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ELECTRO SCIENTIFIC INDUSTRIES INC

FORM 10-Q
(Quarterly Report)

Filed 11/09/16 for the Period Ending 10/01/16

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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 October 1, 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: 0-12853

ELECTRO SCIENTIFIC INDUSTRIES, INC.

Oregon	**93-0370304**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
13900 N.W. Science Park Drive, Portland, Oregon	**97229**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: 503-641-4141

Registrant's web address: www.esi.com

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

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

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

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

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

The number of shares outstanding of the Registrant's Common Stock as of November 4, 2016 was 32,464,117 shares.

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

2017 FORM 10-Q QUARTERLY REPORT

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ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

(In thousands)	October 1, 2016	April 2, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$ 52,685	$ 42,413
Short-term investments	3,500	15,252
Trade receivables, net of allowances of $879 and $1,039	29,744	42,770
Inventories, net	61,895	60,470
Shipped systems pending acceptance	3,893	1,181
Other current assets	5,547	5,340
Total current assets	157,264	167,426
Non-current assets:		
Property, plant and equipment, net of accumulated depreciation of $110,437 and $107,910, (PP&E)	24,581	24,543
Non-current deferred income taxes, net	884	914
Goodwill (see Note 5 "Business Acquisitions")	12,652	7,445
Acquired intangible assets, net of accumulated amortization of $21,702 and $21,146	6,589	7,146
Other assets	15,448	12,626
Total assets	$ 217,418	$ 220,100
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 13,611	$ 16,061
Accrued liabilities	17,170	18,334
Deferred revenue	10,951	6,373
Total current liabilities	41,732	40,768
Non-current liabilities:		
Income taxes payable	1,360	1,266
Deferred income tax liability, net	226	234
Other liabilities	6,529	7,801
Total liabilities	49,847	50,069
Commitments and contingencies (See Note 13 "Commitments & Contingencies")		
Shareholders' equity:		
Preferred stock, without par value; 1,000 shares authorized; no shares issued	—	—
Common stock, without par value; 100,000 shares authorized; 32,966 and 31,613 issued and outstanding	202,493	195,024
Accumulated deficit	(33,792)	(23,998)
Accumulated other comprehensive loss	(1,130)	(995)
Total shareholders' equity	167,571	170,031
Total liabilities and shareholders' equity	$ 217,418	$ 220,100

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands, except per share amounts)	**October 1, 2016**	**September 26, 2015**	**October 1, 2016**	**September 26, 2015**
Net sales:				
Systems	$ 21,442	$ 35,570	$ 59,642	$ 67,632
Services	8,216	10,902	17,684	21,931
Total net sales	29,658	46,472	77,326	89,563
Cost of sales:				
Systems	14,146	22,345	36,568	43,630
Services	4,532	5,706	8,970	12,135
Total cost of sales	18,678	28,051	45,538	55,765
Gross profit	10,980	18,421	31,788	33,798
Operating expenses:				
Selling, general and administrative	12,766	12,534	25,637	25,151
Research, development and engineering	7,760	8,283	15,390	16,928
Acquisition and integration costs	335	40	335	194
Restructuring costs	—	591	—	653
Net operating expenses	20,861	21,448	41,362	42,926
Operating loss	(9,881)	(3,027)	(9,574)	(9,128)
Non-operating income:				
Interest and other income, net	206	6	128	1
Total non-operating income	206	6	128	1
Loss before income taxes	(9,675)	(3,021)	(9,446)	(9,127)
Provision for income taxes	—	239	347	497
Net loss	$ (9,675)	$ (3,260)	$ (9,793)	$ (9,624)
Net loss per share - basic	$ (0.30)	$ (0.10)	$ (0.30)	$ (0.31)
Net loss per share - diluted	$ (0.30)	$ (0.10)	$ (0.30)	$ (0.31)
Weighted average number of shares - basic	32,396	31,384	32,109	31,280
Weighted average number of shares - diluted	32,396	31,384	32,109	31,280

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited)

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	**October 1, 2016**	**September 26, 2015**	**October 1, 2016**	**September 26, 2015**
Net loss	$ (9,675)	$ (3,260)	$ (9,793)	$ (9,624)
Other comprehensive income (loss):				
Foreign currency translation adjustment, net of taxes of $0, $17, $0 and $0	47	(756)	(139)	(725)
Accumulated other comprehensive income related to benefit plan obligation, net of taxes of $2, $(2), $(2) and $(4)	5	4	9	8
Net unrealized loss on available-for-sale securities, net of taxes of $0, $0, $0 and $0	(1)	(1)	(4)	(1)
Other comprehensive income (loss):	51	$ (753)	$ (134)	$ (718)
Comprehensive loss	$ (9,624)	$ (4,013)	$ (9,927)	$ (10,342)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(In thousands)	Two fiscal quarters ended October 1, 2016	Two fiscal quarters ended September 26, 2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (9,793)	$ (9,624)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	3,592	3,803
Amortization of acquired intangible assets	554	725
Share-based compensation expense	3,136	2,626
Loss on disposition of property and equipment, net	40	6
(Benefit from) provision for doubtful accounts	(235)	127
Charges for write-off of damaged product	1,170	—
Decrease in deferred income taxes	87	106
Changes in operating accounts, net of acquisitions:		
Decrease (increase) in trade receivables, net	13,373	(3,953)
Increase in inventories	(3,669)	(2,668)
(Increase) decrease in shipped systems pending acceptance	(2,712)	17
(Increase) decrease in other current assets	(43)	2,736
(Decrease) increase in accounts payable and accrued liabilities	(6,100)	10,308
Increase in deferred revenue	4,577	286
Net cash provided by operating activities	3,977	4,495
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of investments	(228,921)	(261,978)
Proceeds from sales and maturities of investments	240,209	251,982
Purchase of property, plant and equipment	(2,710)	(2,185)
Proceeds from sale of property, plant and equipment	7	—
Cash paid for business acquisitions, net of cash acquired	(2,010)	—
(Increase) decrease in other assets	(71)	386
Net cash provided by (used in) investing activities	6,504	(11,795)
CASH FLOWS FROM FINANCING ACTIVITIES		
Payment of withholding taxes on stock-based compensation	(793)	(603)
Proceeds from issuance of common stock	654	737
Net cash (used in) provided by financing activities	(139)	134
Effect of exchange rate changes on cash	(70)	(186)
NET CHANGE IN CASH AND CASH EQUIVALENTS	10,272	(7,352)
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	42,413	50,994
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$ 52,685	$ 43,642
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid for interest	$ (25)	$ (57)
Cash paid for income taxes	(251)	(478)
Income tax refunds received	6	110
Net increase in PP&E and other assets related to transfers from inventory	3,128	622
Non-cash additions to property, plant and equipment	270	227

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

1. Basis of Presentation

These unaudited interim condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP") have been condensed or omitted in these interim statements. Accordingly, these condensed consolidated financial statements are to be read in conjunction with the financial statements and notes included in the Company's Annual Report on Form 10-K for its fiscal year ended April 2, 2016 . These interim statements include all adjustments (consisting of only normal recurring adjustments and accruals) necessary for a fair presentation of results for the interim periods presented. The results for interim periods are not necessarily indicative of the results of operations for the entire year.

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 commitments and contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results may differ from those estimates.

Management believes that the estimates used are reasonable. Significant estimates made by management include: revenue recognition; inventory valuation; product warranty reserves; allowance for doubtful accounts; accrued restructuring costs; share-based compensation; income taxes including the valuation of deferred tax assets; fair value measurements; purchase price accounting; valuation of long-lived assets; valuation of goodwill; and valuation of acquired technology.

Except for the added policy below, there have been no significant changes to the Company's significant accounting policies from those presented in Note 2 “Summary of Significant Accounting Policies” to the consolidated financial statements included in the Company's Annual Report on Form 10-K for its fiscal year ended April 2, 2016 . All references to years or quarters relate to fiscal years or fiscal quarters unless otherwise noted. The fiscal quarters ended October 1, 2016 and September 26, 2015 consisted of 13-week periods while the two fiscal quarters ended October 1, 2016 and September 26, 2015 consisted of 26-week periods.

Acquisition Accounting

The fair value of the consideration exchanged in an acquisition is allocated to tangible assets and identifiable intangible assets acquired and liabilities assumed at acquisition date fair value. Goodwill is measured as the excess of the consideration transferred over the net fair value of identifiable assets acquired and liabilities assumed. The accounting for an acquisition involves a considerable amount of judgment and estimation. Cost, income, market or a combination of approaches may be used to establish the fair value of consideration exchanged, assets acquired and liabilities assumed, depending on the nature of those items. The valuation approach is determined in accordance with generally accepted valuation methods or other generally accepted methods. Key areas of estimation and judgment may include projections of future performance, cost of capital, market characteristics, cost structure, impacts of synergies, and estimates of terminal value, among others.

While the Company uses best estimates and assumptions as part of the purchase price allocation process to estimate the value of assets acquired and liabilities assumed, estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed, with a corresponding offset to goodwill, to the extent that adjustments are identified to the preliminary purchase price allocation. Upon conclusion of the measurement period, or final determination of the value of the assets acquired and liabilities assumed, whichever comes first, any subsequent adjustments are recorded to results from operations. Refer to Note 5, “Business Acquisitions” of Notes to Condensed Consolidated Financial Statements for further discussion of purchase accounting, valuation methodology and assumptions.

2. Recent Accounting Pronouncements

In August 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-15, Statement of Cash Flows (Topic 230) Classification of Certain Cash Receipts and Cash Payments, which will make eight targeted changes to how cash receipts and cash payments are presented and classified in the statement of cash flows. We elected to early adopt ASU 2016-15 and it did not have any effect on our cash flows.

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers: Topic 606 (ASU 2014-09), to supersede nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. In August 2015, the FASB issued ASU 2015-14, Revenue from Contracts with Customers: Deferral of the Effective Date, which deferred the effective date for implementation of ASU 2014-09 by one year and are now effective for annual reporting periods beginning after December 15, 2017, with early adoption permitted but not earlier than the original effective date. In March 2016, the FASB issued ASU 2016-08, Principal versus Agent Considerations (Reporting Revenue Gross versus Net) (ASU 2016-08), which clarifies the implementation guidance of principal versus agent considerations. In April 2016, the FASB issued ASU 2016-10, Identifying Performance Obligations and Licensing (ASU 2016-10), which clarifies the identification of performance obligations and licensing implementation guidance. In May 2016, the FASB issued ASU 2016-12, Narrow-Scope Improvements and Practical Expedients (ASU 2016-12), to improve guidance on assessing collectability, presentation of sales taxes, noncash consideration, and completed contracts and contract modifications at transition. The effective date and transition requirements in ASU 2016-08, ASU 2016-10, and ASU 2016-12 are the same as the effective date and transition requirements of ASU 2015-14. We have not yet selected a transition method and we are currently evaluating the effect that the updated standards will have on our consolidated financial statements and related disclosures. The new standards are effective for the Company's fiscal year ending March 30, 2019.

In March 2016, the FASB issued ASU 2016-09, “Compensation – Stock Compensation – Improvements to Employee Share-Based Payment Accounting.” ASU 2016-09 simplifies the accounting for several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. ASU 2016-09 is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods, which would be the Company's fiscal year ending March 31, 2018. While we do not expect the adoption of ASU 2016-09 to have a material effect on our business, we are still evaluating any potential impact that adoption of ASU 2016-09 may have on our financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU 2016-02, “Leases.” ASU 2016-02 increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and requires disclosing key information about leasing arrangements. ASU 2016-02 is effective for annual periods beginning after December 15, 2018 and interim periods within those annual periods, which would be the Company's fiscal year ending March 29, 2020. While we do not expect the adoption of ASU 2016-02 to have a material effect on our business, we are still evaluating any potential impact that adoption of ASU 2016-02 may have on our financial position, results of operations or cash flows.

3. Share-Based Compensation

The Company's share-based compensation consists of stock-settled stock appreciation rights (SARs), restricted stock unit awards with a service condition (time-based RSUs), restricted stock unit awards with a performance condition (performance-based RSUs), restricted stock unit awards with a market condition (market-based RSUs) and an employee stock purchase plan.

The Company recognizes expense related to the fair value of SARs and employee stock purchase plan using the Black-Scholes model to estimate the fair value of awards on the date of grant. SARs grant the right to receive shares of the Company's stock equivalent to the increase in stock value of a specified number of shares over a specified period of time, divided by the stock price at the time of exercise. The fair value of time-based RSUs and performance-based RSUs are measured on the grant date based on the market value of our common stock. The market-based RSUs must achieve the total shareholder return (TSR) measures in order for the awards to vest, and the grant date fair value of the awards is calculated using a Monte Carlo simulation model.

The Company recognizes compensation expense for all share-based compensation awards, net of estimated forfeitures, on a straight-line basis over the requisite service period of the award. Expense for performance-based RSUs is recognized based on the probability of achievement of the performance criteria. The compensation cost for market-based RSUs that reference a TSR measure is recognized over the related service period, even if the market condition is never satisfied.

The Company granted a total of 709,000 time-based RSUs, 195,000 market-based RSUs and 90,000 performance-based RSUs during the first two quarters of 2017 , but did not grant any SARs. Grants for the second quarter of 2017 included 152,000 time-based RSUs and 90,000 performance-based RSUs granted to the employees of the Company who were hired as a part of the Visicon acquisition.

Share-based compensation expense under the stock incentive plans is included in the Company's Condensed Consolidated Statements of Operations as follows:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	**October 1, 2016**	**September 26, 2015**	**October 1, 2016**	**September 26, 2015**
Cost of sales	$ 136	$ 114	$ 256	$ 243
Selling, general and administrative	1,205	746	2,182	1,461
Research, development and engineering	177	206	371	425
Total share-based compensation expense	$ 1,518	$ 1,066	$ 2,809	$ 2,129

The Company does not capitalize share-based compensation costs. As of October 1, 2016 , the Company had $9.7 million of total unrecognized share-based compensation costs, net of estimated forfeitures, which are expected to be recognized over a weighted average period of 1.9 years.

4. Fair Value Measurements

Financial Assets and Liabilities Measured at Fair Value

ASC Topic 820 establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include the following:

- *Level 1* , defined as observable inputs such as quoted prices in active markets for identical assets or liabilities;
- *Level 2* , defined as inputs that are observable either directly or indirectly such as quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and other inputs that can be corroborated by observable market data; and
- *Level 3* , defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions.

The Company's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of October 1, 2016 and April 2, 2016 was as follows (in thousands):

October 1, 2016	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash equivalents:				
Money market securities	$ 3,638	$ —	$ —	$ 3,638
Commercial paper	—	23,388	—	23,388
Total cash equivalents	$ 3,638	$ 23,388	$ —	$ 27,026
Short term investments - available for sale:				
U.S. treasury fund	$ 1,003	$ —	$ —	$ 1,003
Commercial paper	$ —	$ 1,495	$ —	$ 1,495
Government agencies	$ —	$ 1,002	$ —	$ 1,002
Total short-term investments - available for sale	$ 1,003	$ 2,497	$ —	$ 3,500
Forward purchase or (sale) contracts:				
Japanese Yen	$ —	$ (21)	$ —	$ (21)
New Taiwan Dollar	—	(2)	—	(2)
Korean Won	—	(2)	—	(2)
Euro	—	(82)	—	(82)
British Pound	—	(12)	—	(12)
Chinese Renminbi	—	—	—	—
Singapore Dollar	—	(1)	—	(1)
Total forward contracts	$ —	$ (120)	$ —	$ (120)
Deferred compensation plan assets:*				
Mutual funds and exchange traded funds	$ 2,176	$ —	$ —	$ 2,176
Money market securities	787	—	—	787
Total deferred compensation plan assets	$ 2,963	$ —	$ —	$ 2,963

April 2, 2016	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market securities	$ 4,643	$ —	$ —	$ 4,643
Commercial paper	—	12,140	—	12,140
Total cash equivalents	$ 4,643	$ 12,140	$ —	$ 16,783
Short term investments - available for sale:				
U.S. treasury fund	$ 1,003	$ —	$ —	$ 1,003
Commercial paper	$ —	$ 997	$ —	$ 997
Government agencies	—	13,252	—	13,252
Total short-term investments - available for sale	$ 1,003	$ 14,249	$ —	$ 15,252
Forward purchase or (sale) contracts:				
Japanese Yen	$ —	$ (31)	$ —	$ (31)
New Taiwan Dollar	—	5	—	5
Korean Won	—	129	—	129
Euro	—	(367)	—	(367)
Chinese Renminbi	—	(1)	—	(1)
Singapore Dollar	—	20	—	20
Total forward contracts	$ —	$ (245)	$ —	$ (245)
Deferred compensation plan assets:*				
Mutual funds and exchange traded funds	$ 1,916	$ —	$ —	$ 1,916
Money market securities	588	—	—	588
Total deferred compensation plan assets	$ 2,504	$ —	$ —	$ 2,504

*These investments represent assets held in trust for the deferred compensation plan

For Level 1 assets, the Company utilized quoted prices in active markets for identical assets.

