at any given process step in the advanced packaging process flow for critical dimension, overlay, and topography applications as well as added inspection capabilities for both front-end-of-line (“FEOL”) patterned wafer and advanced packaging related applications.

Integrated Systems

Our integrated metrology (“IM”) systems are installed directly onto wafer processing equipment to provide near real-time measurements for improved process control and maximum throughput. Our IM systems are sold directly to end customers. The IMPULSE+ and IMPULSE® systems represent our latest metrology platform for OCD and thin film metrology, and have been successfully qualified on numerous independent Wafer Fabrication Equipment Suppliers’ platforms. Our NanoCD suite of solutions is sold in conjunction with our IMPULSE® systems. Our Trajectory® system provides in-line measurement of layers in thin film thickness and composition in semiconductor applications and is qualified in production with major device makers.

Materials Characterization

Our materials characterization products include systems that are used to monitor the physical, optical, electrical and material characteristics of discrete electronic industry, opto-electronic, HB-LED, solar PV, compound semiconductor, strained silicon and silicon-on-insulator (“SOI”) devices, including composition, crystal structure, layer thickness, dopant concentration, contamination and electron mobility.

Our Imperia™ is a photoluminescence (“PL”) full wafer imaging and mapping system designed for high-volume compound semiconductor metrology applications including power control and photonics applications adding significant inspection and substrate metrology capability to the established PL fleet. The RPMBlue™ is our latest PL mapping system designed specifically for the HB-LED market, and is complemented by the RPMBlue-FS, enabling a breadth of research and development configurability. We sell Fourier-Transform Infrared (“FTIR”) automated and manual systems in the QS2200/3300 and QS1200 respectively. The FTIR systems are spectrometers designed for non-destructive wafer analysis for various applications. The NanoSpec® line, including the NanoSpec II, supports thin film measurement across all applications in both low volume production and research applications.

We are continually working to strengthen our competitive position by developing new technologies and products in our market segment. We have expanded our product offerings to address growing applications within the semiconductor manufacturing and adjacent industries. In pursuit of our goals, we have:

- Introduced new products, applications, and upgrades in every core product line and primary market served;
- Diversified our product line and served markets through acquisitions, such as: the 2006 acquisition of Accent Optical Technologies, Inc., a supplier of overlay and thin film metrology and process control systems; the 2008 acquisition of Tevet Process Control Technologies (“Tevet”), an integrated metrology supplier; the 2009 acquisition of the UniFire™ product line from Zygo Corporation, a wholly owned subsidiary of AMETEK, Inc.; and the 2011 acquisition of Nanda Technologies GmbH, a supplier of high sensitivity, high throughput defect inspection systems;
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Continued development of new measurement and inspection technologies for advanced fabrication processes and packaging.

Important Themes and Significant Trends

The semiconductor equipment industry is characterized by cyclical growth. Changing trends in the semiconductor industry continue to drive the need for metrology as a major component of device manufacturing. These trends include:

- Proliferation of Optical Critical Dimension Metrology across Fabrication Processes. Our customers use photolithographic processes to create patterns on wafers. Critical dimensions must be carefully controlled during this process. In advanced node device definition, additional monitoring of thickness and profile dimensions on these patterned structures at Chemical Mechanical Polishing, Etch, and Thin Film processing steps is driving broader OCD adoption. Our proprietary OCD systems can provide the critical process control of these circuit dimensions that is necessary for successful manufacturing of these state-of-the-art devices. Nanometrics OCD technology is broadly adopted across NAND, DRAM, and logic semiconductor manufacturing processes.
- Development of 3D Transistor Architectures. Our end customers continue to improve device density and performance by scaling FEOL transistor architectures. Many of these designs, including FinFET transistors and 3D-NAND, have buried features and high aspect ratio stacked features that enable improved performance and density. The advanced designs require additional process control to manage the complex shapes and materials properties, driving additional applications for both OCD and our UniFire systems.
- Adoption of New Types of Thin Film Materials. The need for ever increasing device circuit speed coupled with lower power consumption has pushed semiconductor device manufacturers to begin the replacement of traditional aluminum etch back interconnect flows, as well as conventional gate dielectric materials, with new materials and processes that are driving broader adoption of thin film and OCD metrology systems. To achieve greater semiconductor device speed, manufacturers have adopted copper in Logic/IDM and it is now proliferating in next generation DRAM and Flash nodes. Additionally, to achieve improved transistor performance in logic devices and higher cell densities in memory devices, new materials including high dielectric constant (or high-k) gate materials are increasingly being substituted for traditional silicon-oxide gate dielectric materials. High-k materials comprise complex thin films including layers of hafnium oxide and a bi-layer of thin film metals. Our advanced metrology and inspection solutions are required for control of process steps, which are critical to enable the device performance improvements that these new materials allow.
- Adoption of Advanced Packaging Processes. Our customers use photolithography, etching, metallization and wafer thinning to enable next generation advanced packaging solutions for semiconductor devices. These new packaging techniques lead to increased functionality in smaller, less expensive form factors. Advanced packages can be broken down into high density flip chip or bump packages that increase pin density allowing for more complex I/O on advanced CPU parts. Similar or different devices can be stacked at the wafer level using a Through Silicon Via ("TSV") process. The TSV process enables high density small form factor parts, being primarily driven by mobile consumer products (e.g. cellular telephones with integrated CMOS camera sensors). Increasingly advanced packaging technologies are being adopted by our end customers.
- Need for Improved Process Control to Drive Process Efficiencies. Competitive forces influencing semiconductor device manufacturers, such as price-cutting, shorter product life cycles and time to market, place pressure on manufacturers to rapidly achieve production efficiency. Device manufacturers are using our integrated and automated systems throughout the fabrication process to ensure that manufacturing processes scale rapidly, are accurate and can be repeated on a consistent basis.

Critical Accounting Policies

The preparation of our financial statements conforms to accounting principles generally accepted in the United States of America, which requires management to make estimates and judgments in applying our accounting policies that have an important impact on our reported amounts of assets, liabilities, revenue, expenses and related disclosures at the date of our financial statements. On an ongoing basis, management evaluates its estimates including those related to bad debts, inventory valuations, warranty obligations, impairment and income taxes. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from management's estimates.

There were no significant changes in our critical accounting policies during the nine months ended September 24, 2016. Please refer to Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," in our Annual Report for a complete discussion of our critical accounting policies.

Recent Accounting Pronouncements

See Note 2 of the Unaudited Condensed Consolidated Financial Statements for a description of recent accounting pronouncements, including the respective dates of adoption and effects or anticipated effects on our results of operations and financial condition.

Upgrade Revenue and Related Cost

Beginning the first quarter of 2016, revenues associated with upgrade sales are now included under Products Revenues, and the related costs in Cost of Products Revenue. This change was due to the types of upgrades currently being sold, which are primarily system software and hardware performance upgrades to extend the features and functionality of a product. Previously, upgrades consisted of a group of parts and/or software that change the existing configuration of a product. For the three months ended September 26, 2015, $0.8 million related to upgrade sales, and $0.1 million of costs, are in included in Service Revenues and Costs of Service Revenues. For the nine months ended September 26, 2015, $7.6 million related to upgrade sales, and $2.9 million of costs, are in included in Service Revenues and Costs of Service Revenues.

