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ELECTRO SCIENTIFIC INDUSTRIES INC

FORM 10-K
(Annual Report)

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

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

For the fiscal year ended April 2, 2016

OR

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

Commission File Number: 0-12853

ELECTRO SCIENTIFIC INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

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

None

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, without par value

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the Registrant is not required to file reports pursuant Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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

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

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

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

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates, computed by reference to the last sales price $4.59 as reported by the NASDAQ Stock Market, as of the last business day of the Registrant's most recently completed second fiscal quarter September 26, 2015 was $126,411,014 .

The number of shares outstanding of the Registrant's Common Stock as of June 10, 2016 was 31,471,682 shares.

Documents Incorporated by Reference

The Registrant has incorporated into Part III of this Form 10-K, by reference, portions of its Proxy Statement for its 2016 Annual Meeting of Shareholders.

ELECTRO SCIENTIFIC INDUSTRIES, INC.

2016 FORM 10-K ANNUAL REPORT

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PART I

Item 1. Business

This annual report on Form 10-K contains forward-looking statements that are subject to risks and uncertainties. Actual results may differ materially from the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed below in Item 1A Risk Factors.

Where You Can Find More Information

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (SEC) under the Securities Exchange Act of 1934 as amended (Exchange Act). You can inspect and copy our reports, proxy statements and other information filed with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. The SEC maintains an Internet site at *www.sec.gov* where you can obtain most of our SEC filings. We also make available, free of charge on our website at *www.esi.com* , our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after they are filed electronically with the SEC. The information found on our website is not part of this Form 10-K. You can also obtain copies of these reports by contacting Investor Relations at (503) 641-4141.

Fiscal Year

Our fiscal year consists of 52 or 53 weeks ending on the Saturday nearest March 31. Accordingly, our fiscal 2016 reporting period consisted of a 53 -week period ending on April 2, 2016 , our fiscal 2015 consisted of a 52 -week period ending on March 28, 2015 and our fiscal 2014 reporting period consisted of a 52 -week period ending on March 29, 2014 . All references to years or quarters relate to fiscal years or fiscal quarters unless otherwise noted.

Business Overview

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.

Industry Overview

The microelectronics, printed circuit board (PCB) and semiconductor industries continue to be driven by demand for advanced features and improved functionality in increasingly smaller and smarter consumer devices. The technologies for consumer electronic devices such as smart phones, tablets, wearable technologies, personal computers, mobile computing devices, video game systems and high-definition televisions have developed rapidly as increasingly affordable products have been introduced that offer more functionality in smaller packages. In addition, semiconductor and other advanced technologies are being used in a broadening set of markets and applications, including automotive, aerospace, medical, security and display.

These dynamics in turn are driving the need for faster, smaller, more complex, less expensive and higher-quality electronic devices and components. To achieve these improvements, component and other device manufacturers are increasing the circuit and feature densities in these devices and investing in new technologies.

For example, smaller and lighter semiconductor devices are driving the need to shrink the physical dimensions of the semiconductor packaging and the high density interconnect (HDI) circuit board on which they are mounted. In addition,

integrated circuit (IC) designers are moving high level interconnect from silicon to the package (ICP) to reduce overall cost in consumer devices. Higher operating speeds of computers and communication products require more input and output channels within packages and between the packages and the HDI circuit board. These trends require smaller, more accurate, and precisely tapered or shaped holes, known as vias, to create connections between layers and interconnecting devices. The continual trend toward smaller and smarter devices also requires the use of an increasing amount of flexible interconnect material between PCBs and other components. These flexible circuits require the smallest and most accurate vias to create the connections between these devices.

In addition, the ability to shrink the actual dimensions of a device is becoming increasingly more difficult, and producers are investing in new technologies, such as stacking thin silicon wafers to create advanced three dimensional (3D) chip packages. We believe this trend may drive additional applications for laser processing, including scribing and dicing of ultra-thin wafers, drilling of through silicon vias (TSV) and scribing of next generation thin films.

Smaller and more complex devices also require more capacitance to be designed into circuits. This has resulted in an increase in the use of smaller, higher-capacitance passive components such as MLCCs. In calendar year 2014, estimated production of MLCCs was approximately 3 trillion units. These MLCCs must be tested electrically and optically to characterize performance and ensure reliability. Automated equipment to test these MLCCs in the manufacturing environment, like our high capacitance tester, can test and sort up to one million parts per hour on parts with dimensions as small as 0.4 by 0.2 millimeters.

Our business is also comprised of specialized microfabrication applications. Any material that can be cut, drilled, marked or joined using a mechanical process can be microfabricated with greater precision and accuracy using a laser-based solution. As consumer electronics and other products or devices become more compact, mechanical processes will not be able to meet the stringent specifications demanded by producers. We believe the capabilities of laser-based solutions for microfabrication will enable our customers to continue to move beyond the limitations of mechanical processes and generate growth for us in the future.

Our Solutions

We believe our products address the needs of microelectronics, PCB and semiconductor manufacturers by providing them with a high return on their investment due to measurable production benefits such as lower cost of ownership, higher performance, continued miniaturization, greater reliability, and improved production yield.

Our core competencies enable us to design, manufacture, and market a variety of integrated laser-based solutions for microfabrication applications in high-volume manufacturing environments. These core competencies include a deep understanding of:

- laser/material interaction;
- laser beam positioning;
- optics and illumination including image processing and optical character recognition;
- high-speed motion control;
- small parts handling;
- proprietary laser technology including laser power control; and
- systems engineering.

We combine this technology expertise with a thorough understanding of our customers’ processes, and our manufacturing agility to respond rapidly to customer demand to develop and deliver integrated solutions and products that address multiple markets and applications.

Our customers manufacture components, interconnect/packaging devices, semiconductors, displays or other parts that serve a wide range of electronic applications. Our systems enable the manufacturing of these components and devices. The primary end-market applications for our customers are consumer electronics, including smart mobile devices such as smart phones and tablets, computers and semiconductors. These devices and applications are also utilized in a variety of other industries including automotive, aerospace, medical, security and general lighting.

Our Strategy

Our strategy is to leverage our core competencies to be a cost of ownership leader in laser-based microfabrication for microtechnology industries, including microelectronics, PCB, and semiconductor. These core competencies, combined with an understanding of our customers’ processes and the use of common platforms, enable us to address a broad range of laser-based applications and end markets within these industries. We intend to focus our efforts on businesses and applications where our differentiated capability enables us to be a market leader. The elements of our strategy are to (1) expand our addressable market

by focusing on large, existing, near-adjacent applications in the growing laser microfabrication market, (2) invest in localized demonstration capability, application development and design, particularly in China, (3) leverage proprietary laser technology to create competitive advantage, (4) strengthen marketing capability and broaden customer focus, and (5) develop and leverage flexible platforms and technology for cost of ownership and time to market advantage in new applications.

Expand our addressable market by focusing on large, existing, near-adjacent applications in the growing laser microfabrication market

Growth in consumer electronics, smart phones, tablets, notebook computers and other smart devices is driving increased miniaturization and complexity of the underlying components and materials, which in turn is creating additional opportunities for laser-based microfabrication. In addition, these materials and components are being adopted in electronic devices, sensors, displays, and other technologies ubiquitously across many markets and applications including automotive, aerospace, medical, communications, appliances, security, general lighting, energy, and entertainment. As a result, we believe there are many large, existing, near-adjacent opportunities for laser micromachining for both the devices themselves and components within them. Our strategy is to expand our addressable market in these near-adjacent applications where we can utilize our technology for a cost of ownership advantage for our customers. Our primary areas of focus are to defend and grow our presence in PCB and interconnect value-added laser processes, expand our consumer electronics device micromachining product and customer base, and extend the reach of our existing product portfolio. For example, during 2015 and 2016 we grew our position in flexible circuit manufacturing and introduced new capabilities in IC packaging and high density interconnect. In addition, we expanded our portfolio of mid-range micromachining products with the acquisition of Wuhan Topwin Optoelectronics Technology Co., Ltd. (Topwin) based in Wuhan, China, and subsequent introduction of the Jade and Garnet micromachining platforms to address a variety of materials at a lower price point. Finally, we leveraged our previous investment in semiconductor to introduce and receive qualification for semiconductor wafer scribing. We believe our growth will be driven by overall growth in the market for these devices, expanding the applications and customers we address, and growing our share in these adjacent markets.

Invest in localized demonstration capability, application development and design, particularly in China

A significant portion of our customers are located in Asia, particularly China. In addition, purchase decisions, product evaluation and qualification are increasingly made locally. As a result, we believe we need to have a stronger local presence in order to respond rapidly to customer requirements and timelines. Our strategy is to invest additional resources for local demonstration, application development, and design capability. In addition, we expect to develop local manufacturing capability or delivery capability through third party and/or local sources of supply. For example, this year we introduced several new products that were designed and manufactured in China, partnering our applications and design center in Shanghai, China with the recently acquired Topwin organization. These new products demonstrate our local design and supply chain capabilities and allow us to be more responsive to customer requirements and timelines in the region. In addition, we opened a center for advanced applications development in Korea. We believe this investment will improve our response to local requirements and enable greater access to the Korean market.

Leverage proprietary laser technology to create competitive advantage

ESI has been a pioneer in laser-material interaction and has developed deep expertise in the use of multiple types of laser technology to develop customer solutions. Over the last five years we have invested in proprietary laser technology through the acquisitions of PyroPhotonics Lasers, Inc., Eolite Systems and the Semiconductor Systems business of GSI Group, Inc. The acquisition of Eolite provided us access to high power UV nanosecond and low-cost picosecond fiber lasers with a unique, scalable architecture. Combined with capability from our Pyrophotonics laser business, these lasers address multiple micromachining applications including thin film processing, glass processing, material trimming, precision drilling, and organic and metal cutting. We intend to utilize these lasers internally to provide differentiated capability and lower cost of ownership as well as provide potential additional commercial revenue for the Company with the ability to customize lasers to specific customer applications in markets or applications that are not core to our internally developed systems. In 2016, we successfully ramped our Boreas laser which provided key differentiation for our latest generation flexible drilling product, Gemstone, and is our largest deployment of internally developed lasers for our own systems to date. Our strategy is to expand the utilization of these technologies to enable differentiated capability within our systems, lower cost, and generate incremental revenue and gross profit for the Company.

Strengthen marketing capability and broaden customer focus

The Company’s close collaboration with key customers who are leaders in their respective industries has enabled ESI to develop world-class technologies that meet the emerging needs of these demanding customers. Our strategy is to modify our approach to product development so we can meet needs across broader markets as opposed to a few key customers. We believe

this new approach will enable our products to serve the needs of a far larger portion of the laser microfabrication market. We have strengthened our marketing capability and channel reach through external hiring, employee training and development, increased localization, and use of channel partners.

Leverage flexible platforms and technology for cost of ownership and time to market advantage

Our key technological capabilities include laser-material interaction, laser beam positioning, optics and illumination, high-speed motion control systems, small parts handling systems and systems integration. Our strategy is to incorporate these capabilities into a series of flexible platforms that have multiple common elements but are tailored to specific applications and to leverage our investment in these platforms to address multiple new applications and market opportunities. In addition, we believe that leveraging common platforms will increase efficiency in the Company through greater use of common parts, lower inventory requirements, shorter cycle times, and leveraged engineering investment across the Company. During 2016 we introduced several new platforms that with minimal modification can address a variety for laser micromachining applications.

Our Products

During 2016, we operated 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.

Component Processing

Interconnect Products (IP)

Our laser systems for interconnect products address multiple applications and materials on a broad set of substrates, panels, and continuous-feed reels primarily for the PCB and packaging industries. Our laser via drilling systems target electrical interconnect applications that require high accuracy and small via (hole) dimensions to create electrical connections between layers in flexible circuits, high-density circuit boards and IC packages. Our micro via drilling technology addresses the rapidly changing applications in IC packages, multichip modules and HDI circuit boards. Our ultraviolet (UV) laser processing systems employ state-of-the-art technology in lasers, optics and motion control. These products include single-beam and multi-beam systems that produce high-quality vias with the best-in-class placement accuracy for improved yield of packages and substrates.

These same technologies can be used to singulate individual PCB’s (depaneling), rout copper openings on PCB material, precisely cut flexible circuit material, and mark individual packages or circuit boards.

Semiconductor Products (SP)

Our semiconductor manufacturing products address multiple applications that utilize laser energy to process materials on wafer-based substrates and semiconductor devices and packages. Applications include processing of silicon wafers, memory devices, mixed signal devices, hybrid circuits, sensors, and resistors.

Semiconductor Systems

In May 2013, we acquired the assets of the Semiconductor Systems business from GSI Group Inc. These products include industry leading wafer marking equipment, wafer and circuit trim tools, and LCD repair tools. Wafer marking equipment is used for serialization and wafer identification by both manufacturers of semiconductor wafers and within semiconductor fabs. Wafer and circuit trim tools are laser systems that adjust the electrical performance of semiconductor devices or hybrid circuits by removing a precise amount of material from one or more circuit components. In addition, the company continues to sell a limited number of memory yield improvement systems and related laser upgrades.

3D Semiconductor Wafer Processing

The advent of 3D chip packaging technologies is driving the need for silicon wafers to become thinner in order to allow for stacking of wafers within the same packaging geometry. As wafers become thinner, they become more challenging to cut into discrete chips using traditional mechanical saws. Our model 9900 uses a laser to dice ultra-thin silicon wafers, those with a thickness of 50 microns or below, and to singulate interposers. During 2016 we introduced Ultrus ™ , based on the 9900 platform that can scribe next-generation thin film materials that lend themselves to laser processing. As 3D technologies are

developed, we believe the use of advanced laser technology will become increasingly important to productivity and performance.

Display Repair

Our laser display repair systems are utilized to improve yields in the manufacture of flat panel displays. During production, individual pixels of a display may develop electrical defects that result in no light emission or the emission of only a steady white light. To correct these defects, flat panel display producers employ a laser repair process to isolate the electrical defects during production by cutting the inputs to the pixel. Our laser systems are primarily sold to the manufacturers of LCD and OLED repair tools as a key component of their products.

Component Test Products (CTP)

Our component test products combine high-speed small parts handling technology with real-time control systems to provide highly automated, cost-effective inspection solutions for manufacturers of MLCCs and other passive components such as capacitor arrays, inductors, resistors, varistors and hybrid circuits. These components, produced in quantities of trillions of units per year, process analog, digital and high-frequency signals and are used extensively in nearly all electronic products. Our MLCC test systems employ high-speed handling and positioning techniques to precisely load, test and sort MLCCs based on their electrical energy storage capacity, or capacitance, and their electrical energy leakage, or dissipation factor. Our 35XX series is the most productive tester in the market today. Our latest 3510 model enables high-speed testing of the industry’s smallest metric 0402 capacitors used primarily in advanced cell phone and tablet designs. We also produce consumable products such as carrier plates and termination belts, both of which are used to hold MLCCs during the manufacturing and testing process.

Micromachining

Micromachining Products (MP)

Micromachining products are comprised of laser systems that are used primarily by manufacturers of end devices across multiple industries 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.

Micromachining Systems

As technologies enable consumer electronics and other devices to become more compact, mechanical processes are not able to meet the stringent specifications demanded by manufacturers. We offer several platforms that enable customers to perform precision drilling, scribing, cutting, etching, routing or marking on many different types of materials and devices including glass, metal, plastic, paint and ceramics. We also offer laser products for integration into customers' tools or process that are useful for applications such as thin film processing, glass processing, material trimming, precision drilling, and organic and metal cutting.

In 2015, we acquired Topwin, a laser system design and manufacturing company located in China. During 2016, we introduced the Jade and Garnet platforms, which incorporate ESI laser technology and software controls on top of base platforms originally designed by Topwin, to address multiple applications requiring mid-range performance, particularly in China. In addition, Topwin offers a portfolio of low-cost laser products that address a variety of marking, cutting and welding applications.

In addition, we offer laser ablation systems that ablate material for identification and analysis applications, including forensics, mineral analysis and research.

Customers

Our top ten customers for 2016 , 2015 and 2014 accounted for approximately 51% , 40% and 41% of total net sales, respectively. One customer, Apple Inc., and its affiliates, accounted for approximately 15% , 9% and 15% of total net sales in 2016 , 2015 and 2014 , respectively.

Sales, Marketing and Service

We sell our products worldwide through direct sales and service offices, value-added resellers and independent representatives located around the world. ESI has direct sales and service personnel in Oregon, California and several other states; China, Japan, Korea, Singapore and Taiwan in Asia; and France, Germany and the United Kingdom in Europe. We serve select customers in Asia, the Americas, Europe and additional countries through manufacturers’ representatives.

We have a substantial base of installed products in use by leading microelectronics and semiconductor manufacturers. We emphasize strong working relationships with these customers to meet their needs for additional systems and to facilitate the successful development and sale of new products to these customers.

We generally employ service personnel wherever we have a significant installed base. We offer a variety of warranty, maintenance and parts replacement programs to support the requirements of our customers' high-volume manufacturing environments.