For Level 2 assets, exclusive of forward contracts, the Company utilized quoted prices in active markets for similar assets. For forward contracts, spot prices at October 1, 2016 and April 2, 2016 were utilized to calculate fair values.

During the first two quarters of 2017 and 2016 , there were no transfers between Level 1, 2 or 3 assets.

Investments

The Company's investments at October 1, 2016 and April 2, 2016 were as follows (in thousands):

October 1, 2016	Cost	Unrealized Gain	Unrealized Loss	Fair Value
Available-for-sale securities (current):				
Government agencies	1,001	1	—	1,002
Commercial paper	24,883	—	—	24,883
Total investments (current)	$ 25,884	$ 1	$ —	$ 25,885
Available-for-sale securities (non-current):				
Mutual funds, exchange traded funds and money market securities*	2,874	89	—	2,963
Total investments (non-current)	$ 2,874	$ 89	$ —	$ 2,963

April 2, 2016	Cost	Unrealized Gain	Unrealized Loss	Fair Value
Available-for-sale securities (current):				
Commercial paper	$ 13,137	$ —	$ —	$ 13,137
Government agencies	13,247	5	—	13,252
Total investments (current)	$ 26,384	$ 5	$ —	$ 26,389
Available-for-sale securities (non-current):				
Mutual funds, exchange traded funds and money market securities*	$ 2,507	$ —	$ (3)	$ 2,504
Total investments (non-current)	$ 2,507	$ —	$ (3)	$ 2,504

*These investments represent assets held in trust for the deferred compensation plan

For purposes of determining gross realized gains and losses and reclassification out of accumulated other comprehensive income (loss), the cost of securities sold is based on specific identification. Net unrealized holding gains and losses on current available-for-sale securities included in accumulated other comprehensive income (loss) were insignificant as of October 1, 2016 and April 2, 2016 .

5. Business Acquisitions

Fiscal 2017

On August 1, 2016, the Company acquired all of the outstanding shares of Visicon Technologies, Inc. (Visicon), a leading supplier of high-accuracy and high-throughput measurement and defect detection systems based in Napa, California. The consideration under the merger agreement is subject to adjustment for indebtedness, seller's transaction expenses, working capital and other items.

Based on estimated closing working capital and other adjustments, ESI paid $2.0 million in cash and expects to issue 637,082 shares of ESI common stock, valued at approximately $4.5 million . The value of the common stock is based on the closing price of stock on August 1, 2016. Of the expected shares to be issued in connection with the agreement, 33,143 shares are expected to be reserved in escrow to serve as a source of payment for any purchase price adjustments or indemnity claims by the Company. The sellers have contractually agreed to limitations on the sale of the shares of common stock they receive in connection with the sale of Visicon; specifically, no shares can be sold for six months following closing, after which point twenty five percent of the shares each stockholder receives can be sold in each of the following four three-month periods. The shares issued as a part of this merger represent a non-cash investing activity of $4.5 million .

As of the reporting date, the Company has not completed the valuation of assets acquired and liabilities assumed. The amounts presented below represent provisional amounts based on best estimates utilizing information available to-date. In the absence of better information, amounts presented represent the carrying value of the item as of the acquisition date. These provisional amounts will be revised when the value of the associated assets and liabilities is determined. The total estimated purchase price of $6.5 million , net of cash acquired, was allocated to the underlying assets acquired and liabilities assumed based on estimated fair value, as shown in the following table:

(In thousands)		
Accounts receivable	$	391
Inventory		2,056
Prepaid expense and other current assets		116
Property, plant and equipment		642
Acquired intangibles and goodwill*		5,207
Other assets		26
Accounts payable and other accrued liabilities		(1,952)
Total purchase price, net of cash acquired	$	6,486

*Acquired intangibles and goodwill are combined above and are both included in Goodwill on the Condensed Consolidated Balance Sheets as the Company has not yet completed its estimation of fair value of intangibles acquired. Upon completion of the valuation process, these amounts will be presented separately.

The acquisition is expected to provide the Company with a portfolio of standalone defect detection systems for the medical device and consumer electronics markets. In addition to a standalone product portfolio and associated value streams, the Company believes the acquisition will provide complementary technology for integrated verification of laser machining, expand its presence into the medical device market, present an opportunity for enhanced vertical integration and result in synergies with the Company's current consumer electronics customer base. Products acquired in the Visicon acquisition are included in the Micromachining segment due to the complementary nature of the sale process and customer base. The value of goodwill acquired has not been finalized as the valuation of assets acquired and liabilities assumed is not complete, as noted above. None of the goodwill is expected to be deductible for tax purposes.

In connection with the acquisition of Visicon, the Company is consolidating Visicon operations with ESI operations, and streamlining manufacturing and development activities between Napa and existing ESI locations. The Company expects to incur total costs approximating $1.2 million in connection with these integration activities. Approximately $0.5 million in integration costs were incurred in the second quarter of 2017 . These costs are included in Selling, general and administrative expenses in the Condensed Consolidated Statements of Operations, and include transaction fees, travel costs, employee severance and other related costs.

The operating results of the acquired entity are included in the Company’s results of operations since the date of acquisition. Pro forma financial information has not been provided for the acquisition of Visicon as it is not material to the Company’s operations and financial position.

Fiscal 2015

On January 15, 2015, the Company acquired all of the outstanding shares of Wuhan Topwin Optoelectronics Technology Co., Ltd. (Topwin), a Chinese manufacturer of laser-based systems for $7.6 million in cash and 748,944 shares of ESI common stock issuable over a three year period, valued at approximately $2.9 million as of the acquisition date. Out of the $2.9 million in equity, one-half, or 374,472 shares, is contingent-based consideration and one-half, or 374,472 shares, is non-contingent and will be issued over a three year period beginning June 30, 2015. The contingent consideration is based on future performance of Topwin, as evaluated against targets for net income for each year over a three year period. One-third of the contingent shares will be issued after each year if the target is met for that year. However, failing to meet stated targets will result in none of the contingent shares being issued for that year. As of the acquisition date, the fair value of 374,472 shares of contingent consideration was estimated to be $0.4 million and the fair value of 374,472 shares of non-contingent consideration was estimated to be $2.5 million . The fair value of the non-contingent and contingent shares to be issued over the three year period was determined based on the estimated share price as of the issuance date derived through Monte Carlo simulation, discounted back to the acquisition date. The value of the contingent shares included an estimate of the probability of attainment of the net income targets. Analysis supporting the purchase price allocation included a valuation of assets and liabilities as of the closing date, an analysis of intangible assets and a detailed review of the opening balance sheet to determine other significant adjustments required to recognize assets and liabilities at fair value. Through the second quarter of 2017 , zero and 212,217 shares of ESI common stock have been issued in connection with contingent and non-contingent consideration under the purchase agreement, respectively.

Additionally, the Company agreed to issue, on the same terms described above, up to approximately 513,328 shares valued at $2.0 million , which, together with cash amounts of $0.2 million , is treated as compensation to an employee in the Company who was also a former shareholder of Topwin. The compensation expense was to be recognized over a three year period. From acquisition through the second quarter of fiscal 2017 , the Company has recognized $1.2 million in share-based compensation expense related to this agreement. From acquisition through the second quarter of fiscal 2017 , zero and 145,427 shares of ESI common stock have been issued in connection with contingent and non-contingent components of compensation expense, respectively.

The total purchase price of approximately $10.5 million , net of cash acquired, was allocated to the underlying assets acquired and liabilities assumed based on their fair values, as shown in the following table:

(In thousands)		
Accounts receivable, net of allowances of $268	$	454
Inventory		544
Prepaid expense and other current assets		295
Property, plant and equipment		23
Acquired intangibles		3,618
Goodwill		7,445
Accounts payable and other accrued liabilities		(1,859)
Total purchase price, net of cash acquired	$	10,520

The acquisition is expected to enable the Company to gain entry into the low total-cost-of-ownership solutions market in China and the goodwill of approximately $7.4 million recognized as a result of the acquisition was assigned to the Topwin reporting unit. The premium paid over the fair value of the individual assets acquired and liabilities assumed reflects the Company's view that this acquisition was the result of a competitive bid process and has provided the Company with innovative design and manufacturing capabilities for laser-based manufacturing solutions across a variety of complementary applications, together with direct access to local China market, supply chain and opto-electronics knowledge center. None of the goodwill is expected to be deductible for tax purposes.

As a result of the acquisition, the Company recorded approximately $4.9 million of identifiable assets, including $3.6 million of identifiable intangible assets and $1.9 million of identifiable liabilities. The acquired intangible assets consisted primarily of $3.5 million of developed technology to be amortized over their useful lives, which range from one to ten years.

In the first two quarters of 2017 the Company did not incur any Topwin acquisition-related costs while it incurred approximately $194 thousand in the first two quarters of 2016 ; these costs are included in Selling, general and administrative expenses in the Condensed Consolidated Statements of Operations. The operating results of this acquisition are included in the Company's results of operations since the date of acquisition. Pro forma financial information has not been provided for the acquisition of Topwin as it is not material to the Company's operations and overall financial position.

In the first quarter of 2017, the Company entered into an agreement with former Topwin shareholders to settle claims against withheld shares. Pursuant to the purchase agreement and the subsequent settlement agreement, the Company's obligation to issue shares with a future issuance date, which served as a source of indemnification, was terminated, representing the effective recovery of 63,114 shares. At the date of recovery the shares had a closing price of $6.30 per share and an original fair value of $446 thousand . As a result, the withheld shares which were initially accounted for as stock compensation were deemed to have forfeited in the first quarter of 2017 and those shares representing contingent consideration and included as a component of purchase price were accounted for within equity. This subsequent recovery of shares issuable under the agreement represented a non-cash investing and financing activity.

In the second quarter of 2017, as a result of this same settlement agreement, all cash amounts held in escrow were released to the Company, representing the recovery of $430 thousand , slightly less than the original cash escrow of $450 thousand due to exchange rate losses. As a result of this recovery, amounts previously recognized as compensation costs were reversed in the current period and those amounts included as a component of purchase price were recognized as a non-operating gain in the second quarter of 2017, and classified accordingly on the statement of cash flows. The purchase price of Topwin was not adjusted for either the stock or cash escrow recoveries as the measurement period for purchase price accounting related to this acquisition had lapsed prior to the recovery of these amounts.

6. Inventories

Inventories are principally valued at standard cost, which approximates the lower of cost or market on a first-in, first-out basis. Components of inventories were as follows:

(In thousands)	October 1, 2016	April 2, 2016
Raw materials and purchased parts	$ 42,186	$ 38,957
Work-in-process	13,303	14,270
Finished goods	6,406	7,243
	$ 61,895	$ 60,470

7. Trade Accounts Receivable

Trade accounts receivable consisted of the following:

(In thousands)	October 1, 2016	April 2, 2016
Current trade accounts receivable, net	$ 29,744	$ 42,770
Non-current trade accounts receivable	134	320
	$ 29,878	$ 43,090

Non-current trade accounts receivable are included in Other assets in the Condensed Consolidated Balance Sheets.

8. Other Current Assets

Other current assets consisted of the following:

(In thousands)	October 1, 2016	April 2, 2016
Prepaid expenses	$ 3,072	$ 2,747
Value added tax receivable	1,485	1,353
Other	990	1,240
	$ 5,547	$ 5,340

Included in "Other" Other current assets are non-trade receivables, income tax refund receivable and other similar items.

9. Other Assets

Other assets consisted of the following:

(In thousands)	October 1, 2016	April 2, 2016
Consignment and demo equipment, net	$ 9,510	$ 7,242
Long term deposits	2,734	2,543
Non-current trade accounts receivable, net	134	320
Other non-current assets	3,070	2,521
	$ 15,448	$ 12,626

Depreciation expense for demo and leased equipment totaled $0.1 million in the second quarters of 2017 and 2016 and $0.2 million for the two fiscal quarters ended October 1, 2016 and September 26, 2015 .

Included in "Other" Other assets are long-term investments and other similar items.

10. Accrued Liabilities (Current) & Other Liabilities (Non-current)

Accrued liabilities (current) consisted of the following:

(In thousands)	October 1, 2016	April 2, 2016
Payroll-related liabilities	$ 5,064	$ 5,717
Product warranty accrual	4,551	3,666
Customer deposits	2,284	1,731
Purchase order commitments and receipts	1,279	2,588
Professional fees payable	953	1,052
Restructuring costs payable	675	757
Other current liabilities	2,364	2,823
	$ 17,170	$ 18,334

Included in other current liabilities above are accrued amounts for value-added taxes, income taxes, freight, and other similar items.

Other liabilities (non-current) consisted of the following:

(In thousands)	October 1, 2016	April 2, 2016
Deferred compensation	$ 2,963	$ 2,504
Product warranty accrual	970	2,068
Other non-current liabilities	2,596	3,229
	$ 6,529	$ 7,801

Other non-current liabilities include long-term deferred revenue, long-term deposits and other similar items.

11. Product Warranty

The following is a reconciliation of the changes in the aggregate product warranty accrual:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	October 1, 2016	September 26, 2015	October 1, 2016	September 26, 2015
Product warranty accrual, beginning	$ 5,947	$ 4,021	$ 5,734	$ 3,342
Warranty charges incurred, net	(1,263)	(2,063)	(3,314)	(3,547)
Provision for warranty charges	837	2,493	3,101	4,656
Product warranty accrual, ending	$ 5,521	$ 4,451	$ 5,521	$ 4,451

Net warranty charges incurred include labor charges and costs of replacement parts for system repairs under warranty. These costs are recorded net of any estimated cost recoveries resulting from either successful repair of damaged parts or from warranties offered by the Company’s suppliers for defective components. The provision for warranty charges reflects the estimate of future anticipated net warranty costs to be incurred for all products under warranty at quarter end and is recorded to cost of sales. Of the total of $5.5 million in product warranty accrual at October 1, 2016 , $1.0 million is non-current and is included in Other liabilities on the Condensed Consolidated Balance Sheets.

12. Deferred Revenue

Generally, revenue is recognized upon fulfillment of acceptance criteria at the Company's factory and transfer of risk and title. Revenue is deferred whenever title transfer is pending, risk has not transferred, and/or acceptance criteria have not yet been fulfilled. Deferred revenue arises from, among other factors, sales to Japanese customers, shipments of substantially new products and shipments with custom specifications and acceptance criteria where the Company cannot demonstrate a track record of acceptance. For sales involving multiple element arrangements, the relative selling price of any undelivered elements, including installation services and similar items, is deferred until the elements are delivered and acceptance criteria are met. Revenue related to maintenance and service contracts is deferred and recognized ratably over the duration of the contracts.