Results of Operations

Net Revenues

Our net revenues comprised the following product lines (in thousands, except percentages):

	Three Months Ended				Nine Months Ended			
	September 24, 2016	September 26, 2015	Change		September 24, 2016	September 26, 2015	Change	
Automated systems	$34,914	$ 20,975	$13,939	66.5%	$90,502	$ 80,808	$9,694	12.0 %
Integrated systems	10,233	11,135	(902)	-8.1 %	37,038	22,036	15,002	68.1 %
Materials characterization systems	4,484	4,304	180	4.2 %	8,750	10,845	(2,095)	-19.3%
Total product revenue	49,631	36,414	13,217	36.3%	136,290	113,689	22,601	19.9 %
Service	9,083	9,264	(181)	-2.0 %	25,680	30,993	(5,313)	-17.1%
Total net revenues	$58,714	$ 45,678	$13,036	28.5%	$161,970	$ 144,682	$17,288	11.9 %

For the three months ended September 24, 2016, total net revenues increased by $13.0 million relative to the comparable 2015 period. For 2016, upgrade sales are included in Product Revenues. For the three months ended September 26, 2015, Product Revenues do not include $0.8 million related to upgrade sales, which are included in Service Revenues. Had upgrade sales been included in Product Revenues in 2015, Product Revenues would have increased by $12.5 million. The increase was primarily attributable to increase in sales of Automated Systems (principally the Atlas® line) due primarily to a higher revenue from our customers in the Foundry and DRAM markets and an increase in sales of Materials Characterization, partially offset by lower Integrated Systems sales. Capital spending by our customers is dependent on the timing of new semiconductor fabrication plants, capacity expansion within existing plants, and the adoption of new technology for current and future manufacturing needs. Future results will vary significantly based on changes in any of these factors.

For the nine months ended September 24, 2016, as compared to the same period in 2015, revenues increased by $17.3 million. For 2016, upgrade sales are included in Product Revenues. For the nine months ended September 26, 2015, Product Revenues do not include $7.6 million related to upgrade sales, which are included in Service Revenues. Had upgrade sales been included in Product Revenues in 2015, Product Revenues would have increased by $15.0 million. The increase was primarily attributable to increase in Integrated Systems sales and Automated Systems sales, partially offset by decrease in sales of our Materials Characterization systems.

With a significant portion of the world's semiconductor manufacturing capacity located in Asia, a substantial portion of our revenues continue to be generated in that region. Although sales to customers within individual countries of that region will vary from time to time, we expect that a substantial portion of our revenues will continue to be generated in Asia.

Gross margin

Our gross margin breakdown was as follows:

	Three Months Ended		Nine Months Ended	
	September 24, 2016	September 26, 2015	September 24, 2016	September 26, 2015
Products	53.2 %	45.9 %	53.1 %	46.6 %
Service	44.2 %	59.5 %	42.7 %	51.1 %

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The calculation of product gross margin includes both cost of products and in 2016, related upgrades, and amortization of intangibles.

The gross margin on product revenue increased to 53.2% in the three months ended September 24, 2016 from 45.9% in the three months ended September 26, 2015, reflecting an increase of 7.3 percentage points from the comparable 2015 period. Had upgrade sales and related cost been included in Product Revenues and Cost of Product Revenues, Product Gross Margin for the three months ended September 26, 2015 would have been 46.9%. The increase in 2016 of 6.3 percentage points over this amount was due to a lower installation and warranty costs and a change in product mix to higher margin products and upgrades during the three months ended September 24, 2016. The gross margin on our services business decreased to 44.2% in the three months ended September 24, 2016 from 59.5% in the three months ended September 26, 2015, reflecting a decrease of 15.3 percentage points. Had upgrade sales and related cost been excluded from Service Revenues and Cost of Service Revenues, Service Gross Margin for the three months ended September 26, 2015, would have been 56.4%. The decrease in 2016 over this amount was due to decrease in the service revenues, a lower mix of labor service, and a lower level of labor utilizations.