Backlog

Backlog consists of purchase orders for products and spare parts that we expect to ship within 12 months and service contracts for performance generally within 24 months. Backlog does not include deferred system revenue. Backlog was $55.2 million at April 2, 2016 compared to $36.5 million at March 28, 2015 , representing an increase of 51% primarily as a result of increased orders in the fourth quarter of 2016 compared to the fourth quarter of 2015. Our stated backlog is not necessarily indicative of sales for any specific future period, because of possible order cancellations or deferrals, shipping or acceptance delays, and backlog does not represent any assurance that we will realize a profit from filling the orders.

Research, Development and Technology

We believe that our ability to compete effectively and deliver customer solutions depends, in part, on our ability to maintain and expand our expertise in core technologies and product applications. Our primary core competencies and capabilities include:

- laser-material interaction;
- high-speed, micron-level motion control systems;
- precision optics;
- proprietary laser technology;
- laser power control;
- image processing and optical character recognition;
- high-speed, small parts handling;
- real-time production-line electronic measurement;
- real-time operating systems; and
- systems design and integration.

Our research and development expenditures for 2016 , 2015 and 2014 were $32.4 million (18% of net sales), $35.2 million (22% of net sales) and $37.8 million (21% of net sales), respectively.

Competition

Our markets are dynamic, cyclical and highly competitive. The principal competitive factors in our markets are total cost of ownership, product performance, ease of use, reliability, service, technical support, product roadmap, price, proprietary technology, manufacturing responsiveness and relationships with customers. We believe that our products compete favorably with respect to these factors. Some of our competitors have greater financial, engineering and manufacturing resources and larger distribution networks than we do. Some of our customers or potential customers develop, or have the ability to develop, manufacturing equipment similar to our products. Competition in our markets may intensify and our technological advantages may be reduced or lost as a result of technological advances by competitors or customers or changes in electronic device processing technology.

Our component processing products compete with laser systems provided by Via Mechanics, Ltd., EO Technics Co. Ltd., LPKF Laser & Electronics AG, Mitsubishi Electric Corporation, Orbotech Ltd., InnoLas Systems GmbH, DISCO Corporation, Laser Solutions, Inc., Quantel USA, Inc., HOYA Corporation, Humo Laboratory Ltd. as well as component manufacturers that develop systems for internal use. Our Micromachining Products compete with laser and laser systems provided by Hans Laser, HG Laser and several Chinese and Korean companies who compete within their local markets.

Manufacturing and Supply

Our primary production facilities are located in Singapore; Portland, Oregon; Klamath Falls, Oregon; and Wuhan, China. Our Singapore facility is our primary systems manufacturing facility and manufactures certain IP, SP, CTP and MP products. The Portland facility primarily provides advanced manufacturing and prototype capability. The Klamath Falls facility manufactures CTP consumable products. The Wuhan facility is primarily used to manufacture our Topwin micromachining products. Our Singapore and Wuhan operations are located in leased facilities. As we continue our efforts to streamline the organization and improve efficiencies, we expect a growing percentage of final systems will be shipped from Singapore and China.

We use qualified manufacturers to supply many components and sub-system modules for our products. Our systems use high-performance computers, peripherals, lasers and other components from various suppliers. Some of the components we use are obtained from a single source or a limited group of suppliers. An interruption in the supply of a particular component would have a temporary adverse impact on us. We believe our relationships with our suppliers are good.

Patents and Other Intellectual Property

We have a policy of seeking patents, when appropriate, on inventions relating to products and methods that are discovered or developed as part of our ongoing research, development and manufacturing activities. We owned 370 United States patents and 642 patents issued outside of the United States as of April 2, 2016 . Additionally, as of April 2, 2016 , we had 33 patent applications pending in the United States and 340 patent applications pending outside of the United States. Although our patents are important, we believe that the competitiveness of our products also depends on the technical competence and innovation of our employees.

We rely on copyright protection for our proprietary software. We also rely upon trade secret protection for our confidential and proprietary information. Others may independently develop substantially equivalent proprietary information and techniques, and we may be unable to meaningfully protect our trade secrets.

Employees

As of April 2, 2016 , we employed 698 people of whom 651 were permanent and 47 were temporary. Many of our employees are highly skilled, and our success will depend in part upon our ability to attract and retain such employees, who are in great demand. We have never had a work stoppage or strike, and no employees are represented by a labor union or covered by a collective bargaining agreement. We consider our employee relations to be good.

Environmental Compliance

During fiscal 2016, we retained ISO 14001 certification via Surveillance Assessment for our environmental management system for our Portland, Oregon operations. We do not expect compliance with international, federal, state and local provisions that have been enacted or adopted related to the discharge of materials into the environment or otherwise relating to protection of the environment to have a material effect on our capital expenditures, earnings or competitive.

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

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. 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 the Company 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 Conflict Minerals Regulation

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.

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. and our January 2015 acquisition of Topwin. 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.

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 and capabilities. 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 in 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 currently benefit 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 ends on June 30, 2016. While the Company has failed to meet certain of the associated requirements for the incentive in the past, it has obtained a waiver for certain periods and believes that it is more likely than not the Company will continue to receive the associated tax incentives for balance of the incentive period. Although the Company has applied for an extension of benefits beyond the incentive period, there is no assurance that these benefits will be extended.

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. At April 2, 2016 , we had working capital of $127 million , including $58 million in cash and short-term investments. Our operating cash flows were negative for most quarters since September 2013 through March 2015. In 2016 we had positive operating cash flows with revenue growth driving operating cash flows of $4.7 million . 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, the level of availability and cost are based on maintaining certain levels of qualified receivables and domestic cash. As a result, if either of these balances decreases significantly, our ability to access the facility may be limited or costs may be higher. In addition, if we fail to meet the covenants in our credit facility, including the tangible net worth covenant, the facility may not be available to us. If we were to require additional financing, there is no assurance it would be available on terms that are acceptable to us or at all. In addition, 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 financing and were unable to do so on 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 $7.1 million in acquired intangible assets, net of accumulated amortization, and $7.4 million in goodwill at April 2, 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 fiscal 2016 , our stock price fluctuated between a high of $7.36 per share and a low of $4.21 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 municipal debt 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 has identified and implemented additional controls, which have remediated these material weaknesses.

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 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our executive and administrative headquarters, which houses our primary engineering and marketing functions, advanced manufacturing capability for new products, and manufacturing of select legacy products are located in a three-building complex with 197,838 square feet of space on 10.15 acres in Portland, Oregon. Additionally, our component test products consumables are manufactured at a 53,000 square foot plant on 31 acres in Klamath Falls, Oregon. We own all of these buildings. We believe the productive capacity of these facilities to be adequate and suitable for the requirements of our business for the foreseeable future.

Our primary system manufacturing facilities are located in leased facilities in Singapore. We lease approximately 26,000 square feet of facilities in Singapore where we manufacture certain Micromachining and Component Processing products. We also lease an approximately 23,000 square foot facility in Sunnyvale, California that is used primarily for engineering, marketing and as a demonstration center for our microfabrication systems. We lease approximately 25,000 square feet of facilities in Wuhan, China that is used primarily for manufacturing of our Topwin micromachining products. Additionally, we lease other office and facility space in various locations throughout the United States and various foreign countries.

We lease approximately 32,500 square feet of facilities in Chelmsford, Massachusetts that have been used primarily for engineering and manufacture of our Semiconductor Systems products. However, as a part of the Company’s plan to streamline its manufacturing and development activities, the Company transitioned the manufacturing and development activities to other U.S. facilities during 2016. In the third quarter of 2016, we entered into a sublease for this property and the associated rental income partially offsets the Company's ongoing lease obligation.

Item 3. 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 4. Mine Safety Disclosures

Not Applicable.

PART II

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

Common Stock Prices

Our common stock trades on the NASDAQ Stock Market under the symbol ESIO. There were approximately 401 shareholders of record as of June 10, 2016 , and on that date there were 31,471,682 common shares outstanding. The closing price on June 10, 2016 was $6.63 per share.

The following table shows the high and low closing prices for our common stock as reported on the NASDAQ Stock Market for the fiscal quarters indicated:

Fiscal 2016	High	Low
Quarter 1	7.36	5.05
Quarter 2	5.40	4.53
Quarter 3	5.28	4.21
Quarter 4	6.20	5.40

Fiscal 2015	High	Low
Quarter 1	$10.01	$6.68
Quarter 2	7.70	5.98
Quarter 3	7.77	6.13
Quarter 4	7.88	6.16

Equity Compensation Plan Information

Disclosures related to securities authorized for issuance under our Equity Compensation Plans are incorporated by reference into Item 12 of this annual report on Form 10-K, Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters, from our Proxy Statement for our fiscal 2016 annual meeting.

Dividends

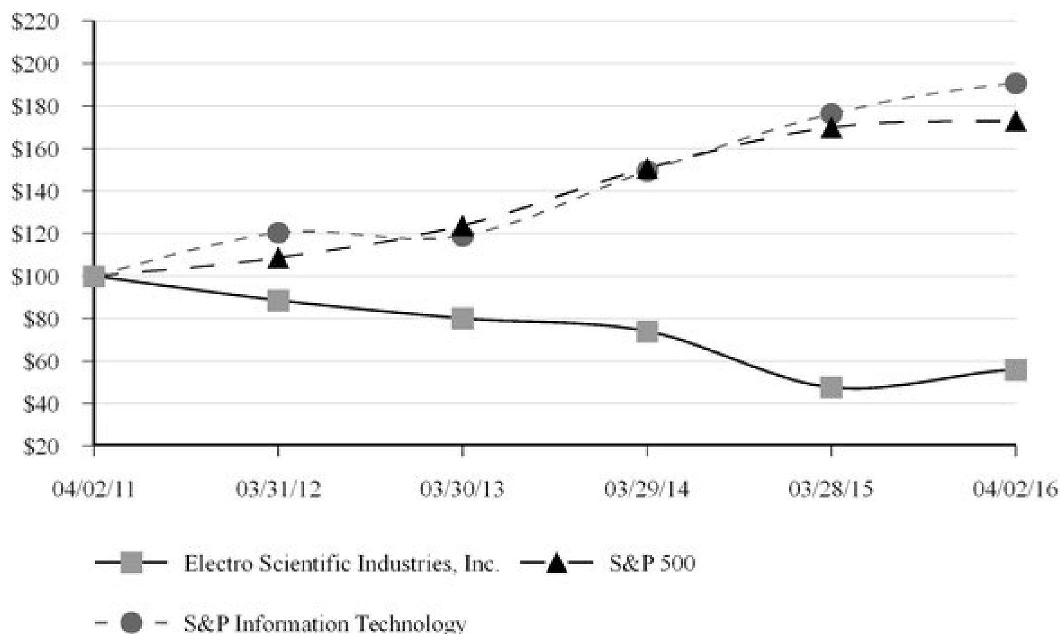
In February 2015, the Board of Directors suspended the quarterly dividend which was adopted by the Company in December 2011. The Company paid dividends in the first three quarters of 2015 under the 2011 dividend policy with aggregate dividends of $7.3 million . The following table summarizes the quarterly dividends declared and paid by us in 2015 :

Date Declared	Record Date	Payable Date	Amount per Share
November 18, 2014	December 1, 2014	December 15, 2014	$0.08
August 21, 2014	September 2, 2014	September 12, 2014	$0.08
May 15, 2014	May 27, 2014	June 10, 2014	$0.08

Stock Performance Graph

The graph below compares the cumulative 60-month total return to holders of Electro Scientific Industries, Inc. common stock with the cumulative total returns of the S&P 500 Index and the S&P Information Technology Index for the same period. The graph assumes that the value of the investment in Electro Scientific Industries, Inc. common stock and in each of the indices (including reinvestment of dividends) was $100.00 on April 2, 2011 and tracks it through April 2, 2016 .

Historical stock price performance should not be relied upon as indicative of future stock price performance.



*$100 invested on 4/2/2011 in stock or 3/31/ 2011 in index, including reinvestment of dividends.
Indexes calculated on month-end basis.

	Cumulative Total Return [1]					
	April 2, 2011	**March 31, 2012**	**March 30, 2013**	**March 29, 2014**	**March 28, 2015**	**April 2, 2016**
Electro Scientific Industries, Inc.	**100.00**	**88.51**	**80.07**	**73.94**	**47.61**	**55.88**
S&P 500	**100.00**	**108.54**	**123.69**	**150.73**	**169.92**	**172.95**
S&P Information Technology Index	**100.00**	**120.21**	**118.86**	**149.28**	**176.32**	**190.53**

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Item 6. Selected Financial Data

(In thousands, except per share data)	2016	2015	2014	2013	2012
Statement of Operations Data					
Net sales	$ 184,391	$ 159,118	$ 181,167	$ 216,625	$ 254,229
Provision for (benefit from) income taxes	(16)	234	(92)	39,851	(1,417)
Net (loss) income	(12,257)	(43,811)	(38,334)	(54,716)	4,904
Net (loss) income per share—basic	(0.39)	(1.43)	(1.28)	(1.86)	0.17
Net (loss) income per share—diluted	(0.39)	(1.43)	(1.28)	(1.86)	0.17
Cash dividends paid per outstanding common share	—	0.24	0.32	2.32	0.08
Balance Sheet Data					
Cash and cash equivalents, restricted cash, short-term investments and auction rate securities	$ 57,665	$ 57,606	$ 106,905	$ 145,057	$ 198,723
Working capital	126,658	124,593	164,835	194,406	269,532
Net property, plant and equipment	24,543	25,858	27,930	27,894	32,103
Total assets	220,100	221,240	270,209	322,208	433,210
Shareholders' equity	170,031	177,321	222,881	264,142	378,670

1. Fiscal 2016 operating expenses included $2.8 million for restructuring costs, which primarily consisted $1.4 million each of employee severance costs and charges for asset write-off and related items. Fiscal 2016 cost of sales included $ 1.4 million for inventory write-offs and $0.4 million of intangible write-offs related to discontinued products. Fiscal 2016 also included $4.2 million of charges for share-based compensation expense, $2.4 million of charges for purchase accounting amortization which included $1.4 million for amortization of acquired intangible assets and $1.0 million of compensation expense related to the purchase of Topwin (Refer to Note 6 "Business Acquisition" for discussion of compensation consideration related to acquisitions).
2. Fiscal 2015 included non-cash goodwill impairment charge of $7.9 million to write down the goodwill to its implied fair value as of March 28, 2015, $3.0 million for restructuring costs for the Chelmsford facility closure, which primarily consisted of $2.0 million for employee severance and related costs and $1.0 million for inventory write-offs. Fiscal 2015 also included $4.5 million of charges for share-based compensation expense, $4.3 million for impairment of a minority investment, $1.5 million for amortization of acquired intangible assets and a $0.6 million gain on liquidation of a foreign subsidiary. The Company also paid $9.0 million in cash for the Topwin acquisition during fiscal 2015.
3. Fiscal 2014 included $1.1 million for restructuring costs, which primarily consisted of $0.8 million charge towards obligations for our outgoing Chief Executive Officer and $0.2 million of charges related to asset write-offs. Fiscal 2014 also included $12.8 million of charges in cost of sales for inventory write-offs, $9.7 million for impairment of a minority equity investment, $6.1 million for share-based compensation expense, $2.9 million for amortization of acquired intangible assets, including $0.3 million of accelerated amortization, $1.3 million for net gain on sale of property and equipment, $0.6 million of accelerated depreciation on assets that will no longer be utilized and a $0.5 million of gain on acquisition of Semiconductor Systems business.
4. Fiscal 2013 included $2.6 million for restructuring costs, which primarily consisted of $1.5 million of employee severance costs and $1.1 million of charges related to asset write-offs. Fiscal 2013 also included $21.0 million of charges in cost of sales for inventory write-offs, $8.1 million for share-based compensation expense, $4.8 million for amortization of acquired intangible assets, including $2.3 million of accelerated amortization, $1.2 million for net gain on sale of property and equipment, and a $15.3 million benefit for net legal settlement proceeds.
5. Fiscal 2013 included a charge of $46.9 million to increase the valuation allowance on deferred tax assets.
6. Fiscal 2012 included $3.8 million for restructuring costs, which primarily consisted of $1.9 million of employee severance costs and $1.7 million of accelerated depreciation for certain assets. Fiscal 2012 also included $2.0 million of charges in cost of sales for an inventory write-off, $11.5 million for share-based compensation expense, $1.7 million for amortization of acquired intangible assets, $1.2 million for loss on disposal of assets and the write-off of engineering materials, $0.6 million for legal settlement costs, and a gain of $2.7 million from sale of previously impaired auction rate securities.
7. The Company paid cash dividends of $7.3 million, $9.6 million, $68.1 million and $2.3 million during fiscal 2015, fiscal 2014, fiscal 2013 and fiscal 2012, respectively. No cash dividends were paid during fiscal 2016.

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

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.

Overview of Financial Results

Our fiscal year consists of 52 or 53 weeks ending on the Saturday nearest March 31. Accordingly, our fiscal 2016 reporting period consisted of a 53 -week period ending on April 2, 2016 , our fiscal 2015 reporting period consisted of a 52 -week period ending on March 28, 2015 and our fiscal 2014 reporting period consisted of a 52 -week period ending on March 29, 2014 . All references to years or quarters relate to fiscal years or fiscal quarters unless otherwise noted.