The following is a reconciliation of the changes in deferred revenue:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	**October 1, 2016**	**September 26, 2015**	**October 1, 2016**	**September 26, 2015**
Deferred revenue, beginning	$ 9,757	$ 14,961	$ 7,685	$ 12,376
Revenue deferred	9,119	17,871	19,472	33,591
Revenue recognized	(7,293)	(20,170)	(15,574)	(33,305)
Deferred revenue, ending	$ 11,583	$ 12,662	$ 11,583	$ 12,662

Of the total of $11.6 million in deferred revenue at October 1, 2016 , $0.6 million is non-current and is included in Other liabilities on the Condensed Consolidated Balance Sheets.

13. Commitments & Contingencies

The Company is party to a loan and security agreement ("Loan Agreement") with Silicon Valley Bank, which was initially entered into on March 20, 2015 and amended on July 12, 2016. The Loan Agreement provides for a senior secured asset-based revolving credit facility (the "Credit Facility") with up to $30 million available on a revolving basis, including a $15 million sublimit for letters of credit. The credit agreement expires March 20, 2018. At October 1, 2016 , the Company had no revolving loans or letters of credit outstanding under the Credit Facility, was in compliance with all covenants, and was not in default under the Loan Agreement. The commitment fee on the amount of unused credit was 0.3 percent.

The Company mitigates credit risk by transacting with highly rated counterparties for foreign exchange contracts, letters of credit and other transactions where counterparty risk is a factor. The Company has evaluated the non-performance risks associated with the Company's lenders and other parties and believe them to be insignificant.

From time to time the Company may be party to litigation arising in the normal course of business. Currently, the Company is not party to any litigation it believes would have a material adverse effect on the Company's financial position, results of operations or cash flows.

14. Earnings (Loss) Per Share

The following is a reconciliation of weighted average shares outstanding used in the calculation of basic and diluted earnings (loss) per share:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands, except per share data)	**October 1, 2016**	**September 26, 2015**	**October 1, 2016**	**September 26, 2015**
Net loss	$ (9,675)	$ (3,260)	$ (9,793)	$ (9,624)
Weighted average shares used for basic earnings per share	32,396	31,384	32,109	31,280
Weighted average shares used for diluted earnings per share	32,396	31,384	32,109	31,280
Net loss per share:				
Basic	$ (0.30)	$ (0.10)	$ (0.30)	$ (0.31)
Diluted	$ (0.30)	$ (0.10)	$ (0.30)	$ (0.31)

Awards of options, SARs and RSUs representing an additional 2.7 million and 3.7 million shares of stock for the second quarter of 2017 and 201 6 , respectively, and 2.4 million and 3.6 million shares of stock for the two fiscal quarters of 2017 and 2016, respectively, were not included in the calculation of diluted net earnings per share because their effect would have been antidilutive.

15. Segment and Geographic Information

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. The chief operating decision maker ("CODM") is the Company's Chief Executive Officer. The Company operates in two segments, Component Processing and Micromachining. Included within Component Processing are interconnect products, semiconductor products and component test products. The interconnect, semiconductor and component test products are sold primarily to manufacturers of electronic components and are used to drill, cut, trim, ablate, test and mark features that improve the yield or functionality of the component. Micromachining products are sold primarily to manufacturers of end devices across multiple industries and are used primarily to drill, cut or mark features on a variety of materials, generally on the casing or external surface of the end device. In addition, micromachining products tend to serve markets that require fewer features, less stringent design requirements, and lower cost. Products acquired in the Visicon acquisition are included in the Micromachining segment due to the complementary nature of the sale process and customer base. The Company uses U.S. GAAP for segment reporting, consistent with the accounting policies of the consolidated entity.

Segment disclosures are presented to the gross profit level as this is the primary performance measure for which the segment management are responsible. Corporate and other charges include amortization of acquired intangible assets, stock-based compensation, restructuring and other costs. Selling, general and administrative and other operating expenses are managed at the functional and corporate levels, and because allocation to the market segments would be arbitrary, have not been allocated to the market segments. See the consolidated statements of operations for reconciliations from gross profit to income before taxes. These reconciling items are not included in the measure of profit and loss for each reportable segment.

In the quarter ended July 2, 2016, we revised the method we use to determine segment gross margin amounts used by the CODM. Previously the profit on the laser (or more specifically, the difference between an estimated third-party purchase price of a similar laser and the cost for the Company to produce these lasers) was associated with only a single segment where the internal lasers were primarily employed or expected to be employed. However, with recent introduction of new products, certain of the Company's internal lasers are now used in both the Component Processing and Micromachining segments. The change in method was made to refine the allocation of profit to the segments given this new dynamic, and to ensure that the margin associated with the use of internal lasers is reflected in the profit of the segment generating the third-party sale. No revisions to segment gross margins were made retrospectively as the changes were deemed immaterial.

Net sales by segment were as follows:

(In thousands)	Fiscal quarter ended		Two fiscal quarters ended	
	October 1, 2016	September 26, 2015	October 1, 2016	September 26, 2015
Component Processing	$ 25,739	$ 32,754	$ 68,868	$ 71,038
Micromachining	3,919	13,718	8,458	18,525
	$ 29,658	$ 46,472	$ 77,326	$ 89,563

Gross profits by segment were as follows:

(In thousands)	Fiscal quarter ended		Two fiscal quarters ended	
	October 1, 2016	September 26, 2015	October 1, 2016	September 26, 2015
Component Processing	$ 11,512	$ 13,387	$ 33,770	$ 27,497
Micromachining	(168)	5,473	(153)	7,135
Corporate and other	(364)	(439)	(1,829)	(834)
	$ 10,980	$ 18,421	$ 31,788	$ 33,798

Net sales by geographic area, based on the location of the end user, were as follows:

(In thousands)	Fiscal quarter ended		Two fiscal quarters ended	
	October 1, 2016	September 26, 2015	October 1, 2016	September 26, 2015
Asia	$ 25,721	$ 37,029	$ 66,169	$ 70,565
Americas	2,236	6,805	5,254	13,161
Europe	1,701	2,638	5,903	5,837
	$ 29,658	$ 46,472	$ 77,326	$ 89,563

16. Restructuring and Cost Management Plans

Chelmsford

In March 2015, as a part of the plan to streamline manufacturing and development activities, the Company initiated a restructuring plan that included the closure of the assembly plant and development center located in Chelmsford, Massachusetts, which was part of the Component Processing segment. The original estimated completion date of the plan was the end of fiscal 2016 at a total estimated pre-tax cost of $ 5.5 million .

There were $297 thousand of restructuring payments related to the above mentioned restructuring plan in the first two quarters of 2017 . Since the inception of the plan, $5.8 million have been recognized in restructuring costs. The plan was effectively complete as of the end of the fourth quarter of 2016. Included in these costs were write-offs of leasehold improvements associated with the abandoned manufacturing facility, employee severance and related payments, and other wind-down costs. The Company expects to pay the remaining costs and accrued expenses related to the leased facility by December 2019, which is the end of the lease term.

At October 1, 2016 and April 2, 2016 , the amount of unpaid restructuring costs included in accrued liabilities for all plans was $0.5 million and $0.8 million , respectively.

The following table presents the amounts related to restructuring costs payable (in thousands):

Restructuring & cost management amounts payable as of April 2, 2016	$ 757
Employee severance and related benefits:	
Cash payments	(297)
Restructuring & cost management amounts payable as of October 1, 2016	$ 460

17. Shareholders’ Equity

Share Repurchase Program

In December 2011, the Board of Directors authorized a share repurchase program totaling $20.0 million to acquire shares of the Company's outstanding common stock. The repurchases are to be made at management’s discretion in the open market or in privately negotiated transactions in compliance with applicable securities laws and other legal requirements and are subject to market conditions, share price and other factors. The Company did not repurchase any shares during the first two quarters of 2017 or 2016 . There is no fixed completion date for the repurchase program.

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

The statements contained in this report that are not statements of historical fact, including without limitation, statements containing the words “believes”, “expects”, “projects”, "anticipates" and similar words, constitute forward-looking statements that are subject to a number of risks and uncertainties. From time to time we may make other forward-looking statements. Investors are cautioned that such forward-looking statements are subject to an inherent risk that actual results may materially differ as a result of many factors, including the risks described in Part II, Item 1A “Risk Factors.”

Overview of Business

Electro Scientific Industries, Inc. and its subsidiaries (ESI) is a leading supplier of innovative laser-based micro-manufacturing solutions for industries reliant on microtechnologies. ESI's integrated solutions allow industrial designers and process engineers to control the power of laser light to transform materials in ways that differentiate their consumer electronics, wearable devices, semiconductor circuits and high-precision components for market advantage. Founded in 1944, ESI is headquartered in Portland, Oregon, with global operations and subsidiaries in Asia, Europe and North America.

Laser microfabrication is comprised of a set of precise micron-level processes, including drilling, scribing, dicing, singulation, cutting, ablating, trimming, and precision marking on multiple types of materials. These processes require application-specific laser systems that are able to meet our customers' exacting performance and productivity requirements. Our laser-based systems are utilized in the production of consumer electronics, flexible and rigid printed circuit boards, semiconductor devices, advanced semiconductor packaging, electronic sensors, touch-panel glass, flat panel liquid crystal displays (LCDs) and other high value components and devices to enable functionality, increase performance and improve production yields.

Additionally, we produce high-capacity test and inspection equipment that is critical to the quality control process during the production of multilayer ceramic capacitors (MLCCs). Our equipment ensures that each component meets the electrical and physical tolerances required to perform properly.

In the second quarter of 2017, ESI acquired Visicon Technologies, Inc. (Visicon), which brings a portfolio of standalone defect detection systems for the medical device and consumer electronics markets to ESI's current product solutions.

The second quarter of 2017 ended October 1, 2016 , the first quarter of 2017 ended July 2, 2016 , and the second quarter of 2016 ended September 26, 2015 were all 13-week periods while the two quarters ended October 1, 2016 and the two quarters ended September 26, 2015 were each 26-week periods.

Summary of Sequential Quarterly Results

Second Quarter 2017 Ended October 1, 2016 Compared to First Quarter 2017 Ended July 2, 2016 .

The financial results for the second quarter of 2017 reflected a continued decline in our order volume with total orders of $28.0 million , compared to $30.4 million in the first quarter of 2017. By segment, orders for Component Processing (CP) decreased approximately 20% primarily due to lower service contracts following strong contract activity in Q1. The decrease in CP was partially offset by an increase in orders for our Micromachining (MM) segment products, primarily driven by increased system orders for our laser ablation products and application wins for our new Garnet ™ platform systems.

Total net sales declined from $47.7 million in the first quarter of 2017 to $29.7 million in the second quarter of 2017. CP segment net sales decreased to $25.7 million in the second quarter of 2017 compared to $43.1 million in the first quarter of 2017 , a decrease of $17.4 million, primarily due to lower revenues for our flex interconnect drilling systems. The lower revenues were primarily the result of overcapacity in the flex via drilling market after several quarters of strong technology and capacity buys. Other factors included lower sales of our semiconductor memory repair products offset by increased sales of our wafer trim products and Allegro ™ component test products. MM segment net sales decreased to $3.9 million in the second quarter of 2017 from $4.5 million in the first quarter of 2017 due to changes in backlog.

Gross profit was $11.0 million , with gross margins of 37.0% , in the second quarter of 2017 compared to gross profit of $20.8 million , with gross margin of 43.7% , in the first quarter of 2017 . The decline in gross profit and gross margin was driven by lower production volumes and less favorable product mix. These declines were partially offset by lower inventory charges as a result of flood damage in our Wuhan manufacturing facility in the first quarter of 2017.

Operating expenses of $20.9 million in the second quarter of 2017 represent a slight increase from $20.5 million in the first quarter of 2017 . We acquired Visicon during the quarter, and incurred $0.5 million in acquisition related costs. Additionally, the acquisition resulted in approximately $0.8 million in accretive operating expenses during the quarter. Selling, general and administrative (SG&A) expenses increased approximately $0.1 million, primarily due to increases related to the Visicon acquisition, partially offset by a $0.5 million decrease in employee variable compensation and a $0.4 million decrease in commissions on lower sales volumes. Research, development and engineering (RD&E) expenses increased $0.1 million , primarily related to a $0.3 million increase related to Visicon. Other RD&E expenses decreased $0.2 million, primarily due to lower spending on project materials and consulting as NViant ™ and CornerStone ™ platforms moved to production.

The Company had an operating loss of $9.9 million in the second quarter of 2017 compared to operating income of $0.3 million in the first quarter of 2017 .

The provision for income taxes was zero in the second quarter of 2017 compared to a provision of $0.3 million in the first quarter of 2017 . The change in income taxes was due to a decrease in projected annual income and a corresponding change in mix of income from foreign jurisdictions. In October, 2016, the Company obtained a waiver from the Singapore tax authority, confirming the retention of benefits enjoyed through June 2016.

Net loss was $9.7 million in the second quarter of 2017 compared to net loss of $0.1 million in the first quarter of 2017 .

Second Quarter 2017 Ended October 1, 2016 Compared to Second Quarter 2017 Ended September 26, 2015

Results of Operations

The following table presents results of operations data as a percentage of net sales:

	Fiscal quarter ended	
	October 1, 2016	**September 26, 2015**
Net sales	100.0 %	100.0 %
Cost of sales	63.0	60.4
Gross profit	37.0	39.6
Selling, general and administrative	43.0	27.0
Research, development and engineering	26.2	17.8
Acquisition and integration costs	1.1	0.1
Restructuring costs	—	1.3
Operating loss	(33.3)	(6.5)
Interest and other income (expense), net	0.7	—
Total non-operating income (expense)	0.7	—
Loss before income taxes	(32.6)	(6.5)
Provision for income taxes	—	0.6
Net loss	(32.6)%	(7.0)%

Net Sales

The following table presents net sales information by product group:

	Fiscal quarter ended			
	October 1, 2016		**September 26, 2015**	
(In thousands, except percentages)	**Net Sales**	**% of Net Sales**	**Net Sales**	**% of Net Sales**
Component Processing				
Interconnect Products (IP)	$ 13,527	45.6%	$ 21,500	46.2%
Semiconductor Products (SP)	7,222	24.4	6,763	14.6
Component Test Products (CTP)	4,990	16.8	4,491	9.7
	$ 25,739	86.8%	$ 32,754	70.5%
Micromachining				
Micromachining Products (MP)	$ 3,919	13.2%	$ 13,718	29.5%
Net Sales	$ 29,658	100.0%	$ 46,472	100.0%

Net sales for the second quarter of 2017 decreased $16.8 million or 36.2% from net sales for the second quarter of 2016 . By segment, net sales in CP decreased by 21.4% and MM decreased by 71.4% .

CP segment net sales for the second quarter of 2017 decreased $7.0 million compared to the second quarter of 2016 . The decrease in CP net sales was driven by lower sales of our flex via drilling systems primarily due to overcapacity in the market and a $1.7 million decrease in service sales. Partially offsetting these was an increase in sales of $1.5 million of our wafer trim products and $0.5 million of Component Test Products.

MM segment net sales for the second quarter of 2017 decreased $9.8 million compared to the second quarter of 2016 . The decrease was primarily due to lower follow-on demand for our micromachining systems.

The following table presents net sales information by geographic region:

	Fiscal quarter ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Asia	$ 25,721	86.8%	$ 37,029	79.7%
Americas	2,236	7.5	6,805	14.6
Europe	1,701	5.7	2,638	5.7
Net Sales	$ 29,658	100.0%	$ 46,472	100.0%

Net sales to Asia decreased by 30.5% or $11.3 million primarily due to decreased placements of flex via drilling products and low follow-on demand for our micromachining systems.