The gross margin on product revenue increased to 53.1% in the nine months ended September 24, 2016 from 46.6% in the nine months ended September 26, 2015, reflecting an increase of 6.5 percentage points from the comparable 2015 period. Had upgrade sales and related cost been included in Product Revenues and Cost of Product Revenues, Product Gross Margin for the nine months ended September 26, 2015 would have been 47.6%. The increase in 2016 of 5.5 percentage points over this amount was due to a change in product mix to higher margin products and upgrades during the nine months ended September 24, 2016. The gross margin on our services business decreased to 42.7% in the nine months ended September 24, 2016 from 51.1% in the nine months ended September 26, 2015, reflecting a decrease of 8.4 percentage points. Had upgrade sales and related cost been excluded from Service Revenues and Cost of Service Revenues, Service Gross Margin for the nine months ended September 26, 2015, would have been 47.6%. The decrease in 2016 over this amount was due to decrease in the service revenues, a lower mix of labor service, and higher service contract part costs.

Operating expenses

Our operating expenses comprised the following categories (in thousands, except percentages):

	Three Months Ended				Nine Months Ended			
	September 24, 2016	September 26, 2015	Change		September 24, 2016	September 26, 2015	Change	
Research and Development	$7,868	$ 8,579	$(711)	-8.3 %	$23,447	$ 24,896	$(1,449)	-5.8 %
Selling	7,495	6,760	735	10.9 %	22,567	20,905	1,662	8.0 %
General and administrative	5,975	5,590	385	6.9 %	17,150	16,901	249	1.5 %
Amortization of intangible assets	—	26	(26)	-100.0 %	24	89	(65)	-73.0 %
Restructuring charge	—	—	—	0.0 %	—	56	(56)	-100.0 %

Total operating expenses	$21,338	$ 20,955	$383	1.8	%	$63,188	$ 62,847	$341	0.5 %

Research and development

Investments in research and development personnel and associated projects are part of our strategy to ensure our products remain competitive and meet customers' needs. For the three months ended September 24, 2016, research and development costs decreased by $0.7 million or 8.3%, compared to the same period in 2015. The decrease related primarily to lower spending for material expenses and related costs associated with research and development investments for our next generation systems.

For the nine months ended September 24, 2016, research and development costs decreased by $1.4 million or 5.8%, compared to the same period in 2015. The decrease related primarily to lower spending for non-recurring engineered program expenses and related material expenses, partially offset by an increase in variable compensation costs.

Selling

Selling expenses increased by $0.7 million or 10.9% and $1.7 million or 8.0%, in the three and nine months ended September 24, 2016, respectively, compared to the same periods in 2015. The increases were due to a decrease in utilization of our sales application personnel, which is included in cost of net revenues and higher variable compensation costs.

General and administrative

General and administrative expenses increased by $0.4 million or 6.9% in the three months ended September 24, 2016 compared to the three months ended September 26, 2015. The increase was primarily due to higher variable compensation costs, and the timing of certain legal expenditures.

General and administrative expenses were higher by $0.2 million or 1.5% in the nine months ended September 24, 2016 compared to the nine months ended September 26, 2015 primarily due to higher variable compensation costs, partially offset by a reduction in information technology infrastructure related costs.

Amortization of intangible assets

Amortization of intangible assets included in operating expenses in the three and nine months ended September 24, 2016 compared to the three and nine months ended September 26, 2015 decreased as a result of the reduction in amortization due to intangible assets that became fully amortized.

Restructuring charge.

No restructuring charges were recorded during the three and nine months ended September 24, 2016.

We recorded a restructuring charge of $0.1 million in the nine months ended September 26, 2015 related to our efforts to improve operating efficiencies. We completed the restructuring plan in March 2015.

Other income, net.