Total order volume in 2016 was $201.7 million , compared to orders of $170.9 million in 2015 . Orders within our Component Processing segment increased approximately 20%, with increases in IP orders partially offset by declines in CTP and SP. Orders for IP increased by approximately 40%, primarily for flex via drilling tools driven by the addition of our new Gemstone via drilling system to our flex product portfolio and the increasing content and complexity of flex circuits primarily in consumer electronics. Orders for SP decreased by approximately 10% with increases in legacy memory repair orders more than offset by decreased trim system sales and decreased service activity. Orders for CTP decreased by 8% primarily as a result of reduced MLCC system demand due to fewer technology sales compared to the prior year and continued over capacity. Orders for Micromachining segment products increased by approximately 10% primarily due to application wins for the Lumen series micromachining platform.

Total revenue in 2016 was $184.4 million , an increase of 16% , compared to revenue of $159.1 million in 2015 . Component Processing revenue increased by 22.2% . Within our Component Processing segment, IP revenue increased by 40.7% primarily due to $24.5 million increase in flex sales with the introduction of our new Gemstone flex via drilling product, and a $4.7 million increase in service sales. SP revenue was relatively flat as the increase in legacy memory repair system sales and initial sale of our Ultrus advanced scribing system was offset by decreases in the circuit trim and wafer trim systems. CTP revenue increased by 4.2% due to reduction in backlog of our component test systems. In our Micromachining segment, MP sales decreased by 7.0% primarily driven by reduced demand for laser ablation systems as well as lower service sales, partially offset by increased sales of $5.7 million for micromachining systems, primarily due to the Lumen series system sales. Backlog was $55.2 million as of April 2, 2016 compared to $36.5 million as of March 28, 2015 , primarily due to increased orders for flex via drilling systems in the fourth quarter of 2016.

Gross profit was $72.7 million in 2016 compared to $54.7 million in 2015 . Overall gross profit increased due to the increase in production and sales volumes, and lower manufacturing costs as we consolidated facilities and made lean improvements. These were partially offset by higher warranty costs and higher inventory and intangible write-offs of $0.8 million associated with discontinued products. Gross margin increased to 39.4% in 2016 compared to 34.4% in 2015 . This increase in gross margin was primarily due to favorable absorption of fixed costs due to higher production volume, improved mix with a higher proportion of flex via drilling products, reduction in inventory reserves related to the sale of memory repair systems, and decreased manufacturing costs, partially offset by higher warranty costs, and higher inventory and intangible write-offs associated with discontinued products.

Net operating expenses of $85.2 million in 2016 decreased $9.2 million from $94.4 million in 2015 . This decrease was primarily due to the $7.9 million impairment of goodwill for our Component Processing and Micromachining reporting units in 2015 which did not repeat in 2016. Excluding the goodwill impairment, net operating expenses decreased $1.4 million. This

was primarily due to a $2.7 million decrease in labor and related expenses due to the restructuring activities in 2015 and 2016, $1.1 million decrease in patent legal fees and other professional fees due to cost management measures and a $0.7 million decrease in depreciation and amortization expense of fixed assets. These were partially offset by $1.4 million increase in variable pay, $0.8 million increase in restructuring costs primarily relating to the facilities charges for the closure of the Chelmsford, Massachusetts manufacturing plant and a $0.5 million increase in travel expenses related to higher marketing and sales activities with increased sales. Operating loss improved by $27.3 million from $39.7 million in 2015 to $12.5 million in 2016 .

Non-operating income was $0.2 million in 2016 compared to an expense of $3.8 million in 2015 . The change was primarily due to $4.3 million expense on our cost method investment in OmniGuide, Inc. which was fully impaired in 2015.

Benefit from income taxes was $16 thousand in 2016 compared to a provision of $234 thousand in 2015 , primarily due to income tax expense from foreign jurisdictions offset by a benefit arising from pretax losses in the Topwin subsidiary for 2016. Net loss was $12.3 million in 2016 compared to $43.8 million in 2015 .

Results of Operations

The following table presents results of operations data as a percentage of net sales for the years ended April 2, 2016 , March 28, 2015 and March 29, 2014 :

	2016	2015	2014
Net sales:	100.0 %	100.0 %	100.0 %
Cost of sales:	60.6	65.6	67.0
Gross profit	39.4	34.4	33.0
Selling, general and administration	27.1	31.0	28.5
Research, development and engineering	17.6	22.1	20.9
Restructuring costs	1.5	1.3	0.6
Impairment of goodwill	—	5.0	—
Gain on sale of property and equipment, net	—	—	(0.7)
Gain on acquisition of Semiconductor Systems business	—	—	(0.3)
Operating loss	(6.8)	(25.0)	(15.9)
Other-than-temporary impairment of cost method investments	—	(2.7)	(5.4)
Interest and other income, net	0.1	0.3	0.1
Loss before income taxes	(6.7)	(27.4)	(21.2)
(Benefit from) provision for income taxes	0.1	0.1	(0.1)
Net loss	(6.6)%	(27.5)%	(21.1)%

Fiscal Year Ended April 2, 2016 Compared to Fiscal Year Ended March 28, 2015

Net Sales

The following table presents net sales information by operating segment and product group:

(In thousands, except percentages)	2016 Net Sales	2016 % of Net Sales	2015 Net Sales	2015 % of Net Sales
Component Processing				
Interconnect Products (IP)	$ 94,121	51.0%	$ 66,913	42.1%
Component Test Products (CTP)	19,901	10.8	19,099	12.0
Semiconductor Products (SP)	38,262	20.8	38,586	24.2
	152,284	82.6	124,598	78.3
Micromachining				
Micromachining Products (MP)	32,107	17.4	34,520	21.7
	32,107	17.4	34,520	21.7
Net Sales	$ 184,391	100.0%	$ 159,118	100.0%

Net sales for 2016 increased $25.3 million or 15.9% from net sales for 2015 . By segment, Component Processing sales increased by $27.7 million or 22.2% and Micromachining sales decreased by $2.4 million or 7.0% , compared to 2015 .

IP sales for 2016 increased $27.2 million or 40.7% compared to 2015 . The increase in IP sales was primarily driven by higher demand for our flex via drilling products, in particular our new Gemstone system, and increased IP service sales.

CTP sales for 2016 increased $0.8 million or 4.2% compared to 2015 . The increase was primarily driven due to modest reduction in backlog year over year for our component test systems.

SP sales for 2016 decreased $0.3 million or 0.8% compared to 2015 . The decrease in SP revenues was primarily driven by $12.9 million decrease in sales of circuit trim, wafer trim and service activity, mostly offset by $10.0 million increase in sales of our legacy memory repair systems and $1.7 million from the initial sale of our Ultrus advanced scribing system.

MP sales for 2016 decreased $2.4 million or 7.0% compared to 2015 , primarily as a result of lower service revenues and declines in our laser ablation products. This was however, partially offset by increased sales of our new Lumen series platform and the addition of Topwin.

The following table presents net sales information by geographic region:

(In thousands, except percentages)	2016 Net Sales	2016 % of Net Sales	2015 Net Sales	2015 % of Net Sales
Asia	$ 152,259	82.6%	$ 124,049	78.0%
Americas	21,206	11.5	18,067	11.4
Europe	10,926	5.9	17,002	10.7
	$ 184,391	100.0%	$ 159,118	100.0%

In 2016 , net sales to Asia increased by $28.2 million primarily due to higher shipments of flex via drilling systems into China and southeast Asia. Net sales to Americas increased by $3.1 million primarily due to the shipment of our new Ultrus advanced scribing system. Europe sales decreased by $6.1 million primarily due to decreased wafer and circuit trim sales, and lower laser ablation sales.

Gross Profit by operating segment

(In thousands, except percentages)	2016 Gross Profit	2016 % of Sales	2015 Gross Profit	2015 % of Sales
Component Processing	$ 66,693	43.8%	$ 50,970	40.9%
Micromachining	9,386	29.2	6,383	18.5
Corporate and other	(3,376)	—	(2,672)	—
	$ 72,703	39.4%	$ 54,681	34.4%

Gross profit was $72.7 million in 2016 compared to $54.7 million in 2015 . Overall gross profit increased due to overall increases in production and sales volumes and lower manufacturing costs as we consolidated facilities and made lean

improvements. These improvements were partially offset by higher warranty costs, and impairments of inventory and an intangible associated with discontinued products.

Gross margin increased to 39.4% in 2016 compared to 34.4% in 2015 . The increase in gross margin was primarily due to favorable absorption of fixed costs due to higher production volume, decreased manufacturing costs, and favorable mix with a higher proportion of flex via drilling products, partially offset by higher warranty costs, and impairments of inventory and an intangible associated with discontinued products.

Gross margin for Component Processing increased from 40.9% to 43.8% primarily due to favorable absorption of fixed costs due to higher volumes, favorable product mix and a reduction in inventory reserves related to the sale of memory repair systems . These were partially offset by higher warranty costs.

Gross margin for Micromachining increased from 18.5% to 29.2% primarily due to lower manufacturing costs and increased absorption on higher system production levels.

Corporate and other cost of sales include expenses not allocated to our two operating segments, including stock compensation, amortization of intangibles, restructuring and other expenses. The change in 2016 is due to impairments of inventory and an intangible associated with discontinued products.

Operating Expenses

	2016		2015	
(In thousands, except percentages)	**Expense**	**% of Net Sales**	**Expense**	**% of Net Sales**
Selling, general and administration	$ 49,753	27.1%	$ 48,525	31.0%
Research, development and engineering	32,400	17.6	35,166	22.1
Impairment of goodwill	—	—	7,889	5.0
Restructuring costs	2,824	1.5	2,069	1.3
Acquisition and integration costs	194	0.1	776	0.5
	$ 85,171	46.2%	$ 94,425	59.3%

Selling, general and administration

Selling, general and administration (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 2016 increased $1.2 million compared to 2015 . This increase was primarily attributable to increases in variable pay of approximately $1.0 million driven by improved attainment of incentive targets and $0.7 million increases related to increased travel, marketing and commissions costs due to higher business volumes. Share-based compensation increased $0.2 million and consisted of $0.9 million of expense related to business acquisition offset by $0.7 million of lower share-based compensation expense due to lower stock price on grant dates and increased forfeitures during the year. Offsetting the above were $0.9 million in labor and related savings due to the cost reduction initiatives and other savings from process efficiencies.

Research, Development and Engineering

Research, development and engineering (RD&E) expenses are primarily comprised of labor and other employee-related expenses, professional fees, project materials, equipment and facilities costs. RD&E expenses for 2016 decreased $2.8 million compared to 2015 . This decrease was primarily due to lower labor, share-based compensation and related costs of $2.2 million due to the restructuring activities, lower expenses for patent legal fees of $0.4 million, and a decrease of $0.3 million in depreciation. These decreases were partially offset by increased variable pay costs of $0.4 million driven by improved attainment of incentive targets.

Impairment of goodwill

The annual review of goodwill for 2016 was performed with no impairment indicated.

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 its reported goodwill to its new reporting units based on the relative fair value of the respective reporting units. In performance of the annual review of goodwill for the newly formed reporting units, we determined that the carrying value of the component processing and micromachining reporting units exceeded its fair value and hence we recorded an impairment charge of $7.9 million in the fourth quarter of 2015.

Restructuring Costs

In 2015, as a part of the Company's plan to streamline its manufacturing and development activities, the Company initiated a restructuring plan to close the assembly plant and development center located in Chelmsford, Massachusetts. Restructuring costs of $2.8 million incurred in 2016 primarily related to $1.7 million of employee severance and related benefits, and $1.1 million of charges related to asset write-offs and net remaining lease obligations due to the closure of the Chelmsford, Massachusetts manufacturing plant in the third quarter of 2016.

Restructuring costs for 2015 were $2.1 million , primarily due to employee severance and related benefits for the Chelmsford restructuring plan.

As of April 2, 2016, most of the restructuring activities have been completed, and we expect to pay the accrued expenses primarily related to severance and employee benefits in the first quarter of 2017. Accrued expenses related to the lease obligations will be carried until the end of the lease term in December 2019.

Share-Based Compensation

The table of operating expenses shown above also includes $3.8 million and $3.9 million of share-based compensation expense for 2016 and 2015 , respectively. Share-based compensation expense decreased in 2016 compared to 2015 primarily due to lower stock price on grant dates and increased forfeitures; partially offset by an increased number of time-based restricted stock unit awards granted. Additionally, we incurred $0.9 million of share-based compensation expense in 2016 related to business acquisition.

Non-operating Income and Expense, net

	2016		2015	
(In thousands, except percentages)	Interest and Other Income, net	% of Net Sales	Interest and Other Expense, net	% of Net Sales
Loss and other-than-temporary impairment of cost method investment	—	—%	(4,263)	(2.7)%
Interest and other income, net	195	0.1	430	0.3
Total non-operating (expense) income	$ 195	0.1%	$ (3,833)	(2.4)%

Other-than-temporary impairment of cost method investment

We held a cost method investment in OmniGuide, Inc., of $4.3 million in fiscal 2015 which was written off in the fourth quarter of 2015, as OmniGuide's lender exercised its right to convert the outstanding obligations owed to it by OmniGuide into 100% of OmniGuide's outstanding equity under the applicable financing agreements. No cost method investments were held by the Company at the end of 2015 and 2016.

Interest and Other Income (Expense), net

Interest and other income (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. Interest and other income, net was $0.2 million in 2016 compared to $0.4 million in 2015 . This change was primarily attributable to a $0.2 million increase in financing costs associated with the establishment of our line of credit in 2016.

Income Taxes

	2016		2015	
(In thousands, except percentages)	Income Tax Benefit	Effective Tax Rate	Income Tax Provision	Effective Tax Rate
(Benefit from) Provision for income taxes	$ (16)	0.1%	$ 234	(0.5)%

The benefit from income taxes for 2016 was $16 thousand on a pretax loss of $12.3 million , an effective tax rate of 0.1% . For 2015 , the provision for income taxes was $234 thousand on a pretax loss of $43.6 million , an effective rate of (0.5)% . The change is primarily due to income from foreign jurisdictions offset by a benefit arising from pretax losses in the Topwin subsidiary for 2016. The provision for income taxes is lower than the statutory rate primarily due to pre-tax losses and the valuation allowance currently maintained against net deferred tax assets. The majority of the income tax paid relates to foreign jurisdictions and the change was primarily a result of the level of income recognized in each foreign location. Our effective tax

rate is subject to fluctuation based upon the mix of income and relative tax rates between jurisdictions, and the occurrence and timing of numerous discrete events such as changes in tax laws or their interpretations, extensions or expirations of research and experimentation credits, closure of tax years subject to examination, finalization of income tax returns, the relationship of fixed deductions to overall changes in estimated and actual pretax income or loss and the tax jurisdictions where income or loss is generated. Based on currently available information, we are not aware of any further discrete events which are likely to occur that would have a material effect on our financial position, expected cash flows or results of operations.

Fiscal Year Ended March 28, 2015 Compared to Fiscal Year Ended March 29, 2014

Net Sales

The following table presents net sales information by operating segment and product:

	2015		2014	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Component Processing				
Interconnect Products (IP)	$ 66,913	42.1%	$ 81,180	44.8%
Component Test Products (CTP)	19,099	12.0	24,441	13.5
Semiconductor Products (SP)	38,586	24.2	35,780	19.7
	124,598	78.3	141,401	78.1
Micromachining				
Micromachining Products (MP)	34,520	21.7	39,766	21.9
	34,520	21.7	39,766	21.9
Net Sales	$ 159,118	100.0%	$ 181,167	100.0%

Net sales for 2015 decreased $22.0 million or 12% from net sales for 2014 . By segment, Component Processing sales decreased by $16.8 million or 12% and Micromachining sales decreased by $5.2 million or 13%, compared to 2014.

IP sales for 2015 decreased $14.3 million or 18% compared to 2014. The decrease in IP sales was primarily driven by backlog reduction in 2014 of flex interconnect systems compared to an increase in backlog in 2015 and lower sales to Korea.

CTP sales for 2015 decreased $5.3 million or 22% compared to 2014 . The decrease was primarily driven by continued customer utilization of existing capacity for MLCC systems in 2015, partially offset by an increase in tooling and consumables parts revenue.

SP sales for 2015 increased $2.8 million or 8% compared to 2014 . The increase in SP revenues was primarily driven by increased sales of circuit trim, wafer trim and service activity from the Semiconductor Systems business, which was acquired during the first quarter of 2014.

MP sales for 2015 decreased $5.2 million or 13% compared to 2014, primarily as a result of reduced shipments of advanced microfabrication systems as our largest customer continued to move towards a reuse program and with no new large design wins.

The following table presents net sales information by geographic region:

	2015		2014	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Asia	$ 124,049	78.0%	$ 136,336	75.3%
Americas	18,067	11.4	31,596	17.4
Europe	17,002	10.7	13,235	7.3
	$ 159,118	100.0%	$ 181,167	100.0%

In 2015 , net sales to Asia decreased by $12.3 million due to higher shipments of flex interconnect systems to Korea in 2014 which did not repeat at the same level in 2015, partially offset by increased system sales for circuit trim and wafer trim. Net sales to Americas decreased by $13.5 million primarily due to reduced sales in our Semiconductor Systems business and to a lesser extent, by reduced MLCC system sales. Europe sales increased by $3.8 million primarily due to increased wafer and circuit trim sales.