Gross Profit

	Fiscal quarter ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Gross Profit	% of Net Sales	Gross Profit	% of Net Sales
Component Processing	$ 11,512	44.7 %	$ 13,387	40.9 %
Micromachining	(168)	(4.3)	5,473	39.9
Corporate and other	(364)	(1.2)	(439)	(0.9)
Gross Profit	$ 10,980	37.0 %	$ 18,421	39.6 %

Gross profit was $11.0 million for the second quarter of 2017 , a decrease of $7.4 million compared to $18.4 million in the second quarter of 2016 . The gross profit decrease was primarily driven by lower net sales and production volumes, partially offset by decreases in service repair costs and improved warranty costs.

Gross margin for the CP segment increased from 40.9% to 44.7% primarily due to improved service margins due to lower contract material usage, lower warranty repair charges and decreased costs due to use of internal lasers. These were partially offset by the impact of lower volume on flex via drilling products. MM segment gross margins decreased from 39.9% to (4.3)% primarily due to lower production volumes driving unfavorable absorption of fixed costs.

Corporate and other cost of sales include expenses not allocated to our two operating segments, including stock compensation, amortization of intangibles, restructuring and other expense.

Operating Expenses

	Fiscal quarter ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Expense	% of Net Sales	Expense	% of Net Sales
Selling, general and administrative	$ 12,766	43.0%	$ 12,534	27.0%
Research, development and engineering	7,760	26.2	8,283	17.8
Acquisition and integration costs	335	1.1	40	0.1
Restructuring costs	—	—	591	1.3
Operating Expenses	$ 20,861	70.3%	$ 21,448	46.2%

Selling, general and administrative

Selling, general and administrative (SG&A) expenses primarily consist of labor and other employee-related expenses including share-based compensation expense, travel expenses, professional fees, sales commissions and facilities costs. SG&A expenses for the second quarter of 2017 increased $0.2 million compared to the second quarter of 2016 . This increase is comprised of $0.5 million in Visicon operating expenses during the second quarter of 2017 and $0.4 million in share based compensation expense primarily due to higher grant date fair value in 2017 compared to 2016. These increases were partially offset by $0.6 million decrease in commission and other variable compensation expenses due to lower sales volume.

Research, Development and Engineering

Research, development and engineering (RD&E) expenses are primarily comprised of labor and other employee-related expenses including share-based compensation expense, professional fees, project materials costs, equipment costs and facilities costs. RD&E expenses for the second quarter of 2017 decreased $0.5 million compared to the second quarter of 2016 . This decrease was primarily due to a $0.4 million decrease in project development costs as various new products moved to production.

Acquisition and Integration Costs

2017

Acquisition and integration costs consisted mainly of $0.5 million of consulting, legal and travel expenses associated with the acquisition and integration of Visicon, which was acquired on August 1, 2016 (see Note 5 "Business Acquisitions"). The Visicon acquisition charges were partially offset by $0.2 million of Topwin escrow cash settlement received in the second quarter of 2017.

2016

Acquisition and integration costs consisted mainly of consulting, legal and travel expenses associated with the acquisition and integration of Wuhan Topwin Optoelectronics Technology Co., Ltd., which was acquired on January 15, 2015.

Restructuring Costs

During the fourth quarter of 2015, we initiated restructuring plans to consolidate and shift our manufacturing activities to Asia and other cost reduction actions. The $0.6 million of restructuring costs in 2016 relate primarily to the labor charges for the closure of the Chelmsford, Massachusetts manufacturing plant associated with these restructuring plans. We ceased our use of that facility in 2016, and no further restructuring charges were incurred in the second quarter of 2017.

Non-operating Income and Expense

	Fiscal quarter ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Interest and Other (Expense) Income, net	% of Net Sales	Interest and Other (Expense) Income, net	% of Net Sales
Interest and other income, net	$ 206	0.7%	$ 6	—%
Total non-operating income	$ 206	0.7%	$ 6	—%

Non-operating income and expense consists of interest income and expense, market gains and losses on assets held in employees' deferred compensation accounts, realized and unrealized foreign exchange gains and losses, bank charges, investment management fees, and other miscellaneous non-operating items. Net non-operating income was $206 thousand in the second quarter of 2017 and $6 thousand in the second quarter of 2016 . The change in non-operating income was primarily due to the recovery of escrow funds related to the Topwin Acquisition.

Income Taxes

	Fiscal quarter ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Income Tax Provision	Effective Tax Rate	Income Tax Provision	Effective Tax Rate
Provision for income taxes	$ —	—%	$ 239	(7.9)%

The income tax provision for the second quarter of 2017 was zero on pretax loss of $9.7 million , an effective tax rate of zero . For the second quarter of 2016 , the income tax provision was $239 thousand on pretax loss of $3.0 million , an effective rate of (7.9)% . The change in provision for taxes relates to the decrease in projected annual income in the second quarter of 2017 and the mix of income between foreign jurisdictions.

Two Quarters Ended October 1, 2016 Compared to Two Quarters Ended September 26, 2015

Results of Operations

The following table presents results of operations data as a percentage of net sales:

	Two fiscal quarters ended	
	October 1, 2016	September 26, 2015
Net sales	100.0 %	100.0 %
Cost of sales	58.9	62.3
Gross profit	41.1	37.7
Selling, general and administrative	33.2	28.1
Research, development and engineering	19.9	18.9
Acquisition and integration costs	0.4	0.2
Restructuring costs	—	0.7
Operating loss	(12.4)	(10.2)
Interest and other income (expense), net	0.2	—
Total non-operating income (expense)	0.2	—
Loss before income taxes	(12.2)	(10.2)
Provision for income taxes	0.5	0.5
Net loss	(12.7)%	(10.7)%

Net Sales

The following table presents net sales information by product group:

	Two fiscal quarters ended					
	October 1, 2016			September 26, 2015		
(In thousands, except percentages)	Net Sales		% of Net Sales	Net Sales		% of Net Sales
Component Processing						
Interconnect Products (IP)	$	44,445	57.5%	$	42,145	47.0%
Semiconductor Products (SP)		14,831	19.2		17,904	20.0
Component Test Products (CTP)		9,592	12.4		10,989	12.3
	$	68,868	89.1%	$	71,038	79.3%
Micromachining						
Micromachining Products (MP)	$	8,458	10.9%	$	18,525	20.7%
Net Sales	$	77,326	100.0%	$	89,563	100.0%

Net sales for the first two quarters of 2017 decreased $12.2 million or 13.7% from net sales for the first two quarters of 2016 . By segment, net sales in CP decreased by $2.2 million or 3.1% and net sales in MM decreased by $10.1 million or 54.3% .

CP segment net sales for the first two quarters of 2017 decreased primarily due to $4.5 million in lower semiconductor service and scribing system sales. These decreases were partially offset by a $2.9 million increase in sales of our flex via drilling products, primarily the new GemStone ™ product and sales of memory repair systems.

The decrease in MM net sales for the first two quarters of 2017 compared to the first two quarters of 2016 was primarily due to lower follow-on demand for our micromachining systems as compared to strong demand in the first two quarters of 2016.

The following table presents net sales information by geographic region:

	Two fiscal quarters ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Asia	$ 66,169	85.6%	$ 70,565	78.8%
Americas	5,254	6.8	13,161	14.7
Europe	5,903	7.6	5,837	6.5
Net Sales	$ 77,326	100.0%	$ 89,563	100.0%

Net sales in Americas decreased to $5.3 million in the first two quarters of 2017 , a decrease of $7.9 million compared to $13.2 million in the first two quarters of 2017 . This was primarily due to lower flex via drilling system sales and lower service sales. Asia net sales decreased to $66.2 million in the first two quarters of 2017 , a decrease of $4.4 million compared to $70.6 million in the first two quarters of 2017 due lower service sales.

Gross Profit

	Two fiscal quarters ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Gross Profit	% of Net Sales	Gross Profit	% of Net Sales
Component Processing	$ 33,770	49.0 %	$ 27,497	38.7 %
Micromachining	(153)	(1.8)	7,135	38.5
Corporate and other	(1,829)	(2.4)	(834)	(0.9)
Gross Profit	$ 31,788	41.1 %	$ 33,798	37.7 %

Gross profit was $31.8 million for the first two quarters of 2017 , a decrease of $2.0 million compared to the first two quarters of 2016 . Gross profit decreased primarily due to lower net sales and production volumes. Gross margin was 41.1% and 37.7% for the first two quarters of 2017 and 2016 , respectively. The improvement in gross margin was driven by decreases in warranty and service repair expenses, and improved mix in CP due to higher net sales of flex via drilling products. These were partially offset by unfavorable absorption on fixed costs due to lower production volumes in the first two quarters of 2017.

Operating Expenses

	Two fiscal quarters ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Expense	% of Net Sales	Expense	% of Net Sales
Selling, general and administrative	$ 25,637	33.2%	$ 25,151	28.1%
Research, development and engineering	15,390	19.9	16,928	18.9
Acquisition and integration costs	335	0.4	194	0.2
Restructuring costs	—	—	653	0.7
Operating Expenses	$ 41,362	53.5%	$ 42,926	47.9%

Selling, general and administrative

SG&A expenses primarily consist of labor and other employee-related expenses including share-based compensation expense, travel expenses, professional fees, sales commissions and facilities costs. SG&A expenses for the first two quarters of 2017 increased $0.5 million compared to the first two quarters of 2016 . The increase was primarily due to a $0.5 million higher share based compensation expense due to higher grant date fair value in 2017 compared to 2016, and a $0.5 million increase due to Visicon operating expenses incurred during the second quarter of 2017. These were partially offset by a $0.4 million decrease in commission and other variable compensation expenses due to lower sales volume and a $0.2 million decrease in travel and related costs.

Research, Development and Engineering

RD&E expenses are primarily comprised of labor and other employee-related expenses including share-based compensation expense, professional fees, project materials costs, equipment costs and facilities costs. RD&E expenses for the first two quarters of 2017 decreased $1.5 million compared to the first two quarters of 2016 . This decrease was primarily driven by a $1.0 million decrease in project development costs as various new products moved to production and a $0.2 million decrease in labor expenses due to restructuring activities carried out in 2016.

Acquisition and Integration Costs

2017

Acquisition and integration costs consisted mainly of consulting, legal and travel expenses associated with the acquisition and integration of Visicon, which was acquired on August 1, 2016 (see Note 5 "Business Acquisitions"). The Visicon acquisition charges were partially offset by $0.2 million of Topwin escrow cash settlement received in the second quarter of 2017.

2016

Acquisition and integration costs consisted mainly of consulting, legal and travel expenses associated with the acquisition and integration of Topwin Optoelectronics, which was acquired on January 15, 2015.

Restructuring Costs

During the fourth quarter of 2015, we initiated restructuring plans to consolidate and shift our manufacturing activities to Asia and other cost reduction actions. The $0.7 million of restructuring costs in 2016 relate primarily to the charges for the closure of the Chelmsford, Massachusetts manufacturing plant associated with these restructuring plans. We ceased our use of that facility in 2016, and no further restructuring charges were incurred in the first two quarters of 2017 .

Non-operating Income and Expense

Non-operating income and expense, net, consists of interest income and expense, market gains and losses on assets held in employees' deferred compensation accounts, realized and unrealized foreign exchange gains and losses, bank charges, investment management fees, and other miscellaneous non-operating items, such as investment impairment.

Non-operating income and expense were as follows:

	Two fiscal quarters ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Non-Operating Income (Expense)	% of Net Sales	Non-Operating Income (Expense)	% of Net Sales
Interest and other income, net	$ 128	0.2%	$ 1	—%
Total non-operating income	$ 128	0.2%	$ 1	—%

Interest and other income (expense), net

Net interest and other income was $128 thousand in the first two quarters of 2017 compared to net interest and other income of $1 thousand in the first two quarters of 2016 . The change in non-operating income was primarily due to the recovery of escrow funds related to the Topwin acquisition. This benefit was partially offset by foreign exchange losses primarily attributable to the weakened British pound and timing of hedges for Japan shipments.

Income Taxes

	Two fiscal quarters ended			
	October 1, 2016		September 26, 2015	
(In thousands, except percentages)	Income Tax Provision	Effective Tax Rate	Income Tax Provision	Effective Tax Rate
Provision for income taxes	$ 347	(3.7)%	$ 497	(5.4)%

The income tax provision for the first two quarters of 2017 was $0.3 million on pretax loss of $9.4 million , an effective tax rate of (3.7)% . For the first two quarters of 2016 , the income tax provision was $0.5 million on pretax loss of $9.1 million , an effective rate of (5.4)% . The change in provision for taxes relates to the decrease in projected annual income in 2017 and the mix of income between foreign jurisdictions.

Financial Condition and Liquidity

At October 1, 2016 , our principal sources of liquidity were cash and cash equivalents of $52.7 million , short-term investments of $3.5 million , accounts receivable of $29.9 million and up to $30.0 million from our credit facility. At October 1, 2016 , we had a current ratio of 3.77 and had no long-term debt. Working capital of $115.5 million decreased $11.1 million compared to the April 2, 2016 balance of $126.7 million primarily due to a decrease in accounts receivable of $13.4 million . Total cash, cash equivalents, and investments decreased $1.0 million as compared to April 2, 2016 .

Sources and Uses of Cash

Net cash provided by operating activities of $4.0 million for the two quarters ended October 1, 2016 was primarily a result of a $9.8 million net loss adjusted for non-cash items of $8.3 million . Working capital changes consisted primarily of a $13.4 million decrease in accounts receivables due to lower business levels and improved collections, partially offset by a $6.1 million decrease in accounts payable due to overall lower purchase volumes and timing of inventory receipts, as well as a $3.7 million increase in inventories.

For the two quarters ended October 1, 2016 , net cash provided by investing activities of $6.5 million was primarily due to $11.3 million of net sales of investments offset by $2.7 million of capital expenditures for purchases of property, plant and equipment and $2.0 million for business acquisition of Visicon.

For the two quarters ended October 1, 2016 , net cash used in financing activities of $0.1 million related to issuances from employee stock plans, net of payments of associated withholding taxes.

We believe that our existing cash, cash equivalents and short-term investments are adequate to fund our operations and contractual obligations for at least the next twelve months.

Critical Accounting Policies and Estimates

Except for the added policy below, we reaffirm the “Critical Accounting Policies and Estimates” in Part II Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations reported in our Form 10-K for the year ended April 2, 2016 .

Acquisition Accounting

The fair value of the consideration exchanged in an acquisition is allocated to tangible assets and identifiable intangible assets acquired and liabilities assumed at acquisition date fair value. Goodwill is measured as the excess of the consideration transferred over the net fair value of identifiable assets acquired and liabilities assumed. The accounting for an acquisition involves a considerable amount of judgment and estimation. Cost, income, market or a combination of approaches may be used to establish the fair value of consideration exchanged, assets acquired and liabilities assumed, depending on the nature of those items. The valuation approach is determined in accordance with generally accepted valuation methods or other generally accepted methods. Key areas of estimation and judgment may include projections of future performance, cost of capital, market characteristics, cost structure, impacts of synergies, and estimates of terminal value, among others.

While the Company uses best estimates and assumptions as part of the purchase price allocation process to estimate the value of assets acquired and liabilities assumed, estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed, with a corresponding offset to goodwill, to the extent that adjustments are identified to the preliminary purchase price allocation. Upon conclusion of the measurement period, or final determination of the value of the assets acquired and liabilities assumed, whichever comes first, any subsequent adjustments are recorded to results from operations. Refer to Note 5, “Business Acquisitions” of Notes to Condensed Consolidated Financial Statements for further discussion of purchase accounting, valuation methodology and assumptions.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

There have been no material changes in the market risk disclosure contained in our Form 10-K for the year ended April 2, 2016 .