Our other income, net, consisted of the following items (in thousands, except percentages):

	Three Months Ended				Nine Months Ended			
	September 24, 2016	September 26, 2015	Change		September 24, 2016	September 26, 2015	Change	
Interest Income	$ 12	$ 7	$ 5	71.4 %	$ 33	$ 63	$ (30)	-47.6 %
Interest Expense	(92)	(86)	(6)	7.0 %	(276)	(252)	(24)	9.5 %
Other income (expense)	229	346	(117)	-33.8 %	60	740	(680)	-91.9 %
Total other income (expense), net	$ 149	$ 267	$ (118)	-44.2 %	$ (183)	$ 551	$ (734)	-133.2 %

Other income decreased by $0.2 million in the three months ended September 24, 2016, and other expense increased by $0.8 million in the nine months ended September 24, 2016 relative to the comparable 2015 period. These changes were principally due to the revaluation of inter-company balances based on fluctuations in foreign exchange rates relative to the U.S. dollar, and hedging gains and losses.

Provision for income taxes.

We recorded a tax provision of $1.3 million and $0.7 million in three months ended September 24, 2016 and September 26, 2015, respectively, and $2.6 million and $1.8 million in nine months ended September 24, 2016 and September 26, 2015, respectively. The increase in the tax provision for 2016 from 2015 was primarily related to an increase in our earnings for the three and nine months ended September 24, 2016.

Our provision for income taxes for the three months ended September 24, 2016 of $1.3 million reflects an effective tax rate of 14.5%. Our provision for income taxes for the nine months ended September 24, 2016 of $2.6 million reflects an effective tax rate of 12.9%. The tax rate for both the three and nine months ended September 24, 2016 differs from the Federal statutory rate of 35.0% primarily due to all our foreign income being subject to tax at lower rates and a tax benefit associated with a change in our valuation allowance as we continue to utilize our deferred tax assets.

As of September 24, 2016, we continue to maintain a valuation allowance against our U.S. and certain foreign deferred tax assets as a result of uncertainties regarding the realization of the asset due to cumulative losses and uncertainty of future taxable income. We will continue to assess the realizability of the deferred tax assets in each of the applicable jurisdictions and maintain the valuation allowances until sufficient positive evidence exists to support a reversal. In the event we determine that the deferred tax assets are realizable, an adjustment to the valuation allowance will be reflected in the tax provision for the period such determination is made. It is reasonably possible that within the next 12 months that positive evidence will be sufficient to release a material amount of our valuation allowance. Release of the valuation allowance would result in the recognition of certain deferred tax assets and a decrease to income tax expense for the period the release is recorded. The exact timing and amount of the valuation allowance release are subject to change on the basis of the level of profitability that we are able to actually achieve. We will continue to evaluate the release of the valuation allowance on a quarterly basis.

We are subject to taxation in the U.S. and various states including California, and foreign jurisdictions including Korea, Japan, Taiwan, and China. Due to tax attribute carry-forwards, we are subject to examination for tax years 2003 forward for U.S. tax purposes. We are also subject to examination in various states for tax years 2002 forward. We are subject to examination for tax years 2007 forward for various foreign jurisdictions.

We accrue interest and penalties related to unrecognized tax benefits in our provision for income taxes. The total amount of penalties and interest were not material as of September 24, 2016 and September 26, 2015. During the next twelve months, we anticipate increases in our unrecognized tax benefits of approximately $0.1 million.

Liquidity and Capital Resources

The following tables present selected financial information and statistics as of September 24, 2016 and December 26, 2015 and for the nine months ended September 24, 2016 and September 26, 2015 (in millions):

	As of September 24, 2016	December 26, 2015
Cash, cash equivalents and marketable securities	$118.5	$ 83.1
Working capital	$163.3	$ 132.9

	Nine Months Ended September 24, 2016	September 26, 2015
Cash provided by operating activities	$34.1	$ 2.3
Cash provided by (used in) investing activities	$(39.6)	$ 4.5
Cash provided by financing activities	$4.1	$ 0.2

Our principal sources of liquidity are cash and cash equivalents, and marketable securities, and cash flow generated from our operations. Our liquidity is affected by many factors, including those that relate to our specific operations and those that relate to the uncertainties of global and regional economies and the sectors of the semiconductor industry in which we operate in. Although our cash requirements will fluctuate based on the timing and extent of these factors, we believe our existing cash, cash equivalents and marketable securities, combined with cash currently projected to be generated from our operations, will be sufficient to satisfy our working capital needs, capital asset purchases, outstanding commitments and other liquidity requirements associated with our existing operations over the next twelve months.