Gross Profit by operating segment

(In thousands, except percentages)	2015		2014	
	Gross Profit	% of Sales	Gross Profit	% of Sales
Component Processing	$ 50,970	40.9%	$ 63,914	45.2%
Micromachining	6,383	18.5	12,175	30.6
Corporate and other	(2,672)	—	(16,218)	—
	$ 54,681	34.4%	$ 59,871	33.0%

Gross profit was $54.7 million in 2015 compared to $59.9 million in 2014 . Overall gross profit was impacted by lower sales combined with increased warranty costs, partially offset by lower inventory write-offs associated with discontinued products.

Gross margin increased to 34.4% in 2015 compared to 33.0% in 2014 . The increase was primarily the result of lower inventory write-offs associated with discontinued products in 2014, partially offset by lower volumes on relatively fixed manufacturing expenses.

Gross margin for Component Processing decreased from 45.2% to 40.9% primarily due to lower volumes on fixed manufacturing costs, higher warranty costs, and unfavorable product mix.

Gross margin for Micromachining decreased from 30.6% to 18.5% primarily due to lower volumes on fixed manufacturing 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 expenses. The change in 2015 is due to lower inventory write-offs associated with discontinued products and lower amortization expense.

Operating Expenses

(In thousands, except percentages)	2015		2014	
	Expense	% of Net Sales	Expense	% of Net Sales
Selling, general and administration	$ 49,301	31.0%	$ 51,598	28.5 %
Research, development and engineering	35,166	22.1	37,839	20.9
Impairment of goodwill	7,889	5.0	—	—
Restructuring costs	2,069	1.3	1,070	0.6
Gain on sale of property and equipment, net	—	—	(1,301)	(0.7)
Gain on acquisition of Semiconductor Systems business	—	—	(499)	(0.3)
	$ 94,425	59.3%	$ 88,707	49.0 %

Selling, general and administration

Selling, general and administration (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 2015 decreased $2.3 million compared to 2014 . This decrease was primarily attributable to lower expenses for share-based compensation, travel, facilities and training. These decreases were partially offset by higher audit, legal and variable pay costs. Share-based compensation expenses were lower primarily due to the lower quantity of restricted stock unit awards granted, combined with lower fair value of new awards granted in 2015.

Research, Development and Engineering

Research, development and engineering (RD&E) expenses are primarily comprised of labor and other employee-related expenses, professional fees, project materials, equipment and facilities costs. RD&E expenses for 2015 decreased $2.7 million compared to 2014 . This decrease was primarily due to lower expenses for project materials, patent legal fees, travel and consulting, partially offset by higher labor and variable pay costs.

Impairment of goodwill

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 its reported goodwill to its new reporting units based on the relative fair value of the respective reporting units. The carrying value of goodwill by reporting unit prior to March 28, 2015 was approximately $7.7 million for Topwin, $6.3 million for Component Processing and $1.6 million for Micromachining. As a result of the reorganization and analysis at a segment and reporting unit level, any goodwill allocated to Component Processing and Micromachining was no longer supported by the estimated fair value of the respective businesses and a $7.9 million impairment was recognized in 2015.

Restructuring Costs

In 2015, as a part of the Company's plan to streamline its manufacturing and development activities, the Company initiated a restructuring plan to close the assembly plant and development center located in Chelmsford, Massachusetts. The restructuring costs of $2.1 million incurred in 2015 were comprised primarily of employee severance and related benefits for the Chelmsford restructuring plan.

Restructuring costs for 2014 were $1.1 million , primarily due to $0.8 million of contractual payments to our former Chief Executive Officer and $0.3 million in accelerated depreciation charges on certain assets that are no longer being utilized.

Gain on Sale of Property and Equipment, net

In 2014, we sold a portion of land and a building at our Portland, Oregon campus for $3.7 million resulting in a pre-tax gain of $1.3 million .

Gain on acquisition of Semiconductor Systems Business

The gain on our acquisition of Semiconductor Systems business was $0.5 million in 2014. This purchase resulted in an overall gain as the estimated fair value of the assets purchased was in excess of the total purchase consideration, primarily due to the recognition of certain intangible assets, comprised of developed technology and order backlog.

Share-Based Compensation

The table of operating expenses shown above also includes $3.9 million and $5.4 million of share-based compensation expense for 2015 and 2014 , respectively. The decrease was primarily due to the lower quantity of restricted stock unit awards granted, combined with lower fair value of new awards granted in 2015.

Non-operating Income and Expense, net

(In thousands, except percentages)	2015		2014	
	Interest and Other Expense, net	% of Net Sales	Interest and Other Expense, net	% of Net Sales
Loss and other-than-temporary impairment of cost method investment	(4,263)	(2.7)%	(9,703)	(5.4)%
Interest and other income, net	430	0.3	113	0.1
Total non-operating (expense) income	$ (3,833)	(2.4)%	$ (9,590)	(5.3)%

Other-than-temporary impairment of cost method investment

As of March 30, 2013, the Company had made a total investment in the equity of OmniGuide, Inc., of $9.0 million. This investment is accounted for as a cost method investment. In the second quarter of 2014, the Company invested an additional $5.0 million in OmniGuide Series F Preferred Stock. As this Series F Preferred Stock round of equity financing was priced below previous rounds, it was considered a triggering event and the Company recorded a $3.6 million impairment charge on its Series D and Series E investments at that time. In the fourth quarter of 2014, further triggering events were identified due to poor operating results through the end of the year combined with decreasing cash levels. As a result, the Company performed an updated valuation of these investments and recorded an additional impairment of $6.1 million, for a total other-than-temporary impairment of $9.7 million in 2014. Remaining carrying value of this cost method investment as of March 29, 2014 was $4.3 million.

In the fourth quarter of 2015, OmniGuide's lender exercised its right to convert the outstanding obligations owed to it by OmniGuide into 100% of OmniGuide's outstanding equity under the applicable financing agreements. This action resulted in an immediate and total impairment of the Company's ownership of OmniGuide, and accordingly the Company recorded a loss of $4.3 million in the fourth quarter of 2015, resulting in zero carrying value on its Consolidated Balance Sheets at March 28, 2015 .

Interest and Other Income (Expense), net

Interest and other income (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. Interest and other income, net was $0.4 million in 2015 compared to $0.1 million in 2014 . This increase was primarily attributable to a $0.6 million gain on liquidation of a foreign subsidiary, which was partially offset by lower interest yields on our investments and market losses on assets held for our deferred compensation plan.

Income Taxes

	2015		2014	
(In thousands, except percentages)	**Income Tax Provision**	**Effective Tax Rate**	**Income Tax Benefit**	**Effective Tax Rate**
Provision for (Benefit from) income taxes	$ 234	(0.5)%	$ (92)	0.2%

The provision for income taxes for 2015 was $0.2 million on a pretax loss of $43.6 million , an effective tax rate of (0.5)% . For 2014 , the benefit from income taxes was $0.1 million on a pretax loss of $38.4 million , an effective rate of 0.2% . The change in provision for income taxes was primarily due to increased tax expense incurred on our foreign income, partially offset by US tax refunds resulting from the conclusion of a tax audit, a favorable assessment related to the legal settlement in Taiwan and refundable credits. Our effective tax rate is subject to fluctuation based upon the mix of income and relative tax rates between jurisdictions, and the occurrence and timing of numerous discrete events such as changes in tax laws or their interpretations, extensions or expirations of research and experimentation credits, closure of tax years subject to examination, finalization of income tax returns, the relationship of fixed deductions to overall changes in estimated and actual pretax income or loss and the tax jurisdictions where income or loss is generated. Based on currently available information, we are not aware of any further discrete events which are likely to occur that would have a material effect on our financial position, expected cash flows or results of operations.

Financial Condition and Liquidity

At April 2, 2016 , our principal sources of liquidity were cash and cash equivalents of $42.4 million , short-term investments of $15.3 million and accounts receivable of approximately $42.8 million in addition to amounts available under our credit facility. At April 2, 2016 , we had a current ratio of 4.11 and had no outstanding amounts under our credit facility. Working capital of $126.7 million increased $2.1 million compared to the March 28, 2015 balance of $124.6 million .

During 2016, the Company generated $4.7 million in positive operating cash flows, primarily the result of improved operating results. The Company used $11.1 million in cash to purchase additional investments to increase returns on excess cash balances, representing the primary investing cash flow.

In March 2015, the Company entered into a loan and security agreement ("Loan Agreement") with Silicon Valley Bank. 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 April 2, 2016 , we had no revolving loans or letters of credit outstanding under our Credit Facility, we were in compliance with all covenants, and were not in default under the Loan Agreement. While we have a credit facility in place, the level of availability and cost are based on maintaining certain levels of qualified receivables and domestic cash. As a result, if either of these balances decreases significantly, our ability to access the facility may be limited or costs may be higher. In addition, if we fail to meet the covenants in our credit facility, including the tangible net worth covenant, the facility may not be available to us.

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.

In February 2015, the Board of Directors suspended the quarterly dividend which was adopted by the Company in December 2011. The Company paid dividends in the first three quarters of 2015 under the 2011 dividend policy in the aggregate amount of $0.24 per share. The Company has not paid any dividends in 2016.

On December 9, 2011, the Board of Directors authorized a share repurchase program totaling $20 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. In the first quarter of 2015 the Company repurchased 207,738 shares for $1.5 million in cash under this authorization at an average price of $7.01 per share, calculated inclusive of commissions and fees. The Company did not repurchase any shares during the subsequent quarters of 2015 or in 2016. In 2014 the Company repurchased 19,832 shares for $0.2 million at an average price of $9.65 per share. The Company has repurchased a total of 227,570 shares to date under this authorization as a part of its publicly announced plan. There is no fixed completion date for the repurchase program.

Our business requires greater levels of working capital than similar sized businesses in some other industries due to the value of the inventory we need to acquire to fill orders and the large accounts receivable we may hold due to the relatively high unit sales prices of our products. If orders increase we expect that working capital demands will also increase for some period before the associated cash flows are realized.

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

Contractual Obligations

The contractual commitments below represent our estimates of future payments under these obligations. The actual payments may differ from these estimates due to changes in our business needs, cancellation provisions, and other factors. We cannot provide certainty regarding the timing of the payment schedule and the amounts of payments.

The following table summarizes our contractual obligations as of April 2, 2016 , by the fiscal year in which they are due:

(In thousands)	Total	2017	2018	2019	2020	2021	Thereafter
Purchase commitments	$ 21,580	$ 21,280	$ 300	$ —	$ —	$ —	$ —
Operating leases	7,312	3,032	2,344	1,589	215	132	—
	$ 28,892	$ 24,312	$ 2,644	$ 1,589	$ 215	$ 132	$ —

The operating lease amounts include our contractual facilities lease obligation at our Chelmsford, Massachusetts plant, excluding the estimated rental income from the sub lease of this facility . The operations at Chelmsford manufacturing plant ceased in the third quarter of 2016 as a part of the Company's plan to streamline its manufacturing and development activities.

This table does not include $10.4 million of unrecognized tax benefits due to the uncertainty with respect to the timing of future cash flows as of April 2, 2016 . We are unable to make reasonably reliable estimates of the period of cash settlement with the respective taxing authorities and the total amounts of income tax payable and the timing of such tax payments may depend on the resolution of current and future tax examinations which cannot be estimated.

Critical Accounting Policies and Estimates

The preparation of our financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. Our estimates are based on historical experience and on various assumptions that we believe to be reasonable under the circumstances. These estimates form the basis for judgments about the carrying values of assets and liabilities that are not readily apparent from other sources.

Our critical accounting policies and estimates include the following:

- 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;
- Valuation of long-lived assets; and
- Valuation of goodwill.

Revenue Recognition

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or the services have been rendered, the sales price is fixed or determinable and collection of the related receivable is reasonably assured. Title and

risk of loss generally pass to the customer at the time of delivery of the product to a common carrier. Revenue is recognized upon such delivery, provided that fulfillment of acceptance criteria can be demonstrated prior to shipment. Where the acceptance criteria cannot be demonstrated prior to shipment, or in the case of substantially new products, revenue is deferred until acceptance has been received. For multiple element arrangements, the relative fair values of any undelivered elements are deferred until the elements are delivered and acceptance criteria are met. Revenues are recorded net of taxes collected which are required to be submitted to government authorities. Installation services are not essential to the functionality of the delivered equipment and installation revenue is deferred until installation is complete. Historically, neither the costs of installation accrued nor the fair value of installation service revenue deferred has been material.

Revenues associated with sales to customers under local contracts in Japan are recognized upon title transfer, which generally occurs upon customer acceptance. Revenues related to spare parts and consumable sales are generally recognized upon shipment. Revenues related to maintenance and service contracts are generally recognized ratably over the duration of the contracts.

Inventory Valuation

We regularly evaluate the carrying value of inventory based on a combination of factors including, but not limited to, the following: product life cycle, forecasted sales or usage, historical usage rates, estimated service period, product end-of-life dates, estimated current and future market values, service inventory requirements and new product introductions. Purchasing requirements and alternative uses for the inventory are explored within these processes to mitigate inventory exposure. Inventory materials with quantities in excess of forecasted usage are reviewed quarterly for obsolescence. Obsolescence write-downs are typically caused by engineering change orders or product life cycle changes.

Research and development product costs are generally expensed as incurred. Engineering materials that are expected to provide future value are generally classified as raw materials inventory.

Finished goods are reviewed quarterly by product marketing and operating personnel to determine if inventory carrying value exceeds market selling prices. When necessary, we record inventory write-downs as an increase to cost of sales based on the above factors and take into account worldwide quantities on hand, product life cycle and forecasted demand into our analysis. Additionally, from time to time, we make strategic decisions to exit or alter product lines which may result in an inventory write-down. If circumstances related to our inventories change, our estimates of the value of inventory could materially change.

Product Warranty Reserves

We evaluate obligations related to product warranties quarterly. A standard warranty is provided on most of our products over a specified period of time, generally twelve to twenty-four months, at no cost to our customers. Warranty charges are comprised of costs to service the warranty, including labor to repair the system and replacement parts for defective items, as well as other costs incidental to the repairs. Warranty charges are recorded net of any cost recoveries resulting from either successful repair of damaged parts or from warranties offered by our suppliers for defective components. Using historical data, we estimate average warranty cost per system or part type and record the provision for such charges as an element of cost of goods sold upon recognition of the related revenue. Additionally, the overall warranty accrual balance is separately analyzed using the remaining warranty periods outstanding on systems and items under warranty, and any resulting changes in estimates are recorded as an adjustment to cost of sales. If circumstances change, or if a significant change in warranty-related incidents occurs, the impact of the change in the warranty accrual could be material. Current portion of accrued product warranty is included on the Consolidated Balance Sheets as a component of accrued liabilities and non-current portion is included on the Consolidated Balance Sheets as a component of other liabilities.

Allowance for Doubtful Accounts

Credit limits are established by reviewing the financial history and stability of each customer. Where appropriate, we obtain credit rating reports and financial statements of customers to establish and modify their credit limits. On certain foreign sales, we require letters of credit. We regularly evaluate the collectability of our trade receivable balances based on a combination of factors. When a customer’s account becomes past due, we contact the customer to determine the cause. If we determine that a customer may be unable to fully meet its financial obligation to us, such as in the case of a bankruptcy filing or other material events impacting its business, we record a specific reserve for bad debt to reduce the related receivable to the amount we expect to recover based on all available information then available. If circumstances change related to specific customers, our estimates of the recoverability of receivables could materially change. We record estimated bad debt expense as an increase to selling, general and administration expenses.

Accrued Restructuring Costs

We have engaged, and may continue to engage, in restructuring actions, which require us to make estimates in certain areas including expenses for severance and other employee separation costs. Because we have a history of paying severance benefits, expenses and liabilities associated with exit or disposal activities are recognized when probable and estimable. For further discussion on the restructuring activities and related charges in 2016 , refer to our discussion of "Restructuring Costs" in the "Results of Operations" section above.

Share-Based Compensation

We measure and recognize compensation expense for all share-based payment awards granted to our employees and directors, including employee stock options, stock-settled stock appreciation rights (SARs), non-vested restricted stock units and purchases under the employee stock purchase plan, based on the estimated fair value of the award on the grant date. We use the Black-Scholes valuation model as our method of valuation for stock option and SAR awards.

The use of the Black-Scholes valuation model to estimate the fair value of stock option and SAR awards requires us to make assumptions regarding the risk-free interest rate, expected dividend yield, expected term and expected volatility over the expected term of the award. The assumptions used in calculating the fair value of share-based payment awards represent management's best estimates based on our historical data, but these estimates involve inherent uncertainties and the recognition of expense could be materially different in the future.

Compensation expense is only recognized on awards that are estimated to ultimately vest. Therefore, based on historical forfeiture rates and patterns, the estimated future forfeitures are factored into the compensation expense to be recognized over the vesting period. We update our forfeiture estimates at least annually and recognize any changes to accumulated compensation expense in the period of change. If actual forfeitures differ significantly from our estimates, our results of operations could be materially impacted.

Income Taxes

We are subject to income taxes in the United States and in numerous foreign jurisdictions and in the ordinary course of business, there are transactions and calculations where the ultimate tax determination is uncertain. We report a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. We recognize interest and penalties, if any, related to the unrecognized tax benefits in income tax expense.

Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those assets and liabilities are recovered or settled. The effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date. When management determines that it is more likely than not that a deferred tax asset will not be fully realized, a valuation allowance is established to reduce deferred tax assets to the amount expected to be realized. As a result, at the end of fiscal 2013 we recorded a valuation allowance of $46.9 million against our deferred tax assets and attributes. The valuation allowance against our net deferred tax assets and attributes was $93.9 million and $87.6 million at April 2, 2016 and March 28, 2015, respectively. Should management's assumptions and expectations be inaccurate, our financial condition and results of operations could be adversely affected in future periods.

On November 20, 2015, the FASB issued ASU 2015-17, Income Taxes (Topic 740), which requires entities to present deferred tax assets (DTAs) and deferred tax liabilities (DTLs) as noncurrent in a classified balance sheet. ASU 2015-17 will become effective for fiscal years, and the interim periods within those years, beginning after December 15, 2016, with early adoption allowed. During the fourth quarter of Fiscal 2016, we elected to prospectively adopt ASU 2015-17, thus reclassifying $0.2 million of current DTAs net of valuation allowance to noncurrent on the accompanying consolidated balance sheet.

Fair Value Measurements

Fair value is defined under Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 820 "Fair Value Measurements and Disclosures" (ASC Topic 820). When determining fair value on the financial assets and liabilities, we consider the exchange price that would be received for an asset or paid to transfer a liability in an orderly transaction between market participants in the principal or most advantageous market. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs.

Valuation of Long-Lived Assets

The assumptions and estimates used to determine future values and remaining useful lives of our intangible and other long-lived assets are complex and subjective. They can be affected by various factors, including external factors such as

industry and economic trends, and internal factors such as changes in our business strategy and our forecasts for specific product lines.

Identified Intangibles

We assess the recoverability of purchased finite-lived intangible assets whenever events or changes in circumstances indicate that an impairment may exist. Recoverability of finite-lived intangible assets is measured by comparing the carrying amount of the asset to the future undiscounted cash flows that the asset is expected to generate. There were no events or circumstances during 2016 that would indicate the carrying value of our long-lived assets may not be recoverable, other than a $0.4 million intangible write-off associated with Topwin developed technology.

We perform an annual impairment assessment in the fourth quarter of each year for indefinite-lived intangible assets, or more frequently if indicators of potential impairment exist, to determine whether it is more likely than not that the carrying value of the assets may not be recoverable. Recoverability of indefinite-lived intangible assets is measured by comparing the carrying amount of the asset to the future discounted cash flows that the asset is expected to generate. If we determine that an individual asset is impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset.

Property, Plant and Equipment

Property, plant and equipment is reviewed for impairment whenever events or circumstances indicate that the carrying amount of assets may not be recoverable. We evaluate recoverability of assets to be held and used by comparing the carrying amount of an asset to estimated future net undiscounted cash flows to be generated by the asset. If such assets are considered to be impaired, the impairment recognized is measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets.

Valuation of Goodwill

Goodwill is recorded when the purchase price for an acquisition exceeds the estimated fair value of the net tangible and identified intangible assets acquired. The carrying value of goodwill was $7.4 million as of April 2, 2016 and $7.7 million as of March 28, 2015 . We perform an annual impairment assessment in the fourth quarter of each year, or more frequently if indicators of potential impairment exist, to determine whether the fair value of the reporting unit is less than its carrying value. 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. Fair value is determined based on the present value of estimated cash flows using available information regarding expected cash flows of the reporting unit, discount rates and the expected long-term cash flow growth rates. Discount rates are determined based on the cost of capital. 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%.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

The primary objectives of our investment activities are to preserve principal and maintain liquidity to meet operating needs. To achieve these objectives, we maintain an investment portfolio of cash, cash equivalents, and investments in a variety of securities, including commercial paper, corporate bonds and U.S. government agency notes.

Interest Rate Risk

Our investment securities are subject to interest rate risk and will decline in value if interest rates increase. The majority of these securities are classified as available-for-sale securities; therefore, the impact on fair value of interest rate changes is reflected as a separate component of shareholders’ equity. Due to the short-term maturity of our investment portfolio, an immediate 10% change in interest rates would not have a material effect on the fair value of our invested assets.

Investment Risk

Our marketable securities are classified as available-for-sale securities measured at fair value. The market value of our investments is influenced by market risks, liquidity risk and the credit worthiness of underlying issuers of our investment. We strive to minimize the investment risk by investing in high quality securities and by utilizing experienced and high credit quality financial institutions to manage the investment portfolio.

Foreign Currency Exchange Rate Risk

We purchase derivative financial instruments on a limited basis and do not use them for trading purposes. We do, however, use derivatives to manage well-defined foreign currency risks. We enter into forward exchange contracts to hedge the value of material non-functional currency monetary asset and liability balances. The net effect of an immediate 10% change in

exchange rates on the forward exchange contracts and the underlying hedged positions would not be material to our financial position or the results of our operations.

The table below summarizes, by currency, the notional amounts of our forward exchange contracts in U.S. dollars as of April 2, 2016 and March 28, 2015 . The “bought” amounts represent the net U.S. dollar equivalents of commitments to purchase foreign currencies, and the “sold” amounts represent the net U.S. dollar equivalents of commitments to sell foreign currencies. The foreign currency amounts have been translated into a U.S. dollar equivalent value using the exchange rates at the reporting date.

	Bought (Sold)	
(In thousands)	**2016**	**2015**
Japanese Yen	$ 5,079	$ 4,263
Euro	12,073	10,354
New Taiwan Dollar	(117)	(831)
Korean Won	197	(3,000)
British Pound	(2,350)	(2,906)
Chinese Renminbi	(1,859)	(4,278)
Singapore Dollar	53	(598)
Canadian Dollar	—	(159)
	$ 13,076	$ 2,845

Item 8. Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
Electro Scientific Industries, Inc.

Portland, Oregon

We have audited the accompanying consolidated balance sheet of Electro Scientific Industries, Inc. and subsidiaries (the "Company") as of April 2, 2016, and the related consolidated statements of operations, comprehensive loss, shareholders' equity, and cash flows for the fiscal year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

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

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Electro Scientific Industries, Inc. and subsidiaries as of April 2, 2016, and the results of their operations and their cash flows for the fiscal year ended April 2, 2016, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of April 2, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated June 14, 2016 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ Deloitte & Touche LLP

Portland, Oregon

June 14, 2016

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders
Electro Scientific Industries, Inc.:

We have audited the accompanying consolidated balance sheet of Electro Scientific Industries, Inc. and subsidiaries as of March 28, 2015, and the related consolidated statements of operations, comprehensive loss, shareholders' equity, and cash flows for each of the years in the two-year period ended March 28, 2015. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Electro Scientific Industries, Inc. and subsidiaries as of March 28, 2015 and the results of their operations and their cash flows for each of the years in the two-year period ended March 28, 2015, in conformity with U.S. generally accepted accounting principles.

/s/KPMG LLP

Portland, Oregon

June 26, 2015

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
As of April 2, 2016 and March 28, 2015

(In thousands)	2016	2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 42,413	$ 50,994
Short-term investments	15,252	6,612
Trade receivables, net of allowances of $1,039 and $712	42,770	42,295
Inventories, net	60,470	56,637
Shipped systems pending acceptance	1,181	2,516
Deferred income taxes, net	—	178
Other current assets	5,340	6,090
Total current assets	167,426	165,322
Non-current assets:		
Property, plant and equipment, net of accumulated depreciation of $107,910 and $102,901	24,543	25,858
Deferred income taxes, net	914	174
Goodwill	7,445	7,717
Acquired intangible assets, net of accumulated amortization of $21,146 and $19,880	7,146	8,958
Other assets	12,626	13,211
Total assets	$ 220,100	$ 221,240
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 16,061	$ 9,514
Accrued liabilities	18,334	18,666
Deferred income taxes, net	—	173
Deferred revenue	6,373	12,376
Total current liabilities	40,768	40,729
Non-current liabilities:		
Income taxes payable	1,266	1,176
Deferred income taxes, net	234	443
Other liabilities	7,801	1,571
Total liabilities	50,069	43,919
Commitments and contingencies (Note 19)		
Shareholders' equity:		
Preferred stock, without par value; 1,000 shares authorized; no shares issued	—	—
Common stock, without par value; 100,000 shares authorized; 31,613 and 30,704 issued and outstanding	195,024	189,134
Accumulated deficit	(23,998)	(11,741)
Accumulated other comprehensive (loss) income	(995)	(72)
Total shareholders' equity	170,031	177,321
Total liabilities and shareholders' equity	$ 220,100	$ 221,240

See Accompanying Notes to Consolidated Financial Statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
For the years ended April 2, 2016 , March 28, 2015 and March 29, 2014

(In thousands, except per share amounts)	2016	2015	2014
Net sales:			
Systems	$ 142,957	$ 111,603	$ 142,054
Service	41,434	47,515	39,113
Total net sales	184,391	159,118	181,167
Cost of sales:			
Systems	89,169	78,195	100,870
Service	22,519	26,242	20,426
Total cost of sales	111,688	104,437	121,296
Gross profit	72,703	54,681	59,871
Operating expenses:			
Selling, general and administration	49,753	48,525	51,598
Research, development and engineering	32,400	35,166	37,839
Restructuring costs	2,824	2,069	1,070
Acquisition and integration costs	194	776	—
Impairment of goodwill	—	7,889	—
Gain on sale of property and equipment, net	—	—	(1,301)
Gain on acquisition of Semiconductor Systems business	—	—	(499)
Net operating expenses	85,171	94,425	88,707
Operating loss	(12,468)	(39,744)	(28,836)
Non-operating income (expense):			
Loss and other-than-temporary impairment of cost method investment	—	(4,263)	(9,703)
Interest and other income, net	195	430	113
Total non-operating income (expense)	195	(3,833)	(9,590)
Loss before income taxes	(12,273)	(43,577)	(38,426)
(Benefit from) provision for income taxes	(16)	234	(92)
Net loss	$ (12,257)	$ (43,811)	$ (38,334)
Net loss per share—basic	$ (0.39)	$ (1.43)	$ (1.28)
Net loss per share—diluted	$ (0.39)	$ (1.43)	$ (1.28)
Weighted average number of shares—basic	31,411	30,611	29,974
Weighted average number of shares—diluted	31,411	30,611	29,974
Cash dividends paid per outstanding common share	$ —	$ 0.24	$ 0.32

See Accompanying Notes to Consolidated Financial Statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
For the years ended April 2, 2016 , March 28, 2015 and March 29, 2014

(In thousands)	2016	2015	2014
Net loss	$ (12,257)	$ (43,811)	$ (38,334)
Other comprehensive (loss) income:			
Foreign currency translation adjustment, net of taxes of $0, $0 and $21	(922)	(384)	37
Accumulated other comprehensive (loss) income related to benefit plan obligation, net of taxes of ($21), ($13), and $19	(4)	(25)	22
Net unrealized (loss) gain on available-for-sale securities, net of taxes of $1, ($5), and $5	3	(15)	9
Comprehensive loss	$ (13,180)	$ (44,235)	$ (38,266)

See Accompanying Notes to Consolidated Financial Statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
For the years ended April 2, 2016 , March 28, 2015 and March 29, 2014

(In thousands)	Common Stock Shares	Common Stock Amount	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at March 30, 2013	29,583	$ 176,631	$ 87,228	$ 283	$ 264,142
Cash dividends paid ($0.32 per outstanding common share)	—	—	(9,558)	—	(9,558)
Employee stock plans	592	6,753	—	—	6,753
Share repurchases	(20)	(191)	—	—	(191)
Net loss	—	—	(38,334)	—	(38,334)
Other comprehensive income				69	69
Balance at March 29, 2014	30,155	183,193	39,336	352	222,881
Cash dividends paid ($0.24 per outstanding common share)	—	—	(7,266)	—	(7,266)
Employee stock plans	757	4,555	—	—	4,555
Share repurchases	(208)	(1,456)	—	—	(1,456)
Business acquisition, equity interest	—	2,842	—	—	2,842
Net loss	—	—	(43,811)	—	(43,811)
Other comprehensive loss				(424)	(424)
Balance at March 28, 2015	30,704	189,134	(11,741)	(72)	177,321
Employee stock plans	909	5,827	—	—	5,827
Business acquisition (Note 6)	—	63	—	—	63
Net loss	—	—	(12,257)	—	(12,257)
Other comprehensive loss				(923)	(923)
Balance at April 2, 2016	31,613	$ 195,024	$ (23,998)	$ (995)	$ 170,031

See Accompanying Notes to Consolidated Financial Statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the years ended April 2, 2016 , March 28, 2015 and March 29, 2014

(In thousands)	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES			
Net loss	$ (12,257)	$ (43,811)	$ (38,334)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities (net of acquisitions):			
Depreciation and amortization	7,343	7,817	7,642
Amortization of acquired intangible assets	1,376	1,502	2,985
Share-based compensation expense	5,103	4,542	6,105
Provision for doubtful accounts	329	53	—
Loss (gain) on sale of property and equipment, net	862	(6)	(1,138)
Gain on acquisition of Semiconductor Systems business	—	—	(499)
Loss and other-than-temporary impairment of cost method investment	—	4,263	9,703
Impairment of goodwill	—	7,889	—
(Increase) decrease in deferred income taxes	(877)	(54)	4,377
Changes in operating accounts, net of acquisitions:			
Decrease (increase) in trade receivables, net	2,984	(7,965)	(2,195)
(Increase) decrease in inventories	(7,303)	1,091	7,567
Decrease (increase) in shipped systems pending acceptance	1,631	(462)	(1,047)
Decrease (increase) in other current assets	1,154	(200)	(728)
Increase (decrease) in accounts payable and accrued liabilities	9,048	(4,013)	(13,694)
(Decrease) increase in deferred revenue	(4,691)	1,861	140
Net cash provided by (used in) operating activities	4,702	(27,493)	(19,116)
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchase of investments	(380,841)	(414,705)	(268,132)
Proceeds from sales and maturities of investments	369,700	450,507	294,182
Purchase of property, plant and equipment	(3,693)	(5,374)	(7,583)
Proceeds from sale of property, plant and equipment	232	154	3,657
Decrease (increase) in other assets	790	(2,638)	438
Cash paid for business acquisitions, net of cash acquired	—	(7,737)	(9,731)
Minority equity investment	—	—	(5,000)
Net cash (used in) provided by investing activities	(13,812)	20,207	7,831
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issuance of common stock	1,362	1,863	2,237
Payment of withholding taxes on stock-based compensation	(638)	(1,850)	(1,589)
Cash dividends paid to shareholders	—	(7,266)	(9,557)
Share repurchases	—	(1,456)	(191)
Net cash provided by (used in) financing activities	724	(8,709)	(9,100)
Effect of exchange rate changes on cash	(195)	(1,472)	(67)
NET CHANGE IN CASH AND CASH EQUIVALENTS	(8,581)	(17,467)	(20,452)
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	50,994	68,461	88,913
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$ 42,413	$ 50,994	$ 68,461
SUPPLEMENTAL CASH FLOW INFORMATION			
Cash paid for interest	$ (57)	$ (109)	$ —
Cash paid for income taxes	$ (806)	$ (1,157)	$ (3,256)
Income tax refunds received	$ 140	$ 633	$ 163
Net increase in property, plant and equip. & other assets related to transfers from inventory	$ 3,866	$ 1,091	$ 4,958
Non-cash additions to property, plant and equipment	$ 766	$ 372	$ 461

See Accompanying Notes to Consolidated Financial Statements

ELECTRO SCIENTIFIC INDUSTRIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. The Company

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.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements include the accounts of Electro Scientific Industries, Inc. and its subsidiaries. All intercompany accounts and transactions have been eliminated.

The Company’s fiscal year consists of 52 or 53 weeks ending on the Saturday nearest March 31. Accordingly, the fiscal 2016 reporting period consisted of a 53 -week period ending on April 2, 2016 , the fiscal 2015 reporting period consisted of a 52 -week period ending on March 28, 2015 and the fiscal 2014 reporting period consisted of a 52 -week period ending on March 29, 2014 . All references to years or quarters relate to fiscal years or fiscal quarters unless otherwise noted.

Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States (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; valuation of long-lived assets; and valuation of goodwill.

Risks and Uncertainties

The Company uses financial instruments that potentially subject it to concentrations of credit risk. Such instruments include cash equivalents, available-for-sale marketable securities, trade receivables and financial instruments used in hedging activities. The Company invests cash in cash deposits, money market funds, commercial paper, certificates of deposit and readily marketable securities. Investments are placed with high credit quality financial institutions and the credit exposure from any one institution or instrument is minimized. See Note 5 “Fair Value Measurements” for further discussion on these investments.

The Company sells a significant portion of its products to a small number of large semiconductor, PCB's and microelectronics manufacturers. The top ten customers accounted for approximately 51% , 40% and 41% of total net sales in 2016 , 2015 and 2014 , respectively. One customer, Apple Inc., and its affiliates, accounted for approximately 15% , 9% and 15% of total net sales in 2016 , 2015 and 2014 , respectively, a majority of which are in the Micromachining products group. No other customer individually accounted for more than 10% of total net sales in 2016 , 2015 or 2014 . The Company’s operating results may be adversely affected if orders and revenues from these key customers decline.