Item 4. Controls and Procedures

Attached to this quarterly report as exhibits 31.1 and 31.2 are the certifications of our President and Chief Executive Officer (CEO) and our Chief Financial Officer (CFO) required by Section 302 of the Sarbanes-Oxley Act of 2002 (the Section 302 Certifications). This portion of our quarterly report on Form 10-Q is our disclosure of the conclusions of our management regarding the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report based on management's evaluation of those disclosure controls and procedures. This disclosure should be read in conjunction with the Section 302 Certifications for a more complete understanding of the topics presented.

Disclosure Controls and Procedures

Our management has evaluated, under the supervision and with the participation of our CEO and CFO, the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report pursuant to Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended (Exchange Act). Based on that evaluation, our CEO and CFO have concluded that, as of the end of the period covered by this report, our disclosure controls and procedures are effective in ensuring that information required to be disclosed in our Exchange Act reports is (1) recorded, processed, summarized and reported in a timely manner, and (2) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting during the second quarter of 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

In the ordinary course of business, we are involved in various legal matters, either asserted or unasserted, and investigations. In the opinion of management, ultimate resolution of these matters will not have a material effect on our consolidated financial position, results of operations or cash flows.

Item 1A. Risk Factors

The statements contained in this report that are not statements of historical fact, including without limitation statements containing the words "believes", "expects", "projects", "anticipates" and similar words, constitute forward-looking statements that are subject to a number of risks and uncertainties. From time to time, we may make other forward-looking statements. Investors are cautioned that such forward-looking statements are subject to an inherent risk that actual results may differ materially. The following information highlights some of the factors that could cause actual results to differ materially from the results expressed or implied by our forward-looking statements. Forward-looking statements should be considered in light of these factors. Factors that may result in such variances include, but are not limited to, the following:

Risks Related to Our Competition and Customers

Volatility of Our Customers' Industries and Capital Spending

Our business is dependent upon the capital expenditures of manufacturers of microelectronics, PCB's, semiconductors, computers, wireless communications and other electronic products. The capital equipment market for microelectronics, semiconductor, and consumer electronics manufacturers has historically been characterized by sudden and severe cyclical variations in product supply and demand due to a number of factors including capacity utilization, timing of customers' new product introductions and demand for their products, inventory levels relative to demand and access to affordable capital. The timing, severity and duration of these market cycles are difficult or impossible to predict. As a result, business levels can vary significantly from quarter to quarter or year to year. Significant volatility in investment cycles in the market for microelectronics, PCB's and semiconductors used in electronic devices or in the market for consumer electronics reduce demand for our products and may materially and adversely affect our business, financial condition and results of operations given the relative fixed cost structure of our business and need to continually invest in product technology and to support and service our products. For example, beginning in the first quarter of fiscal 2017 we began to experience a significant decline in orders due to reduced demand from PCB manufacturers. The degree of the impact of any downturn on our business depends on a number of factors, including: the strength of the global economies, particularly those of Asia and the United States; the overall level of demand for consumer electronics products; the stability of global financial systems; and the overall health of the microelectronics, semiconductor, and consumer electronics industries.

Expansion into New Markets

Our future success depends in large part on our successful penetration of new markets adjacent to our existing markets and of the Chinese market for lower cost systems. These markets are new to us and our success is dependent on our displacing entrenched competitors who are familiar with these markets and are known to customers. In many cases we are attempting to penetrate these new markets with newly introduced products which are not yet proven in the industry. In addition, in some cases we will need to develop or expand our sales channels and customer relationships in order to execute on this strategy. There is no assurance that we will be successful in penetrating these new markets significantly or at all. If we fail to successfully penetrate these markets our business, financial condition and results of operations could be materially and adversely affected.

Highly Competitive Markets

We face substantial competition from established competitors throughout the world, some of which have greater financial, engineering, manufacturing and marketing resources than we do. Those competitors with greater resources may, in addition to other things, be able to better withstand periodic downturns, compete more effectively on the basis of price and technology, or more quickly develop enhancements to, and new generations of, products that compete with the products we manufacture and market. New companies may enter the markets in which we compete, or industry consolidation may occur, further increasing competition in those markets. We have also experienced new entrants to our markets offering aggressive price and payment terms in an attempt to gain market share. Some competitors, particularly in China, also develop low cost products employing processes or technology developed by us. In addition, because we price our products in U.S. dollars, a strong U.S. dollar can make our products less price-competitive outside of the United States to products priced in other currencies. We believe that to be competitive we must continue to expend significant financial resources in order to, among other things, invest in new product development and enhancements. We may not be able to compete successfully in the future and increased competition may result in price reductions, reduced profit margins and loss of market share.

Revenues are Largely Dependent on Few Customers

We depend on a few significant customers for a large portion of our revenues. In 2016, our top ten customers accounted for approximately 51% of total net sales. We anticipate that sales of our products to a relatively small number of customers will continue to account for a significant portion of our revenues. Consolidation between customers, changes in technologies or solutions used by customers, changes in products manufactured by customers or in end-user demand for those products, selection of suppliers other than us, customer bankruptcies or customer departures from their respective industries all may result in even fewer customers accounting for a high percentage of our revenue and reduced demand from any single major customer. Also, business levels with several of our top customers are dependent on our winning new designs and features each product cycle, and there is no guarantee of future business based on past design wins. Furthermore, none of our customers have any long-term obligation to continue to buy our products or services and may therefore delay, reduce or cease ordering our products or services at any time. The cancellation, reduction or deferral of purchases of our products by even a single customer could significantly reduce our revenues in any particular quarter. If we were to lose any of our significant customers or suffer a material reduction in their purchase orders, revenue could decline and our business, financial condition and results of operations could be materially and adversely affected.

Increased Price Pressure

We have experienced and continue to experience pricing pressure in the sale of our products, from both competitors and customers. Pricing pressures typically have become more intense during cyclical downturns when competitors seek to maintain or increase market share, reduce inventory or introduce more technologically advanced products or lower cost products. In addition, we may agree to pricing concessions or extended payment terms with our customers in connection with penetrating new markets, volume orders or to improve cost of ownership in highly competitive applications. Our business, financial condition, margins or results of operations may be materially and adversely affected by competitive pressure and price-based competition.

Revenues are Largely Based on the Sale of a Small Number of Product Units

We derive a substantial portion of our revenue from the sale of a relatively small number of products. Accordingly, our revenues, margins and other operating results could fluctuate significantly from quarter to quarter depending upon a variety of factors in addition to those described above, including:

- changes in the timing of orders and terms or acceptance of product shipments by our customers;
- changes in the mix of products and services that we sell;
- timing and market acceptance of our new product introductions; and
- delays or problems in the planned introduction of new products, or in the performance of any such products following delivery to customers.

As a result of these risks, we believe that quarter-to-quarter comparisons of our revenue and operating results may not be meaningful, and that these comparisons may not be an accurate indicator of our future performance.

Risks Related to Our Supply Chain and Production

Variability of Production Capacity

To meet rapidly changing demand in the industries we serve, we must effectively manage our resources and production capacity. During periods of decreasing demand for our products, we must be able to appropriately align our cost structure with prevailing market conditions and effectively manage our supply chain. Our ability to rapidly and effectively reduce our cost structure in response to such downturns is limited by the fixed nature of many of our expenses in the near term and by our need to continue our investment in product technology and to support and service our products. Conversely, when upturns occur in the markets we serve, we may have difficulty rapidly and effectively increasing our manufacturing capacity or procuring sufficient materials to meet sudden increases in customer demand that could result in the loss of business to our competitors and harm to our relationships with our customers. In addition, our new manufacturing capability with the acquisition of Topwin in China has not been proven at the high volumes we anticipate for that facility. If we are not able to timely and appropriately adapt to changes in our business environment, our business, financial condition or results of operations may be materially and adversely affected.

Reliance on Critical Suppliers

We use a wide range of components from numerous suppliers in the manufacture of our products, including custom electronic, laser, optical and mechanical components. We generally do not have guaranteed supply arrangements with our suppliers. We seek to reduce the risk of production and service interruptions and shortages of key parts by selecting and qualifying alternative suppliers for key parts, monitoring the financial stability of key suppliers and maintaining appropriate inventories of key parts. Although we make reasonable efforts to ensure that parts are available from multiple suppliers, some key parts are available only from a single supplier or a limited group of suppliers in the short term. In addition, some of the lasers we use in our products are difficult to manufacture, and as a result we may not receive an adequate supply of lasers in a timely fashion to fill orders. Operations at our suppliers’ facilities are subject to disruption or discontinuation for a variety of reasons, including changes in business relationships, competitive factors, financial difficulties, work stoppages, fire, natural disasters or other causes. Any such disruption or discontinuation to our suppliers’ operations could interrupt or reduce our manufacturing activities and delay delivery of our products, any or all of which could materially and adversely affect our results of operations. In addition, when markets recover from economic downturns, there is a heightened risk that one or more of our suppliers may not be able to meet our increased demand requirements, adversely impacting our ability to fulfill orders and win business with our customers.

Utilization of Contract Manufacturers

We have arrangements with contract manufacturers to complete the manufacturing of certain of our product subcomponents. Any significant interruption in our contract manufacturers’ ability to provide manufacturing services to us as a result of contractual disputes with us or another party, labor disruptions, financial difficulties, natural disasters, delay or interruption in the receipt of inventory, customer prioritization or other causes could result in reduced manufacturing capabilities or delayed deliveries for certain of our products, any or all of which could materially and adversely affect our results of operations.

Charges for Excess or Obsolete Inventory

One factor on which we compete is the ability to ship products on schedules required by customers. In order to facilitate timely shipping, management forecasts demand, both in type and amount of products, and these forecasts are used to determine inventory to be purchased. We also order materials based on our technology roadmap, which represents management’s assessment of technology that will be utilized in new products that we develop. Certain types of inventory, including lasers and optical equipment, are particularly expensive and may only be used in the production of a single type of product. If actual demand is lower than forecast with respect to the type or amount of products actually ordered, or both, our inventory levels may increase. As a result, there is a risk that we may have to incur material accounting charges for excess and obsolete inventory if inventory cannot be used, which would negatively affect our financial results. Also, if we alter our technology or product development strategy, we may have inventory that may not be usable under the new strategy, which may also result in material accounting charges. For example, during 2016 , we recorded approximately $1.4 million of charges in cost of sales for inventory written off associated with discontinued products.

Uncertainties Resulting from Regulations Regarding Components

Many countries, including the United States and those in the European Union and China, have implemented directives that restrict the sale of new electrical and electronic equipment containing certain hazardous substances, and require a disclosure if certain metals used in products are not from a conflict free source. The directives could restrict our ability to sell our products in certain countries and affect sourcing at competitive prices and availability in sufficient quantities of certain minerals used in the manufacture of our products. In addition, our reputation could be harmed if we are required to disclose that metals in our products are not from conflict free sources.

Risks Related to Our Organization

Operating a Global Business

International shipments accounted for 90% of net shipments in 2016, with 83% of our net shipments to customers in Asia. We expect that international shipments will continue to represent a significant percentage of net sales in the future. We also have significant foreign operations, including manufacturing facilities in Singapore and China, research and application development facilities in Canada, France, China and Korea, and sales and service offices in various countries. Under our globalization strategy, we intend to increase our foreign operations in the future. Our non-U.S. sales, purchases and operations are subject to risks inherent in conducting business abroad, many of which are outside our control, including the following:

- periodic local or geographic economic downturns and unstable political conditions;
- price and currency exchange controls;
- fluctuation in the relative values of currencies;
- difficulty in repatriating money, whether as a result of tax laws or otherwise;
- difficulties protecting intellectual property;
- compliance with labor laws and other laws governing employees;
- local labor disputes;
- shipping delays and disruptions;
- unexpected changes in trading policies, regulatory requirements, tariffs and other barriers; and
- difficulties in managing a global enterprise, including staffing, collecting accounts receivable, and managing suppliers, distributors and representatives.

Our business and operating results could also be impacted, directly or indirectly, by natural disasters, outbreaks of infectious disease, military action, international conflicts, terrorist activities, civil unrest and associated political instability. Many of our facilities, including our Portland, Oregon headquarters, are in areas with known earthquake risk. Some of these events or circumstances may also result in heightened security concerns with respect to domestic and international travel and commerce, which may further affect our business and operating results. In particular, due to these uncertainties, we are subject to the following additional risks:

- future tightening of immigration controls may adversely affect the residence status of non-U.S. engineers and other key technical employees in our U.S. facilities or our ability to hire new non-U.S. employees in such facilities;
- more frequent instances of shipping delays;
- demand for our products may not increase or may decrease; and
- our customers or suppliers may experience financial difficulties or cease operations.

Implementation and Modification of Globalization Strategy

We are continuing to implement and expand our globalization strategy in which we are moving certain operational resources and capabilities to different countries in Asia to be closer to many of our significant customers to reduce costs and to develop low-cost follow-on solutions to our products. As part of this strategy, we opened a manufacturing facility in Singapore in the fourth quarter of 2010, which manufactures certain IP, MP, SP and CTP products and is now our primary system manufacturing facility. We also acquired Topwin, a Chinese manufacturer of laser-based systems, in January 2015 to gain entry into the low-cost solutions market in China. In 2016, we opened an applications development center in Korea in order to increase responsiveness and increase access to local customers.

We believe this strategy will enhance customer relationships, improve our responsiveness, reduce our manufacturing costs for certain products and allow us to compete with low-cost competitors, including those who develop systems employing processes developed by us.

Our globalization strategy is subject to a variety of complexities and risks, many of which may divert a substantial amount of management’s time. These risks include:

- challenges in designing facilities that can be scaled for future expansion, replicating current processes and bringing new facilities up to full operation;
- unpredictable costs, redundancy costs and cost overruns for developing facilities and acquiring equipment;

- building local management teams, technical personnel and other staff for functions that we have not previously conducted outside of the United States;
- technical obstacles such as poor production or process yield and loss of quality control during the ramp of a new facility;
- re-qualifications and other procedures that may be required by our customers;
- our ability to bring up local suppliers to meet our quality and cycle-time needs;
- our ability to reduce costs in the United States as we add costs elsewhere;
- rapidly changing business conditions that may require plans to be changed or abandoned before they are fully implemented; and
- challenges posed by distance and by differences in language and culture.

These and other factors could delay the continuing development, expansion and implementation of our strategy, as well as impair our gross margins, delay shipments and deliveries, cause us to lose sales, require us to write off investments already made, damage our reputation and harm our business, financial condition and results of operations. If we decide to change our globalization strategy, we may incur charges for certain costs incurred. For example, the Company announced a restructuring plan in 2015 which led to the impairment of associated leasehold improvements and other assets for our Chelmsford facility. The estimated future liability associated with the lease commitments was accrued net of estimated sublease rental income. However, to the extent the property is vacated or payments are not made by the sub-lessee, the Company will incur the full amounts of the ongoing lease obligation.

Acquisitions and Divestitures

We may make acquisitions of, or significant investments in, other businesses with complementary products, services or technologies, such as our June 2012 acquisition of Eolite Systems, our May 2013 acquisition of the Semiconductor Systems business from GSI Group, Inc., our January 2015 acquisition of Topwin and our August 2016 acquisition of Visicon Technologies, Inc. Acquisitions involve numerous risks, many of which are unpredictable and beyond our control, including:

- difficulties and increased costs in connection with integration of personnel, operations, technologies and products of the acquired businesses;
- difficulties in implementation of our enterprise resource planning (ERP) system into the acquired company’s operations;
- diversion of management’s attention from other operational matters;
- the potential loss of key employees of the acquired company;
- lack of synergy or inability to realize expected synergies resulting from the acquisition;
- the inability to successfully enter new markets expected to result from the acquisition;
- acquired assets becoming impaired as a result of technological advancements or worse-than-expected performance by the acquired company;
- difficulties establishing satisfactory internal controls and accounting practices at the acquired company;
- difficulties implementing internal manufacturing processes at the acquired company;
- risks related to the culture, language, and local practices of the acquired company;
- risks and uncertainties relating to the performance of the combined company following the transaction; and
- acquiring unanticipated liabilities for which we will not be indemnified.