During the nine months ended September 24, 2016, cash provided by operating activities of $34.1 million was a result of $17.4 million of net income, non-cash adjustments to net income of $13.6 million and a net change in operating assets and liabilities of $3.1 million. The increase for the nine months ended September 24, 2016 was primarily attributable to higher net income decreased inventory levels and increased deferred revenue. This was partially offset by the other changes to operating assets and liabilities, which is generally driven by the timing of customer payments for accounts receivable and timing of vendor payments for accounts payable. Cash used in investing activities of $39.6

million during the nine months ended September 24, 2016 consisted primarily of $63.8 million purchases of marketable securities, net of sales and maturities, of $27.5 million, and acquisition of property, plant and equipment of $3.3 million. Cash provided by financing activities of $4.1 million during the nine months ended September 24, 2016 consisted primarily of $6.0 million in proceeds from the issuance of common stock from the employee stock purchase program and the exercise of stock options, partially offset by cash paid for taxes on net issuance of stock awards of $1.6 million, and royalty payments to Zygo of $0.3 million.

During the nine months ended September 26, 2015, cash provided by operating activities of $2.3 million was a result of $4.7 million of net income, non-cash adjustments to net income of $ 14.3 million and a net change in operating assets and liabilities of $ 16.7 million. Changes to operating assets and liabilities were generally driven by the timing of customer payments for accounts receivable, the timing of inventory purchases and the timing of vendor payments. Cash provided by investing activities of $4.5 million during the nine months ended September 26, 2015, consisted primarily of cash provided by sales and maturities of marketable securities, net of purchases, of $5.9 million, partially offset by cash used to acquire property, plant and equipment of $1.4 million. Cash provided by financing activities of $0.2 million during the nine months ended September 26, 2015 consisted primarily of $3.6 million in proceeds from the issuance of common stock from the employee stock purchase program and the exercise of stock options, partially offset by cash used to repurchase common stock of $1.7 million, royalty and other payments to Zygo of $0.6 million, and cash paid for taxes on net issuance of stock awards of $1.1 million. As we move away from issuing stock options to employees, we anticipate that cash provided by the proceeds from the issuance of common stock may continue to decrease, and the cash paid on net issuance of stock awards to increase

Debt and Business Partnership Payments

Line of Credit - Our revolving line of credit facility with Comerica expired on May 30, 2016 and was not renewed.

Business Partnership - On June 17, 2009, we announced a strategic business partnership with Zygo Corporation, a wholly-owned subsidiary of AMETEK, Inc. whereby we have purchased inventory and certain other assets from Zygo Corporation, and the two companies entered into a supply agreement. We will make payments to Zygo Corporation (with an estimated present value of $1.3 million as of September 24, 2016 and $1.5 million as of December 26, 2015) over a period of time as aspects of the supply agreement are executed. We made royalty payments of $0.3 million and $0.6 million to Zygo in nine months ended September 24, 2016 and September 26, 2015, respectively.

We have evaluated and will continue to evaluate the acquisitions of products, technologies or businesses that are complementary to our business. These activities may result in product and business investments, which may affect our cash position and working capital balances. Some of these activities might require significant cash outlays.

Off-Balance Sheet Arrangements

As of September 24, 2016, we had no off-balance sheet arrangements or obligations.

Contractual Obligations

There have been no material changes outside the ordinary course of our business from those reported in our Annual Report on Form 10-K.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our exposure to market risk does not differ materially from that discussed in our Annual Report on Form 10-K for the fiscal year ended December 26, 2015, filed with the SEC on February 24, 2016. However, we cannot give any assurance as to the effect that future changes in interest rates or foreign currency rates will have on our consolidated financial position, results of operations or cash flows.