The Company uses qualified manufacturers to supply many components and sub-system modules of its products. The systems that the Company manufactures use high-performance computers, peripherals, lasers and other components from various suppliers. The Company obtains some of the components from a single source or a limited group of suppliers. An interruption in the supply of a particular component may have a temporary adverse impact on the Company’s operating results.

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.

The Company's operations involve a number of other risks and uncertainties including but not limited to those relating to the cyclicality of the microelectronics and semiconductor markets, the effect of general economic conditions, rapid changes in technology and international operations.

Immaterial Revision to Prior Period Financial Statements

In the current year, certain prior period amounts have been revised, which conforms to the current year presentation. Please see Note 7 Trade Accounts Receivable , Note 15 Accrued Current Liabilities & Other Liabilities and Note 24 Segment and Geographic Information .

Cash Equivalents and Investments

All highly liquid investments with a maturity of 90 days or less at the date of purchase are considered to be cash equivalents. Short-term investments reflect marketable securities that have maturities of less than one year or are subject to immediate pre-payment or call provisions. These securities consist primarily of marketable debt securities and are classified as "available-for-sale securities" and recorded at fair market value. Unrealized gains and losses on short-term investments are recorded as a component of accumulated other comprehensive income (loss). To determine whether any existing impairment is other-than-temporary and requires recognition of an impairment loss in the results of operations, the Company evaluates its marketable securities based on the nature of the investments and the Company's intent and ability to hold the securities until the securities are no longer in an unrealized loss position.

Accounts Receivable and Allowance for Doubtful Accounts

Trade receivables are stated at the amount the Company expects to collect and do not bear interest. Credit limits are established by reviewing the financial history and stability of each customer. Where appropriate, the Company obtains credit rating reports and financial statements of the customer to establish or modify credit limits. On certain foreign sales, letters of credit are obtained. The collectability of trade receivable balances is regularly evaluated based on a combination of factors such as customer reputation and credit-worthiness, past transaction history with the customer, current economic and industry trends, and changes in customer payment terms. If it is determined or estimated that a customer will be unable to fully meet its financial obligation, such as in the case of a bankruptcy filing or other material events impacting its business, a specific allowance for bad debt is recorded to reduce the related receivable to the amount expected to be recovered.

Accrued Restructuring Costs

The Company has engaged, and may continue to engage, in restructuring actions, which require it to make estimates in certain areas including expenses for severance and other employee separation costs. Because the Company has a history of paying severance benefits, expenses associated with exit or disposal activities are recognized when probable and estimable. Should the actual amounts differ from our estimates, the amount of the restructuring charges could be materially impacted. See Note 25 "Restructuring and Cost Management Plans" for further discussion.

Inventories

Inventories are principally valued at standard costs, which approximate the lower of cost (first-in, first-out) or market. Costs utilized for inventory valuation purposes include material, labor and manufacturing overhead. We regularly evaluate the carrying value of inventory based on a combination of factors including, but not limited to, the following: product life cycle, forecasted sales or usage, historical usage rates, estimated service period, product end-of-life dates, estimated current and future market values, service inventory requirements and new product introductions. Purchasing requirements and alternative uses for the inventory are explored within these processes to mitigate inventory exposure. Inventory materials with quantities in excess of forecasted usage are reviewed quarterly for obsolescence. Obsolescence write-downs are typically caused by engineering change orders or product life cycle changes.

Research and development product costs are generally expensed as incurred. Engineering materials that are expected to provide future value are generally classified as raw materials inventory.

Finished goods are reviewed quarterly by product marketing and operating personnel to determine if inventory carrying value exceeds market selling prices. When necessary, we record inventory write-downs as an increase to cost of sales based on the above factors and take into account worldwide quantities on hand, product life cycle and forecasted demand into our analysis.

Shipped Systems Pending Acceptance

Shipped systems pending acceptance relate to systems that have been ordered and shipped to the customer, but where revenue has been deferred in accordance with the Company's revenue recognition policy. Shipped systems pending acceptance are recognized as cost of sales once all criteria for revenue recognition have been met and revenue is recorded. Shipped systems

pending acceptance are valued at standard costs, which approximate the lower of cost (first-in, first-out) or market. Costs utilized in the valuation of shipped systems pending acceptance include material, labor and manufacturing overhead and exclude costs of installation.

Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization are recognized using the straight-line basis over the estimated useful lives of the assets. Expenditures for maintenance, repairs and minor improvements are expensed as incurred. Major improvements and additions are capitalized. When assets are sold or retired, the cost and related accumulated depreciation and amortization are removed from the accounts and the resulting gain or loss is included as a component of operating expenses.

Long-Lived Asset Impairment

Long-lived assets, principally property, plant and equipment and identifiable long-lived intangibles, are reviewed for impairment whenever events or circumstances indicate that the carrying amount of the assets may not be recoverable. The Company evaluates for recoverability of assets to be held and used by comparing the carrying amount of an asset or asset group to estimated future net undiscounted cash flows generated by the asset. If such assets are considered to be impaired, the impairment recognized is measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets.

The Company's purchased patents are amortized over their estimated useful lives, generally nine to seventeen years.

Other purchased intangible assets with estimated useful lives are carried at cost less accumulated amortization. Amortization expense is recognized on a straight-line basis over the estimated useful lives of the intangible assets, which range from one to ten years.

Goodwill Impairment

The Company accounts for goodwill pursuant to Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 350 as amended in September 2011 by Accounting Standard Update (ASU) 2011-08, "Intangibles-Goodwill and Other (ASC Topic 350): Testing Goodwill for Impairment" (ASC ASU 2011-08). ASC Topic 350 requires that goodwill be tested for impairment at least annually. ASC ASU 2011-08 permits an entity to make a qualitative assessment of whether it is more likely than not that a reporting units' fair value is less than its carrying amount (a "step zero" analysis) before applying the two-step goodwill impairment test. The Company tests goodwill for impairment annually or more frequently if an event occurs or circumstances would indicate that it is more likely than not the fair value of the reporting unit is less than the carrying value.

In the current year, the Company did not elect to perform a step zero and proceeded with a step one analysis of the goodwill related to the Topwin reporting unit. The date of the annual test of goodwill is the first day of the fourth quarter. The carrying value of the reporting unit is determined based on an allocation of the Company's assets and liabilities to the reporting unit using reasonable assumptions. If potential impairment is indicated by the step one test, the Company performs a step two test to determine the fair value of goodwill.

Other Assets

Other assets include consignment, demonstration (demo) and training equipment, long-term deposits, and non-current accounts receivable.

Consignment, demo and training equipment are recorded at the lower of standard costs or estimated market values, until the assets are sold.

Fair Value of Financial Instruments

The carrying amounts of financial instruments, including cash equivalents and accrued liabilities approximate fair value because of the nature of the underlying transactions and short-term maturities involved. Current and non-current marketable securities are recorded at fair value which is defined under FASB ASC Topic 820 "Fair Value Measurements and Disclosures" (ASC Topic 820). 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 in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

See Note 5 “Fair Value Measurements” for further discussion and disclosure of fair value on our financial assets and investments.

Derivative Financial Instruments

The Company’s primary objective for holding derivative financial instruments is to manage currency risk. The Company’s accounting policies for these instruments are based on whether they meet the Company’s criteria for designation as hedging transactions, either as cash flow or fair value hedges. A hedge of the exposure to variability in the cash flows of an asset or a liability, or of a forecasted transaction, is referred to as a cash flow hedge. A hedge of the exposure to changes in fair value of an asset or a liability, or of an unrecognized firm commitment, is referred to as a fair value hedge. The criteria for designating a derivative as a hedge include the instrument’s effectiveness in risk reduction and, in most cases, a one-to-one matching of the derivative instrument to its underlying transaction. The Company enters into foreign currency exchange contracts to offset the earnings impact relating to the variability in exchange rates on certain short-term monetary assets and liabilities denominated in non-functional currencies. The Company does not designate these foreign currency contracts as hedges. The change in fair value of these derivative instruments not designated as hedging instruments is reported each period in other income (expense), net, in our Consolidated Statement of Operations.

Revenue Recognition

The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or the services have been rendered, the sales price is fixed or determinable and collection of the related receivable is reasonably assured. Title and risk of loss generally pass to the customer at the time of delivery of the product to a common carrier. Revenue is recognized upon such delivery, provided that fulfillment of acceptance criteria can be demonstrated prior to shipment. Where the acceptance criteria cannot be demonstrated prior to shipment, or in the case of substantially new products, revenue is deferred until acceptance has been received. For multiple element arrangements, the relative fair value of any undelivered elements is deferred until the elements are delivered and acceptance criteria, if any, are met. Revenues are recorded net of taxes collected which are required to be submitted to government authorities. Installation services are not essential to the functionality of the delivered equipment and installation revenue is deferred as a separate deliverable until installation is complete. Neither accrued installation costs nor the fair value of installation service revenue deferred has been material.

Revenues associated with sales to customers under local contracts in Japan are recognized upon title transfer, which generally occurs upon customer acceptance. Revenues related to spare parts and consumable sales are generally recognized upon shipment. Revenues related to maintenance and service contracts are generally recognized ratably over the duration of the contracts.

Product Warranty

The Company evaluates obligations related to product warranties quarterly. A standard warranty is provided on most of our products over a specified period of time, generally twelve to twenty-four months, at no cost to our customers. Warranty charges are comprised of costs to service the warranty, including labor to repair the system and replacement parts for defective items, as well as other costs incidental to the repairs. Warranty charges are recorded net of any cost recoveries resulting from either successful repair of damaged parts or from warranties offered by the Company’s suppliers for defective components. Using historical data, the Company estimates average warranty cost per system or part type and records the provision for such charges as an element of cost of sales upon recognition of the related revenue. Additionally, the overall warranty accrual balance is separately analyzed using the remaining warranty periods outstanding on systems and items under warranty, and any resulting changes in estimates are recorded as an adjustment to cost of sales. If circumstances change, or if a significant change in warranty-related incidents occurs, the impact of the change in the warranty accrual could be material. Accrued product warranty is included on the Consolidated Balance Sheets as a component of accrued liabilities.

Research and Development

Research and development costs, which include labor and related employee expenses, patent maintenance fees, project materials costs, development tool placement and installation costs, project subcontractors, depreciation of engineering equipment, building costs and other administration expenses, are generally expensed as incurred. Engineering materials that are expected to provide future value are included in inventories.

Income Taxes

The Company accounts for income taxes under the asset and liability method. Under this method, deferred income taxes are recognized for the future tax consequences attributable to temporary differences between the financial statement and tax

balances of existing assets and liabilities. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those assets and liabilities are expected to be recovered or settled. The effect on deferred taxes resulting from a change in tax rates is recognized in income in the period that includes the enactment date. When management determines that it is not more likely than not that a deferred tax asset will be fully realized, a valuation allowance is established to reduce deferred tax assets to the amount expected to be realized.

Taxes on Unremitted Foreign Income

The Company provides for income taxes on its foreign subsidiaries' taxable income based on the effective income tax rate in each respective jurisdiction. The Company provides for deferred taxes on the undistributed earnings of a subsidiary, except to the extent that the income is intended to be indefinitely reinvested or remitted in a tax-free liquidation. The foreign jurisdictions where the Company is permanently reinvested include Singapore and China (Wuhan Topwin Optoelectronics Technology Co., Ltd.). The cumulative amount of earnings upon which U.S. income taxes have not been provided was $37.0 million and $35.3 million as of April 2, 2016 and March 28, 2015 , respectively. If not reinvested, the liability related to these earnings would have been $12.9 million and $12.2 million as of April 2, 2016 and March 28, 2015 , respectively, which may be offset by foreign tax credits or other tax attributes.

Comprehensive Income (Loss)

Comprehensive income (loss) includes net income (loss) and other comprehensive income (loss), which includes charges or credits to equity that are not the result of transactions with shareholders. Comprehensive income (loss) within these consolidated financial statements includes primarily cumulative foreign currency translation adjustments, benefit plan obligations and unrealized gains and losses on securities available for sale. The cumulative translation adjustment included in accumulated other comprehensive income (loss) at April 2, 2016 , March 28, 2015 and March 29, 2014 was $0.9 million , $30 thousand , and $0.4 million respectively.

Earnings Per Share

Basic earnings per share (EPS) is computed utilizing the weighted average number of shares outstanding during the period. Diluted EPS also considers common stock equivalents, such as stock options, stock-settled stock appreciation rights (SARs), employee stock purchase plan (ESPP) shares and restricted stock units, to the extent that they are not antidilutive.

Share-Based Compensation

The Company recognizes expense related to the fair value of its share-based compensation awards. The Company uses the Black-Scholes model to estimate the fair value of all share-based compensation awards on the date of grant, except for unvested restricted stock units, which are valued at the fair market value of the Company's stock on the date of award. The Company recognizes the compensation expense for options, SARs, and unvested time-based restricted stock units on a straight-line basis, net of estimated forfeitures, over the requisite service period of the award. The performance-based stock awards specify certain performance conditions that must be achieved in order for the awards to vest. The related compensation expense for this type of award is recognized on a straight-line basis, net of estimated forfeitures, over the related service period. The amount of compensation expense is dependent on our periodic assessment of the probability of the targets being achieved and our estimate, which may vary over time, of the number of shares that ultimately will be issued.

Segment Reporting

The Company complies with ASC Topic 280 "Segment Reporting" (ASC Topic 280). ASC Topic 280, which is based on a management approach to segment reporting, establishes requirements to report selected segment information quarterly and to report annually entity-wide disclosures about products, major customers and the geographies in which the entity holds material assets and reports revenue. An operating segment is defined as a component that engages in business activities whose operating results are reviewed by the chief operating decision maker and for which discrete financial information is available. Based on the provisions of ASC Topic 280, the Company has determined that it operates in two segments: Component Processing and Micromachining. There are no differences between the accounting policies used for our business segments compared to those used on a consolidated basis.

Employee Benefit Plans

The Company has an employee savings plan under the provisions of Section 401(k) of the Internal Revenue Code. During 2016 and 2015 , contributions to the plan by the Company were $0.7 million and $0.6 million, respectively.

The Company has defined benefit retirement plans at certain of its foreign subsidiaries. The Company accounts for these plans based on the provisions of ASC Topic 715 "Compensation-Retirement Benefits". These plans are immaterial to the financial statements of the Company as a whole.

3. Recent Accounting Pronouncements

In April 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-10, “Revenue from Contracts with Customers (Topic 606) - Identifying Performance Obligations and Licensing.” ASU 2016-10 clarifies aspects of Topic 606 related to identifying performance obligations and the licensing implementation guidance, while retaining the related core principles for those areas. The effective date and transition requirements for ASU 2016-10 are the same as the effective date and transition requirements in ASU 2014-09. While we do not expect the adoption of ASU 2016-10 to have a material effect on our business, we are still evaluating any potential impact that adoption of ASU 2016-10 may have on our financial position, results of operations or cash flows.

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.

In January 2016, the FASB issued ASU 2016-01, "Financial Instruments - Overall (Subtopic 825-10)." ASU 2016-01 enhances the reporting model for financial instruments to provide users of financial statements with more decision-useful information by addressing certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. The amendments simplify certain requirements and also reduce diversity in current practice for other requirements. ASU 2016-01 is effective for public companies' fiscal years beginning after December 15, 2017, which would be the Company's fiscal year ending March 30, 2019, including interim periods within those fiscal years. Except for the early application guidance specifically allowed in ASU 2016-01, early adoption is not permitted. We do not expect the adoption of ASU 2016-01 to have a material effect on our financial position, results of operations or cash flows.

In November 2015, the FASB issued ASU 2015-17, "Income Taxes (Topic 740) - Balance Sheet Classification of Deferred Taxes." ASU 2015-17 simplifies the presentation of deferred income taxes, and requires that deferred tax liabilities and assets be classified as non-current in a classified statement of financial position. Early application is permitted and may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. We elected to prospectively adopt ASU 2015-17, thus reclassifying an immaterial amount of current deferred tax assets net of valuation allowance to noncurrent on the accompanying consolidated balance sheet.

In August 2015, the FASB issued ASU No. 2015-14, which defers the effective date of ASU No. 2014-09 "Revenue from Contracts with Customers" one year to interim and annual reporting periods beginning after December 15, 2017, which would be the Company's fiscal year ending March 30, 2019. This guidance may be adopted retrospectively or under a modified retrospective method where the cumulative effect is recognized at the date of initial application. The Company is currently evaluating the impact of adopting this guidance on its Consolidated Financial Statements and disclosures included within Notes to Consolidated Financial Statements.

In July 2015, the FASB issued ASU 2015-11, “Simplifying the Measurement of Inventory (Topic 330).” ASU 2015-11 simplifies the accounting for the valuation of all inventory not accounted for using the last-in, first-out (“LIFO”) method by prescribing inventory be valued at the lower of cost and net realizable value. ASU 2015-11 is effective for public companies' annual periods, including interim periods within those fiscal years, beginning after December 15, 2016, which would be the Company's fiscal year ending March 31, 2018, on a prospective basis. Early adoption is permitted. We do not expect the adoption of ASU 2015-11 to have a material effect on our financial position, results of operations or cash flows.