Furthermore, the accounting for an acquisition could result in significant charges resulting from amortization or write-off of intangible assets and goodwill we acquire. Our inability to effectively manage these risks or lower levels of revenue, profitability or cash flows for acquired businesses and assets could result in our inability to realize the anticipated benefits of an acquisition on a timely basis, or at all, and materially and adversely affect our business, financial condition and results of operations. In addition, all acquisition transaction costs must be expensed as incurred rather than capitalized, which may have a material adverse effect on our results of operations.

The means by which we finance an acquisition may also significantly affect our business or the value of the shares of our common stock. If we issue common stock to pay for an acquisition, the ownership percentage of our existing shareholders will be diluted and the value of the shares held by our existing shareholders could be reduced. If we use cash on hand to pay for an acquisition, the payment could significantly reduce the cash that would be available to fund our operations or to use for other purposes. If we borrow funds in connection with an acquisition, we would be required to use cash to service the debt and to comply with financial and other covenants.

Security Breaches

We store sensitive data, including intellectual property, our proprietary business information and that of our customers, suppliers and business partners, and personally identifiable information of our employees, on our networks. The secure maintenance and transmission of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other actions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, disrupt our operations and damage our reputation, which could adversely affect our business, revenues and competitive position.

Hiring and Retention of Personnel

Our continued success depends in part upon the services of our key managerial, financial and technical personnel. The loss of key personnel, or our inability to attract, assimilate and retain qualified personnel, could result in the loss of customers, inhibit our ability to operate and grow our business and otherwise have a material adverse effect on our business and results of operations. We have previously had to, and may in the future have to, impose salary reductions on employees during economic downturns in an effort to maintain our financial position. On several occasions in recent years executives and other employees have received limited or no annual bonuses due to our financial performance relative to the performance parameters in our annual bonus plans. These events may have an adverse effect on employee loyalty and may make it more difficult for us to attract and retain key personnel. Competition for qualified personnel in the industries and locations in which we compete for talent is intense, and we may not be successful in attracting and retaining qualified personnel. We may incur significant costs in our efforts to recruit and retain key personnel, which could affect our financial position and results of operations.

Our ability to retain key personnel and execute our strategy may also be adversely affected by the transition to a new CEO. On October 3, 2016 Michael Burger became our President and Chief Executive Officer, replacing Edward C. Grady, who held the position since 2014.

Risks Related to Technology

Markets Characterized by Rapid Technological Change

The markets for our products are characterized by rapid technological change and innovation, frequent new product introductions, changes in customer requirements and evolving industry standards. Our future performance will depend on the successful development, introduction and market acceptance of new and enhanced products that address technological changes and the requirements of current and potential customers. The development of new, technologically advanced products is a complex and uncertain process, requiring high levels of innovation and highly skilled engineering and development personnel, as well as the accurate anticipation of technological and market trends. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully, if at all, or on a timely basis. The introduction by us or by our competitors of new or enhanced products, or alternative technologies, may cause our customers to defer, change or cancel orders for our existing products or cease purchasing our products altogether. Further, we cannot assure that our new products will gain timely market acceptance or that we will be able to respond effectively to product announcements by competitors, technology changes or emerging industry standards. If we are unable to develop new or enhanced products to address product or technology changes or new industry standards on a timely basis or at all, or if our new or enhanced products are not accepted by the market, or if our customers adopt alternative technologies, our business, financial condition and results of operations may be adversely affected.

Need to Invest in Research and Development

Our industry is characterized by the need for continued investment in research and development. Because of intense competition in the industries in which we compete, if we were to fail to invest sufficiently in research and development, our products could become less attractive to our current and potential customers or obsolete, and our business and financial condition could be materially and adversely affected. As a result of our need to maintain our spending levels in this area, our operating results could be materially harmed if our net sales decline. In addition, as a result of our emphasis on research and development and technological innovation, our operating costs may increase in the future, and research and development expenses may increase as a percentage of total operating expenses and as a percentage of net sales.

Need to Broaden our Marketing and Channel Capability

The laser microfabrication industry is comprised of broad set of markets and applications and represents significant opportunities for growth. In order to access these opportunities, we are broadening our approach from customer centric to market based. This will require the hiring, development, and application of new marketing capability and channel access. Our ability to successfully access and compete in these broader markets will be partially dependent on our development of these new skills, capabilities and customer relationships. Our inability to do so would harm our business and adversely affect our revenues and profitability.

Products are Highly Complex

Our products are highly complex, and our extensive product development, manufacturing and testing processes may not be adequate to detect all defects, errors, failures and quality issues that could impact customer satisfaction or result in claims against us. As a result, we may have to replace certain components or provide remediation in response to the discovery of defects in products after they are shipped. The occurrence of any defects, errors, failures or quality issues could result in cancellation of orders, product returns, diversion of our resources, legal actions by our customers and other losses to us or to our customers. These occurrences could also result in the loss of, or delay in, market acceptance of our products, loss of sales and increased expenses and warranty costs, which would harm our business and adversely affect our revenues and profitability.

Risks Related to Legal Matters

Protection of Proprietary Rights – Generally

Our success depends significantly upon the protection of our proprietary rights. We attempt to protect our proprietary rights through patents, copyrights, trademarks, maintenance of trade secrets and other measures, including entering into confidentiality agreements. We incur substantial costs to obtain and maintain patents and to defend our intellectual property rights. We rely upon the laws of the United States and foreign countries where we develop, manufacture or sell our products to protect our proprietary rights. We may not be successful in protecting these proprietary rights, these rights may not provide the competitive advantages that we expect, or other parties may challenge, invalidate or circumvent these rights.

Protection of Proprietary Rights – Foreign Jurisdictions

Our efforts to protect our intellectual property may be less effective in some foreign countries where intellectual property rights are not as well protected as in the United States. Many United States companies have encountered substantial problems in protecting their proprietary rights against infringement in foreign countries. If we fail to adequately protect our intellectual property in these countries, it could be easier for our competitors to sell competing products in foreign countries, which could result in reduced sales and gross margins.

Intellectual Property Infringement Claims

Several of our competitors hold patents covering a variety of technologies, applications and methods of use similar to some of those used in our products. While we attempt in our designs to avoid patent infringement, from time to time we and our customers have received correspondence from our competitors claiming that some of our products, as used by our customers, may be infringing one or more of these patents. Competitors or others have in the past and may in the future assert infringement claims against our customers or us with respect to current or future products or uses, and these assertions may result in costly litigation or require us to obtain a license to use intellectual property rights of others. If claims of infringement are asserted against our customers, those customers may seek indemnification from us for damages or expenses they incur.

If we become subject to infringement claims, we will evaluate our position and consider the available alternatives, which may include seeking licenses to use the technology in question or defending our position. These licenses, however, may not be available on satisfactory terms or at all. If we are not able to negotiate the necessary licenses on commercially reasonable terms or successfully defend our position, our financial condition and results of operations could be materially and adversely affected.

We also defend our patent and intellectual property portfolio. For example, we initiated litigation in 2014 against Humo Laboratory, LTD. in Japan and against Eo Technics Co., Ltd., in South Korea for infringement of key patents. There is no assurance that this litigation will be successful, and we may incur significant legal fees to prosecute these claims.

Tax Audits and Changes in Tax Law

We are periodically under audit by United States and foreign tax authorities and may have exposure to additional tax liabilities as a result. Significant judgment is required in determining our provision for income and other tax liabilities. Although we believe our tax estimates are reasonable, the final outcome of tax audits and the impact of changes in tax laws or the interpretation of tax laws could result in material differences from what is reflected in historical income tax accruals. If additional taxes are assessed as a result of an examination, a material effect on our financial results, tax positions or cash flows could occur in the period or periods in which the determination is made.

We previously benefited from a tax incentive program in Singapore pursuant to which we pay no Singapore income tax with respect to our manufacturing income. The incentive period ended on June 30, 2016. The Company has applied for an extension of benefits beyond the incentive period, and if the extension is not received, we may lose the benefits of the advantageous tax provision.

Legal Proceedings

From time to time we are subject to various legal proceedings, including breach of contract claims and claims that involve possible infringement of patent or other intellectual property rights of third parties or by third parties. It is inherently difficult to assess the outcome of litigation matters, and there can be no assurance that we will prevail in any litigation. Any litigation could result in substantial cost and diversion of management's attention, which by itself could have a material adverse effect on our financial condition and results of operations. Further, adverse determinations in such litigation could result in loss of our property rights, subject us to significant liabilities, require us to seek licenses from others or prevent us from manufacturing or selling our products, any of which could materially adversely affect our business, financial condition, results of operations or cash flows.

Provisions Restricting Our Acquisition

Our articles of incorporation and bylaws contain provisions that could make it harder for a third party to acquire us without the consent of our Board of Directors. In addition, the Oregon Control Share Act and the Oregon Business Combination Act limit the ability of parties who acquire a significant amount of voting stock to exercise control over us. These provisions may have the effect of lengthening the time required for a person to acquire control of us through a proxy contest or the election of a majority of our Board of Directors, may deter efforts to obtain control of us and may make it more difficult for a third party to acquire us without negotiation. These provisions may apply even if the offer may be considered beneficial by our shareholders.

Risks Related to Financial Matters

Liquidity

We may require greater working capital to operate than similar size businesses in many other industries. As of October 1, 2016 , we had working capital of $115.5 million , including $56.2 million in cash and short-term investments. Our operating cash flows were negative for most quarters from September 2013 through March 2015 and for the quarter ending October 1, 2016 and could be negative again in future periods. If revenues were to grow, we would expect increased working capital needs for receivables and inventory.

As of April 2, 2016, we have permanently reinvested $37.0 million of foreign earnings primarily related to manufacturing operations in Singapore and China (Topwin). The Company's net investment exposure in foreign subsidiaries translated into U.S. dollars using the period-end exchange rates at April 2, 2016 and March 28, 2015 was approximately $56.9 million and $64.3 million, respectively. The potential loss in fair value resulting from a hypothetical 10% adverse change in foreign exchange rates would be approximately $5.7 million and $6.4 million at April 2, 2016 and March 28, 2015, respectively. Foreign exchange rate gains or losses on foreign investments as of April 2, 2016 were reflected as a cumulative translation adjustment, net of tax, and do not affect the Company's results of operations.

While we have a credit facility in place, if we fail to meet the covenants in our credit facility, including a quick ratio and an EBITDA loss threshold measured on a trailing twelve month basis, access to the facility may be limited or the facility may become unavailable altogether. EBITDA losses, such as those experienced in the second quarter of 2017, negatively impact our ability to maintain compliance with these covenants.

If we were to obtain financing by selling stock or convertible securities, the ownership of existing shareholders would be diluted. If we were to require additional liquidity and were unable to obtain financing with acceptable terms, or at all, our business and our ability to continue operations could be materially and adversely affected.

In addition, most of our contracts to acquire inventory represent purchase commitments. As a result, if we experience lower than anticipated demand for our products, in many cases we would not be able to avoid the cost of purchasing the associated inventory, which could negatively impact our results of operations and liquidity.

Unfavorable Currency Exchange Rate Fluctuations

Currency exchange rate fluctuations could have an adverse effect on our sales and results of operations and we could experience losses with respect to forward exchange contracts into which we may enter. Unfavorable currency fluctuations could require us to increase prices to foreign customers, which could result in lower net sales by us to those customers. Alternatively, if we do not adjust the prices for our products in response to unfavorable currency fluctuations, our results of operations could be materially and adversely affected. In addition, some of our foreign sales are denominated in the currency of the country in which these products are sold and the currency we receive in payment for such sales could be less valuable at the time of receipt as a result of exchange rate fluctuations. From time to time, we enter into forward exchange contracts to hedge the value of accounts receivable primarily denominated in euros and other currencies. However, we cannot be certain that our efforts will be adequate to protect us against significant currency fluctuations or that such efforts will not expose us to additional exchange rate risks, which could adversely affect our results of operations.

Fluctuations in Effective Tax Rate

As a global company, we are subject to taxation in the United States and numerous foreign jurisdictions. Our effective tax rate is subject to fluctuation from one period to the next because the income tax rates for each year are a function of many factors, including: (a) taxable income levels and the effects of a mix of profits (losses) earned by ESI and our subsidiaries in numerous tax jurisdictions with a broad range of income tax rates; (b) our ability to utilize deferred tax assets; (c) taxes, refunds, interest or penalties resulting from tax audits; (d) the magnitude of various credits and deductions as a percentage of total taxable income; (e) the ability to maintain our Pioneer Status in Singapore; and (f) changes in tax laws or the interpretation of such tax laws. In addition, we currently have a valuation allowance against domestic tax assets as a result of historic losses recorded in the United States. Changes in the mix of these items may cause our effective tax rate to fluctuate between periods, which could have a material adverse effect on our financial position and results of operations.

Impairment of Goodwill, Intangible and Long-Lived Assets

We held a total of $6.6 million in acquired intangible assets, net of accumulated amortization, and $12.7 million in goodwill, subject to adjustment for final purchase price allocation associated with the Visicon acquisition at October 1, 2016 . Events may occur or circumstances change such that the carrying value is not recoverable or it becomes more likely than not that the fair value of long-lived assets is reduced below the carrying value of the reporting unit.

For example, in the fourth quarter of 2015 we realigned our products into two segments as a result of changes in our go-to-market strategies, common customer characteristics, and information utilized to manage our business. This reorganization required the Company to reassign goodwill to the new reporting units based on the relative fair value of the respective reporting units, and as a result we concluded that $7.9 million of goodwill was impaired as of March 28, 2015.

We performed a review of our acquired definite-lived intangible assets in the fourth quarter of 2016, including a review for impairment based on certain triggering events and no significant impairments of intangible assets were identified, other than a $0.4 million intangible associated with developed technology for our Topwin reporting unit. We performed our annual goodwill impairment analysis of the associated reporting unit and determined that the goodwill was not impaired. The estimated fair value of the Topwin reporting unit exceeded the carrying value of the reporting unit by approximately $1.7 million or over 18%. The assessment of whether goodwill is impaired is sensitive to many financial and valuation assumptions, including projections of future performance, the determination of weighted average cost of capital, and estimates of terminal value. Our projections include assumptions regarding the adoption of new products, expected margins, and other factors, and a significant deterioration or deviation between expectations and actual performance may trigger impairment. For example, should the performance of our Topwin reporting unit not meet our expectations, impairment of goodwill associated with that reporting unit may be triggered, which could have a material impact on our business, financial condition and results of operations.

In addition, certain of our long-lived assets such as machinery and equipment may experience impairment as a result of such events as the introduction of new products, changes in technology or changes in customer demand patterns. We depreciate our machinery and equipment at levels we believe are adequate; however, there can be no assurance that there will not be a future impairment that could have a material impact on our business, financial condition and results of operations.

Stock Price Volatility

The market price of our common stock has fluctuated widely. During the second quarter of 2017 , our stock price fluctuated between a high of $6.98 per share and a low of $4.93 per share. Consequently, the current market price of our common stock may not be indicative of future market prices, and we may be unable to sustain or increase the value of an investment in our common stock. Factors affecting our stock price, many of which are outside of our control, may include:

- variations in operating results from quarter to quarter;
- changes in earnings estimates by analysts or our failure to meet analysts' expectations;
- changes in the market price per share of our public company customers;
- market conditions in the consumer electronics, semiconductor and other industries into which we sell products;
- general economic conditions;
- political changes, hostilities or natural disasters;
- low trading volume of our common stock;
- the number of analysts covering our common stock;
- being added or removed from market indices;
- policies of institutional investors restricting or prohibiting investments in stock with a market price below certain thresholds;
- stock price volatility based on one or a few investors buying or selling a large number of shares over days or weeks, due to relatively low volumes of trading in our stock; and
- the number of firms making a market in our common stock.