Foreign Currency Risk

Our exposure to foreign currency exchange rate fluctuations arises in part from intercompany balances in which costs are charged between our U.S. headquarters and our foreign subsidiaries. On our consolidated balance sheet these intercompany balances are eliminated and thus no consolidated balances are associated with these intercompany balances; however, since each foreign entity's functional currency is generally its respective local currency, there is exposure to foreign exchange risk on a consolidated basis. Intercompany balances are denominated primarily in U.S. dollars and, to a lesser extent, other local currencies.

We enter into foreign currency forward exchange contracts to protect against currency exchange risks associated with existing assets and liabilities. A foreign currency forward exchange contract acts as a hedge by increasing in value when underlying assets decrease in value or underlying liabilities increase in value due to changes in foreign exchange rates. Conversely, a foreign currency forward exchange contract decreases in value when underlying assets increase in value or underlying liabilities decrease in value due to changes in foreign exchange rates. These forward contracts are not designated as accounting hedges, so the unrealized gains and losses are recognized in other income, net, in advance of the actual foreign currency cash flows with the fair value of these forward contracts being recorded as accrued liabilities or other current assets.

We do not use forward contracts for trading purposes. Our forward contracts generally have maturities of 30 days or less. We enter into foreign currency forward exchange contracts based on estimated future asset and liability exposures, and the effectiveness of our hedging program depends on our ability to estimate these future asset and liability exposures. Recognized gains and losses with respect to our current hedging activities will ultimately depend on how accurately we are able to match the amount of foreign currency forward exchange contracts with actual underlying asset and liability exposures.

The following table provides information about our foreign currency forward exchange contracts as of September 24, 2016. The information is provided in United States dollar equivalent amounts. The table presents the notional amounts, at contract exchange rates, and the weighted average contractual foreign currency exchange rates expressed as units of the foreign currency per United States dollar, which in some cases may not be the market convention for quoting a particular currency. All of these forward contracts mature during October 2016.

	Notional Principal (in millions)	Contract Rate
Forward Contracts		
Korean won	$ 2.6	1,115
European Union euro	4.1	1.13
Israeli shekel	1.1	3.75
Singapore dollar	0.9	1.35
Chinese yuan	1.9	6.69
Japanese yen	3.0	100.98
New Taiwan dollar	0.9	31.16
British Pound	1.4	1.31
Total	15.9	
Estimated Fair Value	15.9	

This compares to the information about our foreign currency forward contracts as of December 26, 2015, which is set forth in the table below. All of these forward contracts matured during January 2016.

	Notional Principal (in millions)	Contract Rate
Forward Contracts		
Korean won	$ 7.0	1,174
European Union euro	4.1	1.10
Israeli shekel	2.1	3.88
Singapore dollar	2.7	1.41
Chinese yuan	1.4	6.52
Japanese yen	13.2	121.27
Total	30.5	

Estimated Fair Value	30.4

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ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management evaluated, with the participation of our Chief Executive Officer, Timothy J. Stultz, and our Chief Financial Officer, Jeffrey Andreson, the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that as of September 24, 2016, our disclosure controls and procedures were effective to ensure that information we are required to disclose in reports that we file or submit under the Securities Exchange Act of 1934 were (i) recorded, processed, summarized and reported within the time periods specified in SEC rules and forms; and (ii) accumulated and reported to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely discussions regarding required disclosures.