In April 2015, the FASB issued ASU 2015-05, “Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40).” ASU 2015-05 provides guidance regarding the accounting for a customer's fees paid in a cloud computing arrangement, specifically about whether a cloud computing arrangement includes a software license, and if so, how to account for the software license. ASU 2015-05 is effective for public companies' annual periods, including interim periods, beginning after December 15, 2015, which would be the Company's fiscal year ending April 1, 2017. Early adoption is permitted. We do not expect the adoption of ASU 2015-05 to have a material effect on our financial position, results of operations or cash flows.

In June 2014, the FASB issued ASU No. 2014-12, "Compensation - Stock Compensation (Topic 718)." ASU No. 2014-12 addresses accounting for share-based payments when the terms of an award provide that a performance target could be achieved after the requisite service period. ASU 2014-12 indicates that, in such situations, the performance target should be treated as a performance condition and, accordingly, the performance target should not be reflected in estimating the grant-date fair value of the award. Instead, compensation cost should be recognized in the period in which it becomes probable that the performance target will be achieved. ASU 2014-12 is effective for annual periods and interim periods within those annual periods beginning after December 15, 2015, which would be the Company's fiscal year ending April 1, 2017. We do not expect the adoption of ASU 2014-12 to have a material effect on our financial position, results of operations or cash flows.

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers". ASU No. 2014-09 requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance when it becomes effective. The new standard is effective for the Company on March 26, 2017. Early application is not permitted. The standard permits the use of either the retrospective or cumulative effect transition method. The Company is evaluating the effect that ASU 2014-09 will have on its consolidated financial statements and related disclosures. The Company has not yet selected a transition method nor has it determined the effect of the standard on its ongoing financial reporting.

4. Share-Based Compensation

The Company's employee share-based compensation plans consist of our 2004 Stock Incentive Plan (the 2004 Plan) and our 1990 Employee Stock Purchase Plan. Additionally, the Company recognizes compensation expense for shares issued in connection with business acquisition from an unallocated share pool, approved by the shareholders or the Board of Directors.

The 2004 plan was approved by the shareholders in October 2004, replacing various stock compensation plans that were previously approved by the shareholders or the Board of Directors (the Replaced Plans), except with respect to options and other awards previously outstanding. Outstanding options and awards remained subject to the terms of the Replaced Plans under which they were originally granted. At that time, the shareholders also approved the reservation of 3,000,000 shares of common stock for issuance under the 2004 Plan. These shares are in addition to any shares of common stock that, at the time the 2004 Plan was approved by shareholders, were available for grant under any of the Replaced Plans through the expiration, termination, forfeiture or cancellation of grants. The 2004 Plan allows for grants of stock options, stock appreciation rights, stock bonuses (including restricted stock units), restricted stock, performance-based awards and dividend equivalents. In August 2014, the 2004 Plan was amended to reduce the shares reserved for issuance by 1,000,000 shares.

In September 1990, the shareholders approved the adoption of the 1990 Employee Stock Purchase Plan, as amended in September 1998, October 2003, October 2004, January 2008, August 2009 and August 2014 (the ESPP), pursuant to which 4,400,000 shares of common stock have been reserved for issuance to participating employees. Eligible employees may elect to contribute up to 15 percent of their base wage and commissions during each pay period, up to a maximum of 500 shares per purchase date. The ESPP provides for separate overlapping twenty-four month offerings starting every three months. Each offering has eight purchase dates occurring every three months on designated dates. The offerings under the ESPP commence on February 15, May 15, August 15 and November 15 of each calendar year. Any eligible employee may participate in only one offering at a time and may purchase shares only through payroll deductions permitted under the ESPP. At the end of each three-month purchase period, the purchase price is determined and the accumulated funds are used to automatically purchase shares of common stock. The purchase price per share is equal to 85 percent of the lower of the fair market value of the common stock on (a) the first day of the offering period or (b) the date of purchase. The ESPP also provides that if the fair market value of the common stock on the first day of the new offering period is less than or equal to the fair market value of the common stock on the first date of any ongoing offering, employees participating in any such ongoing offering will be automatically withdrawn from it and enrolled in the new offering.

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 Company uses the Black-Scholes model to estimate the fair value of SARs. Similar to options, SARs are recorded at the fair value of the award at grant date and the expense is recognized on a straight-line basis over the requisite service period of the award. The Company granted 467,000 , 634,523 , and 63,853 SARs in 2016 , 2015 and 2014 , respectively.

Share-based compensation expense was included in the Company's Consolidated Statements of Operations as follows:

(In thousands)	2016	2015	2014
Cost of sales	$ 445	$ 586	$ 722
Selling, general and administration	3,004	2,847	4,213
Research, development and engineering	783	1,109	1,170
Share-based compensation expense	$ 4,232	$ 4,542	$ 6,105

The amounts shown in the table above for the year ended April 2, 2016 do not include $871 thousand in share-based compensation expense related to acquisitions. Refer to Note 6 "Business Acquisition" for discussion of stock amounts considered compensation related to acquisitions.

The total amount of net cash received from the stock plan awards was $0.7 million , zero and $0.7 million for 2016 , 2015 and 2014 , respectively. All stock plan awards are settled with newly issued shares.

No share-based compensation costs were capitalized during 2016 , 2015 or 2014. As of April 2, 2016 , the Company had $6.9 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 .

Valuation Assumptions

The Black-Scholes option pricing model is utilized to determine the fair value of SARs granted. The following weighted average assumptions were used in calculating the fair value of SARs during the periods presented:

	2016	2015	2014
Risk-free interest rate	1.94%	2.04%	1.88%
Expected dividend yield	—%	4.6%	3.5%
Expected lives	7.4 years	7.0 years	6.0 years
Expected volatility	47%	47%	45%

The following weighted average assumptions were used to estimate the fair value of ESPP shares issued in the periods presented:

	2016	2015	2014
Risk-free interest rate	0.34%	0.24%	0.16%
Expected dividend yield	—%	3.2%	3.3%
Expected lives	1.1 years	1.1 years	1.1 years
Expected volatility	35%	41%	37%

The risk-free interest rates used are based on the U.S. Treasury yields over the expected terms. In December 2011, the Board of Directors adopted a dividend policy under which the Company made quarterly cash dividends payments. Accordingly, the Company paid a dividend of $0.08 per outstanding common share in first three quarters of 2015 and all four quarters of 2014. In the fourth quarter of 2015, the Board of Directors suspended the quarterly dividend payment and as such no dividends were paid in that quarter or any quarter of 2016. The expected dividend yield used is derived using a mathematical formula which uses the expected Company annual dividend rate over the expected term divided by the fair value of the Company's common stock at the grant date.

The expected term and forfeiture estimates for stock options and SARs are based on an analysis of actual exercise behavior. The expected term for the ESPP is the weighted average length of the purchase periods. The Company uses its historical volatility over the estimated expected term as the expected volatility.

At April 2, 2016 , the Company had 5,099,015 shares of its common stock reserved for issuance under all of the above plans combined. Of those shares, 3,638,391 are subject to issuance under currently outstanding stock options, SARs and stock awards and 1,460,624 shares, including 622,276 shares available for issuance under the ESPP, are available for future grants.

The total fair value of stock option and SARs awards granted and vested during the period, unvested restricted stock unit awards granted and vested during the period, the intrinsic value of stock options and SARs exercised during the period and the total grant date fair value were:

(In thousands, except per share data)	2016	2015	2014
Stock-Option and SAR Awards:			
Grant date fair value per share	$ 2.89	$ 2.12	$ 2.94
Total fair value of options and SARs granted	$ 1,350	$ 1,291	$ 188
Total fair value of options and SARs vested	$ 336	$ 409	$ 1,305
Total intrinsic value of options and SARs exercised	$ 1	$ 18	$ 183
Unvested Restricted Stock Unit Awards:			
Grant date fair value per share	$ 5.52	$ 6.80	$ 10.19
Total fair value of awards granted	$ 4,072	$ 5,832	$ 6,865
Total fair value of awards vested	$ 4,324	$ 7,532	$ 5,251
Employee Stock Purchase Plan:			
Grant date fair value per share	$ 1.22	$ 1.72	$ 2.61
Total grant date fair value	$ 394	$ 559	$ 699

Share-Based Payment Award Activity

Information with respect to stock option and SAR activity was as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (In years)	Aggregate Intrinsic Value (In thousands)
Outstanding at March 30, 2013	2,773,788	$ 17.98		
Granted	63,853	9.24		
Exercised	(46,350)	7.26		
Expired or forfeited	(892,882)	23.67		
Outstanding at March 29, 2014	1,898,409	$ 15.27	3.76	$ 1,275
Granted	634,523	6.91		
Exercised	(8,250)	7.26		
Expired or forfeited	(295,636)	18.30		
Outstanding at March 28, 2015	2,229,046	$ 12.52	4.45	$ —
Granted	467,000	5.63		
Exercised	(2,500)	6.71		
Expired or forfeited	(537,946)	16.53		
Outstanding at April 2, 2016	2,155,600	$ 10.03	5.35	$ 904
Vested and expected to vest at April 2, 2016	2,124,474	$ 10.09	5.30	$ 867
Exercisable at April 2, 2016	1,288,983	$ 12.54	3.06	$ 54

Information with respect to unvested time-based restricted stock unit awards activity was as follows:

	Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (In years)	Aggregate Intrinsic Value (In thousands)
Outstanding at March 30, 2013	1,092,489	$ 12.19		
Awarded	465,789	10.08		
Vested	(299,538)	11.84		
Forfeited	(143,139)	11.63		
Outstanding at March 29, 2014	1,115,601	$ 11.47	1.65	$ 11,033
Awarded	459,295	6.33		
Vested	(672,930)	11.19		
Forfeited	(66,125)	9.82		
Outstanding at March 28, 2015	835,841	$ 8.90	1.91	$ 5,149
Awarded	737,200	5.52		
Vested	(360,349)	11.75		
Forfeited	(130,888)	7.66		
Outstanding at April 2, 2016	1,081,804	$ 6.77	1.93	$ 7,781

Information with respect to unvested performance-based restricted stock unit awards activity was as follows:

	Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (In years)	Aggregate Intrinsic Value (In thousands)
Outstanding at March 30, 2013	372,527	$ 10.72		
Awarded	213,662	10.45		
Vested (1)	(151,145)	11.29		
Forfeited	(38,511)	11.13		
Outstanding at March 29, 2014	396,533	$ 10.33	1.51	$ 3,922
Awarded	398,905	7.33		
Vested (1)	(234)	—		
Forfeited	(201,500)	11.63		
Outstanding at March 28, 2015	593,704	$ 7.88	1.81	$ 3,657
Awarded	—	—		
Vested (1)	(5,592)	14.64		
Forfeited	(187,125)	10.84		
Outstanding at April 2, 2016	400,987	$ 6.93	1.00	$ 2,928

(1) Zero performance-based shares were earned in 2016 , 2015 and 2014 .

Share-Based Payment For Business Acquisitions

As consideration for the purchase of Topwin, the Company is obligated to issue up to 513,328 shares valued at $2.0 million as compensation to an employee in the Company who was also a former shareholder of Topwin. The compensation expense will be recognized over a three year period. In 2016, the Company issued 59,887 shares of ESI common stock and recognized $0.9 million in compensation expense related to this agreement. See Note 6 "Business Acquisition” for discussion.

5. Fair Value Measurements

Financial Assets Measured at Fair Value

The Company's fair value hierarchy for its financial assets measured at fair value on a recurring basis as of April 2, 2016 and March 28, 2015 was as follows (in thousands):

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
Government agencies	—	13,252	—	13,252
Commercial paper	—	997	—	997
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 our deferred compensation plan

March 28, 2015	Level 1		Level 2		Level 3		Total	
Cash equivalents:								
Money market securities	$	14,280	$	—	$	—	$	14,280
Commercial paper		—		15,537		—		15,537
Government agencies		—		2,702		—		2,702
Total cash equivalents	$	14,280	$	18,239	$	—	$	32,519
Short term investments - available for sale:								
Municipal bonds	$	—	$	3,872	$	—	$	3,872
Corporate bonds		—		853		—		853
Total short-term investments - available for sale	$	—	$	4,725	$	—	$	4,725
Forward purchase or (sale) contracts:								
Japanese Yen	$	—	$	(7)	$	—	$	(7)
New Taiwan Dollar		—		17		—		17
Korean Won		—		(44)		—		(44)
Euro		—		277		—		277
British Pound		—		(133)		—		(133)
Chinese Renminbi		—		(34)		—		(34)
Total forward contracts	$	—	$	76	$	—	$	76
Deferred compensation plan assets:*								
Mutual funds and exchange traded funds	$	1,885	$	—	$	—	$	1,885
Money market securities		190		—		—		190
Total deferred compensation plan assets	$	2,075	$	—	$	—	$	2,075

*These investments represent assets held in trust for our 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 April 2, 2016 and March 28, 2015 were utilized to calculate fair values.

During 2016 and 2015 , there were no transfers between Level 1, 2 or 3 assets.

Investments

The Company’s investments at April 2, 2016 and March 28, 2015 were as follows (in thousands):

		Unrealized		
April 2, 2016	**Cost**	**Gain**	**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

		Unrealized		
March 28, 2015	**Cost**	**Gain**	**Loss**	**Fair Value**
Available-for-sale securities (current):				
Commercial paper	$ 15,537	$ —	$ —	$ 15,537
Municipal bonds	3,870	2	—	3,872
Government agencies	2,702	—	—	2,702
Corporate bonds	853	—	—	853
Mutual funds, exchange traded funds and money market securities*	1,950	125	—	2,075
Total investments (current)	$ 24,912	$ 127	$ —	$ 25,039

*These investments represent assets held in trust for our 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 April 2, 2016 and March 28, 2015 .

Investments with underlying maturities within one year at April 2, 2016 , including cash equivalents, totaled $26.4 million .

6. Business Acquisition

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 fiscal 2016, zero and 87,378 shares of ESI common stock have been issued in connection with contingent and non-contingent consideration under the purchase agreement, respectively.

Additionally, the Company will issue, on the same terms described above, 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 will be recognized over a three year period. Through fiscal 2016, we have recognized $1.0 million in compensation expense related to this agreement. This expense was comprised of $0.9 million of share-based compensation and $0.1 million amortization. Through fiscal 2016, zero and 59,887 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 consist primarily of $3.5 million of developed technology and will be amortized over their useful lives, which range from one to ten years.

In 2016 and 2015, the Company incurred approximately $0.2 million and $0.8 million in acquisition-related costs, respectively, which are included in selling, general and administration expenses in the 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.

7. Trade Accounts Receivable

Trade accounts receivable at April 2, 2016 and March 28, 2015 consisted of the following:

(In thousands)		2016		2015
Current trade accounts receivable, net	$	42,770	$	42,295
Non-current trade accounts receivable		320		3,656
	$	43,090	$	45,951

Non-current trade accounts receivable are included in Other assets in the Condensed Consolidated Balance Sheets. Presentation of $3.7 million of non-current trade accounts receivable previously shown as current at March 28, 2015 was revised to reflect these amounts as non-current, which conforms to current period presentation.

8. Inventories

The components of inventories at April 2, 2016 and March 28, 2015 were as follows:

(In thousands)		2016		2015
Raw materials and purchased parts	$	38,957	$	37,991
Work-in-process		14,270		14,834
Finished goods		7,243		3,812
	$	60,470	$	56,637

In 2016 and 2015 , the Company recorded a charge against inventory for write-offs associated with discontinued products of $1.4 million and $1.0 million , respectively. See Note 25 "Restructuring and Cost Management Plans" for further discussion on 2015 write-off.

9. Other Current Assets

Other current assets at April 2, 2016 and March 28, 2015 consisted of the following:

(In thousands)	2016	2015
Prepaid expenses	$ 2,747	$ 2,595
Value added tax receivable	1,353	802
Acquisition related receivable	—	1,180
Other	1,240	1,513
	$ 5,340	$ 6,090

Included in "Other" Other current assets are non-trade receivables, derivative sale proceeds receivable and other similar items.

10. Property, Plant and Equipment, net

Property, plant and equipment as of April 2, 2016 and March 28, 2015 consisted of the following:

(In thousands)	Estimated Useful Lives	2016	2015
Land	n/a	$ 2,152	$ 2,152
Buildings and improvements	3 to 40 years	36,487	37,841
Machinery and equipment	3 to 10 years	57,986	53,781
Computer equipment and software	1 to 7 years	35,828	34,985
		132,453	128,759
Less accumulated depreciation		(107,910)	(102,901)
		$ 24,543	$ 25,858

Depreciation expense totaled $6.8 million, $7.2 million and $7.1 million in 2016 , 2015 and 2014 , respectively. For the year ended April 2, 2016 , the Company performed a review for impairment based on certain triggering events. As a result of this review, no impairments of property, plant and equipment were identified.

11. Goodwill

The Company had $7.4 million and $7.7 million in goodwill as of April 2, 2016 and March 28, 2015 , respectively, which was associated with the Topwin reporting unit. Purchase price accounting was finalized in the first quarter of 2016, which reduced goodwill by $0.3 million, due primarily to a lower purchase price resulting from working capital adjustments in accordance with the purchase agreement.

The Company tests goodwill for impairment annually or more frequently if an event occurs or circumstances would indicate that it is more likely than not the fair value of the reporting unit is less than the carrying value. The date of the annual test of goodwill for the Topwin reporting unit is the first day of the fourth quarter. Accordingly, the Company performed a step one analysis of the recorded goodwill as of January 3, 2016, and the reporting unit fair value was determined to be greater than the carrying value, indicating no impairment.