In addition, the stock market has experienced significant price and volume fluctuations in recent years. These fluctuations have particularly affected the market prices of the securities of high-technology companies like ours. These market fluctuations could adversely affect the market price of our common stock.

Impairment of Investments

Our investment portfolio is primarily comprised of commercial paper, debt securities issued by U.S. governmental agencies and money market securities. These investments are intended to be highly liquid and low risk. If the markets for these securities were to deteriorate for any reason, including as a result of a downgrade in the credit rating of U.S. government securities, the liquidity and value of these investments could be negatively affected, which could result in impairment charges. Any such impairment charges may have a material impact on our financial condition and results of operations.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud and our stock price may be adversely affected.

Effective internal controls are necessary for us to provide reliable financial reports and effectively prevent fraud. If we cannot provide reliable financial reports or prevent fraud, our operating results could be harmed.

In connection with our 2015 audit we identified material weaknesses in our internal control over financial reporting related to the accounting and disclosure of complex, judgmental accounting matters and non-routine transactions. The matters involving internal controls and procedures that our management considered to be material weaknesses included the risk assessment and certain process and review level controls associated with complex and non-routine transactions affecting goodwill, disclosures related to the Topwin acquisition, disclosures related to operating segments, and presentation of service revenue and associated cost of sales on the statements of operations. Management believes that it identified and implemented additional controls that remediated these material weaknesses by the end of 2016.

The requirements of Section 404 of the Sarbanes-Oxley Act are ongoing and also apply to future years. We expect that our internal control over financial reporting will continue to evolve as our business develops. Although we are committed to continue to improve our internal control processes and we will continue to diligently and vigorously review our internal control over financial reporting in order to ensure compliance with the Section 404 requirements, any control system, regardless of how well designed, operated and evaluated, can provide only reasonable, not absolute, assurance that its objectives will be met. Therefore, we cannot be certain that in the future additional material weaknesses or significant deficiencies will not exist or otherwise be discovered. If such weaknesses or deficiencies occur, they could result in misstatements of our results of operations, additional restatements of our consolidated financial statements, a decline in our stock price and investor confidence, or other material effects on our business, reputation, results of operations, financial condition or liquidity.

Item 4. Mine Safety Disclosures

Not Applicable.

Item 6. Exhibits

This list is intended to constitute the exhibit index.

3.1	Third Restated Articles of Incorporation, as amended. Incorporated by reference to Exhibit 3.1 of the Company's Annual Report on Form 10-K for the fiscal year ended April 3, 2010.
3.2	2009 Amended and Restated Bylaws, as amended. Incorporated by reference to Exhibit 3.1 of the Company’s Current Report on Form 8-K filed on March 26, 2015
10.1	First Amendment to Loan and Security Agreement, dated July 12, 2016, between the Company and Silicon Valley Bank. Incorporated by reference to Exhibit 10.1 of the Company’s Current Report on Form 8-K filed on July 14, 2016.
10.2	Employment Agreement, dated August 19, 2016, between the Company and Michael Burger. Incorporated by reference to Exhibit 10.1 of the Company’s Current Report on Form 8-K filed on August 19, 2016.
10.3	2004 Stock Incentive Plan, as amended. Incorporated by reference to Exhibit 10.1 of the Company’s Current Report on Form 8-K filed on August 22, 2016.
10.4	Retention Bonus Agreement, dated August 31, 2016, between Electro Scientific Industries, Inc. and Paul R Oldham. Incorporated by reference to Exhibit 10.1 of the Company’s Current Report on Form 8-K filed on September 2, 2016.
10.5	Form of Performance-Based Restricted Stock Unit Agreement for May 2016 awards.
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document *
101.SCH	XBRL Taxonomy Extension Schema Document *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase 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 *

* Pursuant to Rule 406T of Regulation S-T, these interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933 or Section 18 of the Securities and Exchange Act of 1934, and otherwise are not subject to liability under those sections.

SIGNATURES

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

Date: November 8, 2016

ELECTRO SCIENTIFIC INDUSTRIES, INC.

By: /s/ Michael D. Burger

Michael D. Burger

President and Chief Executive Officer

(Principal Executive Officer)

By: /s/ Paul Oldham

Paul Oldham

Senior Vice President of Administration, Chief Financial Officer and Corporate Secretary

(Principal Financial Officer)

PERFORMANCE-BASED
RESTRICTED STOCK UNITS AWARD AGREEMENT

This Award Agreement (the “Agreement”) is entered into as of May 17, 2016 by and between Electro Scientific Industries, Inc., an Oregon corporation (the “Company”), and __________________________ (“Recipient”), for the grant of restricted stock units with respect to the Company’s Common Stock (“Common Stock”). By accepting this award Recipient agrees to be bound by the terms and conditions of this Agreement.

On May 17, 2016, the Compensation Committee of the Company’s Board of Directors made a restricted stock units award to Recipient pursuant to the Company’s 2004 Stock Incentive Plan (the “Plan”). The award is intended to qualify as performance-based compensation under Section 162(m) of the Internal Revenue Code of 1986, as amended (the “Code”). Recipient desires to accept the award subject to the terms and conditions of this Agreement.

IN CONSIDERATION of the mutual covenants and agreements set forth in this Agreement, the parties agree to the following:

(a) **Grant and Terms of Restricted Stock Units** . The Company grants to Recipient under the Plan ______ restricted stock units, subject to the adjustments, restrictions, terms and conditions set forth in this Agreement.

(a) *Rights under Restricted Stock Units* . A restricted stock unit (an “RSU”) represents the unsecured right to require the Company to deliver to Recipient one share of Common Stock for each RSU. The number of shares of Common Stock deliverable with respect to each RSU is subject to adjustment as determined by the Board of Directors of the Company as to the number and kind of shares of stock deliverable upon any merger, reorganization, consolidation, recapitalization, stock dividend, spin-off or other change in the corporate structure affecting the Common Stock generally.

(b) *Vesting* . The RSUs issued under this Agreement shall initially be 100% unvested and subject to forfeiture as set forth below.

(i) Except as set forth in Section 1(d), if Recipient ceases to be employed by the Company for any reason or for no reason prior to May 16, 2019, the unvested RSUs shall be forfeited to the Company.

(ii) To the extent that the number of RSUs first specified above are reduced in accordance with Section 1(b)(iii) and except as provided in Section 1(d), the reduction shall be forfeited to the Company. The extent to which any Performance Goal is achieved, if at all, shall be determined by a date that is no later than December 31 of the calendar year in which the Performance Period to which the Performance Goal relates ends. Nothing contained in this Agreement shall confer upon Recipient any right to be employed by the Company or to continue to provide services to the Company or to interfere in any way with the right of the Company to terminate Recipient’s services at any time for any reason, with or without cause.

(iii) The RSUs shall be earned based on three “Performance Goals” based on the relative performance of the Company’s Common Stock against the Russell 2000 Index, as follows:

(A) ___________ [insert # equal to 33.3%] of the RSUs will be earned based on the Relative Performance Percentage for the period beginning May 17, 2016 and ending May 16, 2017 (the "First Performance Period"), as follows: (i) 100% of the RSUs will be earned if the Relative Performance Percentage for the First Performance Period is equal to 100%; (ii) for every percentage point that the Relative Performance Percentage is less than 100% for the First Performance Period, three percent fewer of the RSUs available to be earned with respect to the First Performance Period will be earned, so that no RSUs will be earned with respect to that period if the Relative Performance Percentage is less than or equal to 66.7%; and (iii) for every percentage point that the Relative Performance Percentage for the First Performance Period is greater than 100%, two percent more of the RSUs available to be earned for such period will be earned, so that 150% of the target RSUs for such period will be earned if the Relative Performance Percentage is 125% for such period, provided that no more than 150% of the RSUs available to be earned in the First Performance Period may be earned based on this Performance Goal.

(B) ___________ ___________ [insert # equal to 33.3%] of the RSUs will be earned based on the Relative Performance Percentage for the period beginning May 17, 2016 and ending May 16, 2018 (the "Second Performance Period"), as follows: (i) 100% of the RSUs will be earned if the Relative Performance Percentage for the Second Performance Period is equal to 100%; (ii) for every percentage point that the Relative Performance Percentage is less than 100% for the Second Performance Period, three percent fewer of the RSUs available to be earned with respect to the Second Performance Period will be earned, so that no RSUs will be earned with respect to that period if the Relative Performance Percentage is less than or equal to 66.7%; and (iii) for every percentage point that the Relative Performance Percentage for the Second Performance Period is greater than 100%, two percent more of the RSUs available to be earned for such period will be earned, so that 200% of the target RSUs for such period will be earned if the Relative Performance Percentage is 150% for such period, provided that no more than 200% of the RSUs available to be earned in the Second Performance Period may be earned based on this Performance Goal.

(C) ___________ ___________ [insert # equal to 100%] of the RSUs will be earned based on the Relative Performance Percentage for the period beginning May 17, 2016 and ending May 16, 2019 (the "Third Performance Period"), as follows: (i) 100% of the RSUs will be earned if the Relative Performance Percentage for the Third Performance Period is equal to 100%; (ii) for every percentage point that the Relative Performance Percentage is less than 100% for the Third Performance Period, three percent fewer of the RSUs available to be earned with respect to the Third Performance Period will be earned, so that no RSUs will be earned with respect to that period if the Relative Performance Percentage is less than or equal to 66.7%; and (iii) for every percentage point that the Relative Performance Percentage for the Third Performance Period is greater than 100%, two percent more of the RSUs available to be earned for such period will be earned, so that 200% of the target RSUs for such period will be earned if the Relative Performance Percentage is 150% for such period, provided that no more than 200% of the RSUs available to be earned at target performance in the Third Performance Period may be earned based on this Performance Goal, with such number reduced by the aggregate number of RSUs earned with respect to the First Performance Period and the Second Performance Period (but with such reduction not to reduce the number of RSUs earned in the Third Performance Period below zero).

(D) Notwithstanding anything in this Agreement to the contrary, the total number of RSUs that are earned under this Agreement shall not exceed the lesser of (i) a number of shares with an aggregate value, based on the closing price of the Company's Common

Stock in the last trading date preceding the vesting date, that is five times the result of (A) [insert total target # of shares] by (B) [insert closing price on May 17, 2016], rounded down to the nearest whole share, and (ii) 200% of the number of RSUs set forth in the first sentence of Section 1.

(E) Performance of the Company's Common Stock relative to the Russell 2000 Index for a given Performance Period will be measured as follows:

(i) To determine relative performance, the baseline metrics are the 20 trading day average closing price of the Company's Common Stock and the Russell 2000 Index, as reported in The Wall Street Journal, or such other reliable source as is determined by the Compensation Committee or the Board of Directors, in its sole discretion, with the last of the 20 trading days falling on May 16, 2016. This 20 day average establishes both the Company baseline stock price (the "Company Baseline Stock Price") and the Russell 2000 Index baseline (the "Russell 2000 Baseline") against which future Company stock and Russell 2000 Index performance will be compared.

(ii) Next, the Company will measure the 20 trading day average closing price of the Company and the Russell 2000 Index, as reported in The Wall Street Journal, or such other reliable source as is determined by the Compensation Committee or the Board of Directors, in its sole discretion, with the last trading day of such 20-trading day period ending on the last trading day of the applicable Performance Period (establishing both the "Company Closing Price" and the "Russell 2000 Index Closing Price" for such Performance Period).

(iii) The Company will then measure Company performance for a given Performance Period by dividing the Company Closing Price by the Company Baseline Stock Price, with the quotient expressed as a percentage of the Company Baseline Stock Price (the "Company Percentage Performance"). The Company will then measure Russell 2000 Index Performance over the same period by dividing the Russell 2000 Index Closing Price by the Russell 2000 Index Baseline with the quotient expressed as a percentage of the Russell 2000 Index Baseline (the "Russell 2000 Index Percentage Performance").

(iv) The Company will then subtract the Russell 2000 Index Percentage Performance from the Company Percentage Performance, then add 100 to the result, with the final result constituting the relative Company Common Stock performance as a percentage (the "Relative Performance Percentage").

(F) "Performance Period" means any of the First Performance Period, the Second Performance Period or the Third Performance Period.

(G) The number of RSUs determined pursuant to clauses (A), (B) and (C) of this Section 1(b)(iii) (subject to the limitations in clause (D)) shall vest on the last day of the Third Performance Period, subject to Section 1(b)(i). Except as provided in Section 1(d), any RSUs that are not vested at the end of the Third Petrformance Period shall be forfeited.

(c) *Delivery Date* . Except as set forth in Section 1(d)(iv), the delivery date for shares of Common Stock with respect to RSUs earned subject to this Agreement shall be as soon as practicable after the Third Performance Period ends, but in no event later than December 31 of the calendar year in which such fiscal year ends.

(d) Proration upon Termination for Certain Reasons Prior to End of Performance Period; Treatment on Change in Control.

(i) *Proration on Death or Total Disability* . If Recipient ceases to be an employee of the Company prior to the end of the Performance Period by reason of Recipient's death or total disability, the RSUs that have not otherwise vested or been forfeited pursuant to Section 1(b)(iii)(G) shall not be forfeited under Section 1(b)(i) and the following shall apply:

(1) With respect to any Performance Period that is completed prior to Recipient's termination of employment, the number of RSUs earned with respect to such Performance Period(s) shall not be reduced.

(2) With respect to the any Performance Period during which Recipient's employment terminates, the number of RSUs Recipient would otherwise be entitled to receive pursuant to Section 1(b)(iii) with respect to that Performance Period if Recipient were employed through the end of that Performance Period (the "Base Payout") shall be reduced to a number determined by multiplying the Base Payout by a percentage calculated by dividing the number of months elapsed from the beginning of such Performance Period to the date of termination of employment (rounded down to the whole month) by the number of months in such Performance Period. RSUs for the Performance Period in which employment terminates that exceed the reduced number shall be forfeited to the Company.

(3) The shares of Common Stock with respect to RSUs determined under (1) and (2) shall be delivered as soon as practicable on or after the end of the Third Performance Period in which employment terminates, but in no event later than December 31 of the calendar year in which the Third Performance Period ends.

(4) The term "total disability" means a medically determinable mental or physical impairment that is expected to result in death or has lasted or is expected to last for a continuous period of 12 months or more and that, in the opinion of the Company and two independent physicians approved by the Company, causes Recipient to be unable to perform his or her duties as an employee, director, officer or consultant of the Company and unable to engage in any substantial gainful activity. Total disability shall be deemed to have occurred after both of the following have occurred:

(A) The two independent physicians have furnished their written opinion of total disability to the Company; and

(B) The Company has reached an opinion of total disability.

(ii) *Double Trigger Acceleration on Change in Control* .

(1) The number of unvested RSUs Recipient would otherwise be entitled to receive pursuant to Section 1(b)(iii) if Recipient were employed through the end of the Third Performance Period shall immediately vest (provided, however, that if vesting occurs pursuant to this Section 1(d)(ii) during or prior to the end of a Performance Period that has not yet ended it will be conclusively presumed that the RSUs would have been at the 100% vesting level for each such unfinished Performance Period, subject to any action taken by the Compensation Committee or the Board of Directors pursuant to clause (1) or (2) of Section 1(d)(iii), including the final paragraph of Section 1(d)(iii)) if a Change in Control (as defined below) occurs and either:

(A) at any time after the Change in Control and on or before the first anniversary of the Change in Control, (i) the Recipient's employment is terminated by the

Company (or its successor) without Cause (as defined below), or (ii) the Recipient's employment is terminated by the Recipient for Good Reason (as defined below); or

(B) at any time after the Change in Control (i) the Company or the surviving or acquiring entity terminates this Agreement and all similar agreements, including because the achievement of any of the Performance Goals becomes reasonably unable to be determined;

Notwithstanding the foregoing, the RSUs may also immediately vest in connection with a sale of the Company as provided in Section 1(d)(iii) below.