Changes in Internal Control over Financial Reporting

During the quarter ended September 24, 2016, there were no changes in our internal controls over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, has designed our disclosure controls and procedures and our internal control over financial reporting to provide reasonable assurances that the controls' objectives will be met. However, management does not expect that disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within Nanometrics have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any system's design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of a system's control effectiveness into future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

PART II — OTHER INFORMATION

ITEM 1A. RISK FACTORS

Investing in our securities involves a high degree of risk. In assessing these risks, you should carefully consider the information included in this report, including our financial statements and the related notes thereto. You should carefully review and consider all of the risk factors set forth in Part l, “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 26, 2015, filed with the SEC on February 24, 2016. The risks described in our Annual Report on Form 10-K are not the only ones we face. Additional risks and uncertainties that are not currently known to us or that we currently believe are immaterial may also impair our business operations. Our business, operating results and financial conditions could be materially harmed by any of these risks. The trading price of our common stock could decline due to any of these risks and investors may lose all or part of their investment.
There have been no material changes in our risk factors from those discussed in our Annual Report on Form 10-K for the fiscal year ended December 26, 2015.

ITEM 6. EXHIBITS

The following exhibits are filed, furnished or incorporated by reference with this Quarterly Report on Form 10-Q:

Exhibit No.	Description
3.(i)	Certificate of Incorporation
3.1(1)	Certificate of Incorporation of the Registrant
3.(ii)	Bylaws
3.2(2)	Bylaws of the Registrant
4	Instruments Defining the Rights of Security Holders, Including Indentures
4.1	Reference is made to Exhibits 3.1 and 3.2
10	Material Contracts
31	Rule 13a-14(a)/15d-14(a) Certifications
31.1(3)	Certification of Timothy J. Stultz, principal executive officer of the Registrant, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2(3)	Certification of Jeffrey Andreson, principal financial officer and principal accounting officer of the Registrant, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32	Section 1350 Certifications
32.1(3)	Certification of Timothy J. Stultz, principal executive officer of the Registrant, and Jeffrey Andreson, principal financial officer and principal accounting officer of the Registrant pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101(4)	The following financial statements, formatted in XBRL: (i) Condensed Consolidated Balance Sheets at September 24, 2016, and December 26, 2015, (ii) Condensed Consolidated Statements of Operations for the three and nine months ended September 24, 2016 and September 26, 2015, (iii) Condensed Consolidated Statements of Cash Flows for the nine months ended September 24, 2016 and September 26, 2015, and (v) Notes to Unaudited Condensed Consolidated Financial Statements.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

(1) Incorporated by reference to Exhibit 3.1 filed with the Registrant’s Current Report on Form 8-K (File No. 000-13470) filed on October 5, 2006.
(2) Incorporated by reference to Exhibit 3.1 filed with the Registrant’s Current Report on Form 8-K (File No. 000-13470) filed on April 12, 2012.
(3) Filed herewith.
(4) Furnished herewith.

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.

NANOMETRICS INCORPORATED
(Registrant)

By: /S/ JEFFREY ANDRESON
Jeffrey Andreson
Chief Financial Officer
(Duly Authorized and Principal Financial Officer)

Dated: October 28, 2016

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32	Section 1350 Certifications
32.1(3)	Certification of Timothy J. Stultz, principal executive officer of the Registrant, and Jeffrey Andreson, principal financial officer and principal accounting officer of the Registrant pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101(4)	The following financial statements, formatted in XBRL: (i) Condensed Consolidated Balance Sheets at September 24, 2016, and December 26, 2015, (ii) Condensed Consolidated Statements of Operations for the three and nine months ended September 24, 2016 and September 26, 2015, (iii) Condensed Consolidated Statements of Cash Flows for the nine months ended September 24, 2016 and September 26, 2015, and (v) Notes to Unaudited Condensed Consolidated Financial Statements.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document

101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

(1) Incorporated by reference to Exhibit 3.1 filed with the Registrant's Current Report on Form 8-K (File No. 000-13470) filed on October 5, 2006.
(2) Incorporated by reference to Exhibit 3.1 filed with the Registrant's Current Report on Form 8-K (File No. 000-13470) filed on April 12, 2012.
(3) Filed herewith.
(4) Furnished herewith.