(2) For purposes of this Agreement, a "Change in Control" of the Company shall mean the occurrence of any of the following events:

(A) At any time during a period of two consecutive years, individuals who at the beginning of such period constituted the Board of Directors of the Company ("Incumbent Directors") shall cease for any reason to constitute at least a majority thereof; provided, however, that the term "Incumbent Director" shall also include each new director elected during such two-year period whose nomination or election was approved by two-thirds of the Incumbent Directors then in office;

(B) Any "person" or "group" (within the meaning of Sections 13(d) and 14(d)(2) of the Exchange Act) shall, as a result of a tender or exchange offer, open market purchases or privately negotiated purchases from anyone other than the Company, have become the beneficial owner (within the meaning of Rule 13d-3 under the Exchange Act), directly or indirectly, of more than fifty percent (50%) of the then outstanding Common Stock of the Company;

(C) A consolidation, merger or plan of exchange involving the Company ("Merger") as a result of which the holders of outstanding securities of the Company ordinarily having the right to vote for the election of directors ("Voting Securities") immediately prior to the Merger do not continue to hold at least fifty percent (50%) of the combined voting power of the outstanding Voting Securities of the surviving corporation or a parent corporation of the surviving corporation immediately after the Merger, disregarding any Voting Securities issued to or retained by such holders in respect of securities of any other party to the Merger; or

(D) A sale, lease, exchange, or other transfer (in one transaction or a series of related transactions) of all or substantially all of the assets of the Company.

(3) For purposes of this Agreement, "Cause" shall mean (a) the willful and continued failure to perform substantially the Recipient's reasonably assigned duties with the Company (or its successor) (other than any such failure resulting from incapacity due to physical or mental illness) after a demand for substantial performance is delivered to the Recipient by the Company (or its successor) which specifically identifies the manner in which the Company (or its successor) believes that the Recipient has not substantially performed the Recipient's duties, (b) the willful engagement in illegal conduct which is materially and demonstrably injurious to the Company (or its successor), or (c) the commission of an act by Recipient, or the failure of Recipient to act, which constitutes gross negligence or gross misconduct. No act, or failure to act, shall be considered "willful" if the Recipient reasonably believed that the action or omission was in, or not opposed to, the best interests of the Company (or its successor).

(4) For purposes of this Agreement, "Good Reason" shall mean:

(A) the assignment of a different title, job or responsibilities that results in a decrease in the level of responsibility of the Recipient after the Change in Control when compared to the Recipient's level of responsibility for the Company's operations prior to the Change in Control; provided that Good Reason shall not exist if the Recipient continues to have the same or a greater general level of responsibility for Company operations after the Change in Control as the Recipient had prior to the Change in Control even if the Company operations are a subsidiary or division of the surviving company,

(B) a reduction in the Recipient's base pay as in effect immediately prior to the Change in Control,

(C) a material reduction in total benefits available to the Recipient under cash incentive, stock incentive and other employee benefit plans after the Change in Control compared to the total package of such benefits as in effect prior to the Change in Control, or

(D) the Recipient is required to be based more than 50 miles from where the Recipient's office is located immediately prior to the Change in Control except for required travel on company business to an extent substantially consistent with the business travel obligations which the Recipient undertook on behalf of the Company prior to the Change in Control.

(iii) *Sale of the Company* . If there shall occur a merger, consolidation or plan of exchange involving the Company pursuant to which the outstanding shares of Common Stock of the Company are converted into cash or other stock, securities or property, or a sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all, or substantially all, the assets of the Company, then, as determined by the Committee or the Board of Directors, either:

(1) the unvested RSUs shall be converted into restricted stock units for stock of the surviving or acquiring corporation in the applicable transaction, with the amount and type of shares subject thereto to be conclusively determined by the Committee, taking into account the relative values of the companies involved in the applicable transaction and the exchange rate, if any, used in determining shares of the surviving corporation to be held by the former holders of the Company's Common Stock following the applicable transaction, and disregarding fractional shares, with the dates for vesting of RSUs, payment and other terms of this Agreement unchanged;

(2) the unvested RSUs shall be converted into a cash payment obligation of the surviving or acquiring corporation in an amount equal to the proceeds a holder of the underlying shares would have received in proceeds from such transaction with respect to those shares, with the dates for vesting of RSUs, payment and other terms of this Agreement unchanged; or

(3) all of the unvested RSUs shall immediately vest based on the number of RSUs earned for completed Performance Periods and assuming 100% earning level for any uncompleted Performance Periods and all underlying shares shall be delivered simultaneously with the closing of the applicable transaction such that the Recipient will participate as a shareholder in receiving proceeds from such transaction with respect to those shares.

In the case of (1) and (2) if any Performance Period has not been completed as of the date of the transaction, the Company Closing Price for such Performance Period shall be deemed to be the price per share received by the Company's stockholders in the transaction. Relative performance for such uncompleted Performance Period shall then be measured against the Russell 2000 Index

performance from the Russell 2000 Index Baseline through the 20 trading day average closing price of the Russell 2000 Index in the period ending on the date of the closing of the transaction. The Company's stock performance relative to the Russell 2000 Index shall then be determined consistently with the methodology specified herein for completed Performance Periods. The number of RSUs subject to this Agreement so determined shall then continue to vest based upon Recipient's continuing service to the Company, the acquirer, or their parents or subsidiaries through May 16, 2019, subject to accelerated vesting as set forth in Section 1(d)(ii).

(iv) *Delivery Date* . For purposes of Section 1(d)(ii) or (iii), the delivery date for shares of Common Stock with respect to RSUs shall be as soon as practicable on or after the vesting described in such sections.

(e) *Forfeiture of RSUs on Other Terminations of Employment* . If Recipient ceases to be an employee of the Company for any reason that does not result in acceleration or payment pursuant to Section 1(d), Recipient shall immediately forfeit all outstanding but unvested RSUs granted pursuant to this Agreement and Recipient shall have no right to receive the related Common Stock.

(f) *Restrictions on Transfer and Delivery on Death* . Recipient may not sell, transfer, assign, pledge or otherwise encumber or dispose of the RSUs. Recipient may designate beneficiaries to receive stock if Recipient dies before the delivery date by so indicating on Exhibit A, which is incorporated into and made a part of this Agreement. If Recipient fails to designate beneficiaries on Exhibit A, the shares will be delivered to Recipient's estate.

(g) *Reinvestment of Dividend Equivalents* . On each date on which the Company pays a dividend on a share of Common Stock with respect to an RSU, the number of RSUs subject to this Agreement shall be increased by a number equal to the number of whole or fractional shares of Common Stock with a value equal to the value of the dividends that would have been paid on the stock deliverable pursuant to the RSUs (if such shares were outstanding), divided by the closing stock price on the dividend payment date. If the vesting date for any RSUs subject to this Agreement occurs within seven business days of the payment date for a dividend, the Company, at its option, may elect to pay to Recipient cash, net of withholding, equal to the cash dividend payable on the RSUs which so vest in lieu of increasing the number of RSUs subject to this Agreement.

(h) *Delivery on Delivery Date* . On the delivery date the Company shall deliver to Recipient a certificate for the number of shares of Common Stock represented by all RSUs having a delivery date on the same date, rounded down to the whole share. No fractional shares of Common Stock shall be issued. The Company shall pay to Recipient in cash an amount equal to the value of any fractional shares that would otherwise have been issued, valued as of the delivery date. If shares or cash are to be delivered on a particular date, the shares or cash shall be deemed delivered on that date for purposes of compliance with the terms of this Agreement if the cash or shares are actually delivered within 45 days after the specified date as determined in the Company's discretion with the Recipient having no right to determine the delivery date. Recipient shall not have any right to determine or direct the date of actual delivery; provided however, that delivery required to be made in no event later than December 31 of the calendar year in which the Performance Period ends must be made on or before such date.

(i) *Recipient's Rights as Shareholder* . Recipient shall have no rights as a shareholder with respect to the RSUs or the shares underlying them until the Company delivers the shares to Recipient on the delivery date.

(j) *Tax Withholding* . Recipient acknowledges that, not later than the actual delivery date, the value of delivered shares of Common Stock will be treated as ordinary compensation income for federal and state income and FICA tax purposes, and that the Company will be required to withhold taxes on this income amount. The Company will notify Recipient of the required withholding amount. In connection with the delivery of the certificate referred to in Section 1(h), Recipient shall pay to the Company the required withholding amount in cash or, at the election of Recipient (which election must be made on or before the vesting date), by surrendering to the Company for cancellation shares of the Company's Common Stock to be delivered with respect to the RSUs or other shares of the Company's Common Stock valued at the closing market price for the Company's Common Stock on the vesting date. If Recipient pays the withholding amount in shares of Common Stock, the Company shall pay to Recipient in cash the amount of any resulting over payment.

(k) *Section 409A* . The award made pursuant to this Agreement is intended to comply with and shall be interpreted in accordance with the requirements of Section 409A and Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance issued after the grant of the award. Without limiting the generality of the foregoing, notwithstanding anything to the contrary in this Agreement:

(i) Any payment of Non-Qualified Deferred Compensation made pursuant to a voluntary or involuntary termination of employment shall be withheld and not paid until Recipient incurs both (i) such a termination of employment and (ii) a "separation from service" with the Company within the meaning of Treas. Reg. Section 1.409A-1(h).

(ii) The provisions described in Sections 1(d)(ii)(1)(B) and 1(d)(iii)(3) shall apply only if such events qualify as a "termination or liquidation of the plan" within the meaning of Treas. Reg. § 1.409A-3(j)(4)(ix);

(iii) The provisions described in Section 1(d)(ii) shall apply only if the "Change in Control" as defined in 1(d)(ii)(2) qualifies as a "change of control event" within the meaning of Treas. Reg. § 1.409A-3(i)(5)(i)

(iv) If an amount is determined to be subject to applicable provisions of Section 409A of the Code, payment in connection with termination of employment for a reason other than death may not start or be made to Recipient if the Company determines Recipient is a "key employee" as defined in Section 416(i) of the Code, without regard to Section 416(i)(5) of the Code, before the date which is six months after the date of termination, notwithstanding any other provisions for time of payment in this Agreement, if such delay in payment is necessary to comply with Section 409A of the Code. The Company may determine that Recipient is a key employee in the event of doubt or to avoid impractical efforts or expense to make an exact determination of key employees. Recipient shall have no claim, rights or remedy if the determination is not correct.

(v) The Company may adopt such amendments to the award or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, that the Company determines are necessary or appropriate to (1) exempt the award from the application of Section 409A or preserve the intended tax treatment of the benefits provided with respect to the award, or (2) comply with the requirements of Section 409A.

(b) **Miscellaneous** .

(a) *Entire Agreement; Amendment* . This Agreement and the Plan (including without limitation Section 17 thereof) constitute the entire agreement of the parties with regard to the subjects hereof and may be amended only by written agreement between the Company and the Recipient.

(b) *Notices* . Any notice required or permitted under this Agreement shall be in writing and shall be deemed sufficient when delivered personally to the party to whom it is addressed or when deposited into the United States mail as registered or certified mail, return receipt requested, postage prepaid, addressed to Electro Scientific Industries, Inc., Attention: Corporate Secretary, at its principal executive offices or to the Recipient at the address of Recipient in the Company's records, or at such other address as such party may designate by ten (10) days' advance written notice to the other party.

(c) *Rights and Benefits* . The rights and benefits of this Agreement shall inure to the benefit of and be enforceable by the Company's successors and assigns and, subject to the restrictions on transfer of this Agreement, be binding upon the Recipient's heirs, executors, administrators, successors and assigns.

(d) *Further Action* . The parties agree to execute such further instruments and to take such further action as may reasonably be necessary to carry out the intent of this Agreement.

(e) *Applicable Law; Attorneys' Fees* . The terms and conditions of this Agreement shall be governed by the laws of the State of Oregon. In the event either party institutes litigation hereunder, the prevailing party shall be entitled to reasonable attorneys' fees to be set by the trial court and, upon any appeal, the appellate court.

ELECTRO SCIENTIFIC INDUSTRIES, INC.

By: __________
Authorized Officer

EXHIBIT A

DESIGNATION OF BENEFICIARY

Name ______________________________ **Social Security Number** ____-___-_____

I designate the following person(s) to receive any restricted stock units outstanding upon my death under the Performance-Based Restricted Stock Units Award Agreement with Electro Scientific Industries, Inc.:

Primary Beneficiary(ies)

Name _________________________ Social Security Number ____-___-_____
Birth Date _____________________ Relationship _________________________
Address___________________________ City__________ State____ Zip ________

Name _________________________ Social Security Number ____-___-_____
Birth Date _____________________ Relationship _________________________
Address___________________________ City__________ State____ Zip ________

Name _________________________ Social Security Number ____-___-_____
Birth Date _____________________ Relationship _________________________
Address___________________________ City__________ State____ Zip ________

If more than one primary beneficiary is named, the units will be divided equally among those primary beneficiaries who survive the undersigned.

Secondary Beneficiary(ies)

In the event no Primary Beneficiary is living at the time of my death, I designate the following the person(s) as my beneficiary(ies):

Name _________________________ Social Security Number ____-___-_____
Birth Date _____________________ Relationship _________________________
Address___________________________ City__________ State____ Zip ________

Name _________________________ Social Security Number ____-___-_____
Birth Date _____________________ Relationship _________________________
Address___________________________ City__________ State____ Zip ________

Name _________________________ Social Security Number ____-___-_____
Birth Date _____________________ Relationship _________________________
Address___________________________ City__________ State____ Zip ________

If more than one Secondary Beneficiary is named, the units will be divided equally among those Secondary beneficiaries who survive the undersigned.

This designation revokes and replaces all prior designations of beneficiaries under the Performance-Based Restricted Stock Units Award Agreement.

_______________________________ Date signed: ___________________, 20___
Signature

EXHIBIT 31.1

CERTIFICATION PURSUANT TO
SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002

I, Michael D. Burger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Electro Scientific Industries, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2016

/s/ Michael D. Burger

Michael D. Burger
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION PURSUANT TO
SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002

I, Paul Oldham, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Electro Scientific Industries, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2016

/s/ Paul Oldham

Paul Oldham
Senior Vice President of Administration,
Chief Financial Officer and Corporate Secretary

EXHIBIT 32.1

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

In connection with this quarterly report on Form 10-Q of Electro Scientific Industries, Inc. (the Company) for the quarterly period ended October 1, 2016 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Michael D. Burger, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

/s/ Michael D. Burger

Michael D. Burger
President and Chief Executive Officer

November 8, 2016

This certification is made solely for the purpose of 18 U.S.C. Section 1350, and not for any other purpose. A signed original of this written statement required by Section 906 has been provided to Electro Scientific Industries, Inc. and will be retained by Electro Scientific Industries, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.2

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

In connection with this quarterly report on Form 10-Q of Electro Scientific Industries, Inc. (the Company) for the quarterly period ended October 1, 2016 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Paul Oldham, Vice President of Administration, Chief Financial Officer, and Corporate Secretary of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

/s/ Paul Oldham

Paul Oldham
Senior Vice President of Administration,
Chief Financial Officer and Corporate Secretary

November 8, 2016

This certification is made solely for the purpose of 18 U.S.C. Section 1350, and not for any other purpose. A signed original of this written statement required by Section 906 has been provided to Electro Scientific Industries, Inc. and will be retained by Electro Scientific Industries, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.