See Note 6 "Business Acquisition" for further discussion on Topwin goodwill.

12. Acquired Intangible Assets, net

Acquired intangible assets as of April 2, 2016 and March 28, 2015 consisted of the following:

(In thousands, except years)	Weighted Average Useful Life (In years)	2016	2015
Developed technology	7.1	$ 19,457	$ 20,001
Customer relationships	5.6	3,154	3,154
Customer backlog	1.0	1,341	1,341
Trade name and trademarks	3	463	463
Fair value of below-market lease (non-current portion)	3.8	310	310
Change of control agreements	1	100	100
Patents	13.0	3,467	3,469
		28,292	28,838
Less accumulated amortization		(21,146)	(19,880)
		$ 7,146	$ 8,958

We performed a review of our acquired 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 detected, other than a $0.4 million intangible associated with developed technology related to the Topwin reporting unit.

Amortization expense for acquired intangible assets has been recorded on the Consolidated Statements of Operations as follows:

(In thousands)	2016	2015	2014
Cost of sales	$ 1,140	$ 1,095	$ 2,293
Selling, general and administration	36	210	212
Research, development and engineering	200	197	480
	$ 1,376	$ 1,502	$ 2,985

The estimated amortization expense for acquired intangible assets in future years is as follows (in thousands):

Year	Amortization
2017	$ 1,089
2018	1,087
2019	1,087
2020	1,035
2021	1,012
Future years	1,836
	$ 7,146

13. Other Assets

Other assets consisted of the following as of April 2, 2016 and March 28, 2015 :

(In thousands)	2016	2015
Consignment and demo equipment, net	$ 7,242	$ 7,164
Long term deposits	2,543	2,376
Non-current trade accounts receivable, net	320	3,656
Other non-current assets	2,521	15
	$ 12,626	$ 13,211

Depreciation expense for demo equipment totaled $0.5 million in 2016 and $0.6 million in each of 2015 and 2014.

14. Income Taxes

During the fourth quarter of 2016, we elected to prospectively adopt ASU 2015-17, thus reclassifying $0.2 million of current DTAs net of valuation allowance to noncurrent on the accompanying consolidated balance sheet.

Net deferred tax assets and liabilities at April 2, 2016 and March 28, 2015 consisted of the following:

(In thousands)	2016	2015
Deferred tax assets and liabilities:		
Current		
Inventory valuation and warranty costs	$ —	$ 10,781
Receivables and other current assets	—	(272)
Payroll-related accruals	—	1,288
Accrued liabilities	—	2,382
Deferred revenue	—	3,368
Other	—	1,029
Total current deferred tax assets	—	18,576
Valuation allowance, current	—	(18,571)
Net current deferred tax assets (liabilities)	—	5
Non-current		
Inventory valuation and warranty costs	11,524	—
Receivables and other non-current assets	(91)	—
Payroll-related accruals	6,035	4,704
Intangible assets and investments	865	(1,677)
Accrued liabilities	1,626	454
Deferred revenue	1,746	—
Property, plant and equipment	5,220	5,187
Other comprehensive income	219	(112)
Tax loss and credit carryforwards	67,630	59,137
Other assets	(219)	1,049
Total non-current deferred tax assets	94,555	68,742
Valuation allowance, non-current	(93,875)	(69,011)
Net non-current deferred tax (liabilities) assets	680	(269)
Total deferred tax assets	94,555	87,318
Total valuation allowance	(93,875)	(87,582)
Net deferred tax (liabilities) assets	$ 680	$ (264)

The Company had approximately $77.9 million and $68.5 million in tax assets resulting from federal, state and foreign net operating losses and tax credits as of April 2, 2016 and March 28, 2015 , respectively as follows:

(In thousands)	2016	2015
Federal net operating losses	$ 27,430	$ 19,785
State net operating losses	3,467	3,467
Foreign operating losses and tax credits	12,173	11,433
Federal research credits	21,336	19,670
State research credits	4,480	4,287
Federal minimum tax credit	990	1,049
Federal capital losses	8,022	8,855
	$ 77,898	$ 68,546

The federal and state net operating losses expire on various dates through fiscal 2036. The majority of the foreign tax credits expire on various dates through fiscal 2026. The federal and most of the state research credits expire on various dates through fiscal 2036. Certain state research credits and the federal minimum tax credits are available indefinitely. The state net operating losses and credits are reflected net of their federal tax impact.

A valuation allowance is required if it is more likely than not that all or a part of a deferred tax asset will not be realized in the future. A valuation allowance of $93.9 million and $87.6 million was recorded as of April 2, 2016 and March 28, 2015 , respectively. The valuation allowance increased by $6.3 million in 2016 primarily due to continued net operating losses and tax credits.

The components of income before income taxes and the (benefit from) provision for income taxes, all from continuing operations, were as follows:

(In thousands)	2016	2015	2014
Income (loss) before income taxes:			
Domestic	$ (13,385)	$ (39,656)	$ (37,739)
Foreign	1,112	(3,921)	(687)
Total loss before income taxes	(12,273)	(43,577)	(38,426)
Provision for (benefit from) income taxes:			
Current:			
U.S. federal and state	8	(983)	(605)
Foreign	916	1,205	437
	924	222	(168)
Deferred:			
U.S. federal and state	—	5	(26)
Foreign	(940)	7	102
	(940)	12	76
Total provision for (benefit from) income taxes	$ (16)	$ 234	$ (92)

The portion of the tax benefit derived from stock-based compensation that is allocated as common stock was zero in 2016 , 2015 and 2014 .

A reconciliation of the Company's effective tax rate to the United States federal statutory income tax rate was as follows:

	2016	2015	2014
U.S. federal statutory income tax rate	35.0 %	35.0 %	35.0 %
State income taxes, net of federal benefit	(0.5)	(1.1)	(0.6)
Tax credits	17.1	4.2	3.0
Domestic production and export tax incentives	—	—	—
Non-U.S. income taxed at different rates	14.3	2.1	3.3
Changes in unrecognized tax benefits	(4.1)	(2.4)	2.1
Change in valuation allowance	(51.8)	(32.3)	(38.0)
Stock compensation	(10.2)	(4.2)	(4.1)
Other, net	0.3	(2.0)	(0.5)
	0.1 %	(0.7)%	0.2 %

The Company currently benefit 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 ends on June 30, 2016. While the Company has failed to meet certain of the associated requirements for the incentive in the past, it has obtained a waiver for certain periods and believes that it is more likely than not the Company will continue to receive the associated tax incentives for balance of the incentive period. Although the Company has applied for an extension of benefits beyond the incentive period, there is no assurance that these benefits will be extended.

The Company operates globally but considers its significant tax jurisdictions to include Canada, China, France, Japan, Korea, Singapore, Taiwan, the United Kingdom and the United States. As of April 2, 2016 , the following tax years remained subject to examination by the major tax jurisdictions indicated:

Major Jurisdictions	Open Tax Years
Canada	2012 and forward
China	2006 and forward
France	2013 and forward
Japan	2009 and forward
Korea	2011 and forward
Singapore	2012 and forward
Taiwan	2011 and forward
United Kingdom	2012 and forward
United States	2004 and forward

A reconciliation of the beginning and ending amount of the consolidated liability for unrecognized income tax benefits for the years ended April 2, 2016 and March 28, 2015 was as follows:

(In thousands)	2016	2015	2014
Beginning unrecognized tax benefits balance	$ 9,654	$ 9,356	$ 9,210
Gross increases for tax positions of prior years	731	849	44
Gross decreases for tax positions of prior years	—	(1,013)	—
Gross increases for tax positions for current year	—	462	102
Ending unrecognized tax benefits balance	$ 10,385	$ 9,654	$ 9,356

The unrecognized tax benefits were presented as long-term income taxes payable on the Consolidated Balance Sheets net of offsetting deferred tax assets. If recognized the net impact to the effective tax rate associated with the unrecognized tax benefits would be $0.2 million and $0.2 million as of April 2, 2016 and March 28, 2015 , respectively. The Company records interest and penalties related to unrecognized tax benefits as tax expense. The interest and penalties were minimal in 2016 and 2015 . The Company expects no decrease in unrecognized tax benefits within the next twelve months from the lapse in statutes of limitation. The Company also expects the annual increases to be consistent with prior years and does not anticipate any significant changes in unrecognized tax benefits in the next twelve months as the result of examinations.

15. Accrued Liabilities (current) & Other Liabilities (non-current)

Accrued liabilities (current) consisted of the following at April 2, 2016 and March 28, 2015 :

(In thousands)	2016	2015
Payroll-related liabilities	$ 5,717	$ 6,723
Product warranty accrual	3,666	3,342
Purchase order commitments and receipts	2,588	1,815
Customer deposits	1,731	1,057
Professional fees payable	1,052	1,237
Restructuring and cost management amounts payable	757	1,997
Freight accrual	538	171
Value added taxes payable	388	474
Income taxes payable	181	83
Other current liabilities	1,716	1,767
	$ 18,334	$ 18,666

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

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

(In thousands)	2016	2015
Deferred compensation	$ 2,504	$ —
Product warranty accrual	2,068	—
Other non-current liabilities	3,229	1,571
	$ 7,801	$ 1,571

Other non-current liabilities include long-term deferred revenue, long-term deposits, and other similar items. Presentation of $1.6 million of Other non-current liabilities previously shown as current at March 28, 2015 was revised to reflect these amounts as non-current, which conforms to current period presentation.

16. Product Warranty

The following is a reconciliation of the changes in the aggregate product warranty accrual for 2016 , 2015 and 2014 :

(In thousands)	2016	2015	2014
Product warranty accrual, beginning	$ 3,342	$ 4,215	$ 5,411
Warranty charges incurred, net	(7,781)	(6,468)	(7,178)
Provision for warranty charges	10,173	5,595	5,982
Product warranty accrual, ending	$ 5,734	$ 3,342	$ 4,215

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 fiscal year-end and is recorded to cost of sales. Of the total of $5.7 million in product warranty accrual at April 2, 2016 , $2.1 million is non-current and is included in Other liabilities on the Condensed Consolidated Balance Sheets.

17. Deferred Revenue

The following is a reconciliation of the changes in deferred revenue for 2016 , 2015 and 2014 :

(In thousands)	2016	2015	2014
Deferred revenue, beginning	$ 12,376	$ 10,515	$ 10,196
Revenue deferred	58,416	46,139	34,594
Revenue recognized	(63,107)	(44,278)	(34,275)
Deferred revenue, ending	$ 7,685	$ 12,376	$ 10,515

Of the total of $7.7 million in deferred revenue at April 2, 2016 , $1.3 million is non-current and is included in Other liabilities on the Condensed Consolidated Balance Sheets.

18. Derivative Financial Instruments

The Company enters into derivative financial instruments on a limited basis and does not use them for trading purposes. It does, however, use derivatives to manage well-defined foreign currency risks. The Company hedges material non-functional currency monetary asset and liability balances. Foreign exchange contract gains and losses are recognized at the end of each fiscal period in the Company's results of operations. Such gains and losses are typically offset by the corresponding changes to the related underlying hedged item. Cash flows from derivative financial instruments are classified in the same category as the cash flows from the items hedged.

At April 2, 2016 and March 28, 2015 , the Company had net forward exchange contracts to purchase foreign currencies totaling $13.1 million and $2.8 million , respectively. In general, these contracts mature in less than six months and the counterparties are large, highly rated banks; therefore, the Company believes that the risk of loss as a result of nonperformance by the banks is minimal.

The table below summarizes, by currency, the notional amounts of forward exchange contracts in U.S. dollars as of April 2, 2016 and March 28, 2015 . The "bought" amounts represent the net U.S. dollar equivalents of commitments to purchase foreign currencies, and the "sold" amounts represent the net U.S. dollar equivalents of commitments to sell foreign currencies. The foreign currency amounts have been translated into a U.S. dollar equivalent value using the exchange rates as of April 2, 2016 and March 28, 2015 .

	Bought (Sold)	
(In thousands)	**2016**	**2015**
Japanese Yen	$ 5,079	$ 4,263
Euro	12,073	10,354
New Taiwan Dollar	(117)	(831)
Korean Won	197	(3,000)
British Pound	(2,350)	(2,906)
Chinese Renminbi	(1,859)	(4,278)
Singapore Dollar	53	(598)
Canadian Dollar	—	(159)
	$ 13,076	$ 2,845

19. Commitments and Contingencies

The aggregate minimum commitment obligation under operating leases beyond April 2, 2016 was as follows (in thousands):

Year	**Operating Leases**
2017	$ 3,032
2018	2,344
2019	1,589
2020	215
2021	132
Thereafter	—
	$ 7,312

The Company leases certain equipment, automobiles, manufacturing and office space under operating leases, which are non-cancelable and expire on various dates through fiscal 2021. Rental expense for all operating leases was $2.5 million , $2.7 million and $2.8 million in 2016 , 2015 and 2014 , respectively. The operating lease amounts include our contractual facilities lease obligation at our Chelmsford, Massachusetts plant, excluding the estimated rental income from the sub lease of this facility .

The operations at Chelmsford manufacturing plant ceased in the third quarter of 2016 as a part of the Company's plan to streamline its manufacturing and development activities. In the third quarter of 2016, we entered into a sublease for this property and the associated estimated rental income of $0.5 million over the three year life of the lease partially offsets the Company's ongoing lease obligation. See Note 25 "Restructuring and Cost Management Plans" for further discussion on Chelmsford plant closure plan.

The Company routinely enters into inventory purchase contracts which require 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. The Company had purchase commitments of $21.6 million at April 2, 2016 , of which $0.3 million represent long term purchase contracts.

In the normal course of business, the Company agrees to indemnify customers with respect to certain matters. The Company has agreed, under certain conditions, to hold these third parties harmless against specified losses, such as those arising from other third party claims that the Company's products, when used for their intended purposes, infringe the intellectual property rights of such other third parties. To date, the Company has not recorded any material charges related to these types of obligations.

We mitigate credit risk by transacting with highly rated counterparties for foreign exchange contracts, letters of credit and other transactions where counterparty risk is a factor. We have evaluated the non-performance risks associated with our lenders and other parties and believe them to be insignificant. From time to time we may be party to litigation arising in the normal

course of business. Currently we are not party to any litigation we believe would have a material adverse effect on our financial position, results of operations, or cash flows.

20. Loan Agreement

In March 2015, the Company entered into a loan and security agreement ("Loan Agreement") with Silicon Valley Bank ("SVB"), as lender. 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, until March 20, 2018. Borrowings under the Credit Facility may be used for working capital needs and other general corporate purposes. The Credit Facility has three levels of reporting, pricing, and availability based on the Company's liquidity and certain borrowing base valuations of the Company's eligible accounts receivable. Amounts outstanding under the Credit Facility will bear interest at a rate per annum equal to, at the election of the Company, the LIBOR rate or Wall Street Journal prime rate, plus an additional interest rate margin that is determined by the availability of borrowings under the Loan Agreement. The additional interest rate margin will range from 2.0% to 2.75% in the case of LIBOR advances and from zero percent to 0.5% for prime rate advances. During an event of default, amounts due under the Loan Agreement will bear interest at a rate per annum equal to 5% above the rate otherwise applicable to such amounts. The Company paid SVB a commitment fee of $75,000 on execution of the Loan Agreement and will be required to pay $12,500 per annum thereafter, and is required to pay a quarterly unused facility fee equal to 0.30% - 0.50% per annum of the average daily unused portion of the commitments under the Credit Facility, depending upon availability of borrowings under the Credit Facility.

At April 2, 2016 , we had no revolving loans or letters of credit outstanding under our Credit Facility, we were in compliance with all covenants, and were not in default under the Loan Agreement. While we have a credit facility in place, the level of availability and cost are based on maintaining certain levels of qualified receivables and domestic cash. As a result, if either of these balances decreases significantly, our ability to access the facility may be limited or costs may be higher. In addition, if we fail to meet the covenants in our credit facility, including the tangible net worth covenant, the facility may not be available to us.

21. Loss Per Share

The following was a reconciliation of weighted average shares outstanding used in the calculation of basic and diluted earnings per share for 2016 , 2015 and 2014 :

(In thousands, except per share data)	2016	2015	2014
Net loss	$ (12,257)	$ (43,811)	$ (38,334)
Weighted average shares used for basic earnings per share	31,411	30,611	29,974
Incremental diluted shares	—	—	—
Weighted average shares used for diluted earnings per share	31,411	30,611	29,974
Net loss per share:			
Net loss—basic	$ (0.39)	$ (1.43)	$ (1.28)
Net loss—diluted	$ (0.39)	$ (1.43)	$ (1.28)

Awards of options, SARs and unvested restricted stock units representing an additional 2.3 million , 2.9 million and 3.8 million shares of stock for 2016 , 2015 and 2014 , respectively, were not included in the calculation of diluted net earnings per share because their effect would have been antidilutive.

22. 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 our 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 2016 . In 2015, the Company repurchased 207,738 shares for $1.5 million under this authorization at an average price of $7.01 per share, calculated inclusive of commissions and fees. In 2014, the Company repurchased 19,832 shares for $0.2 million at an average price of $9.65 per share, calculated inclusive of commissions and fees. Cash used to settle repurchase transactions is reflected as a component of cash used in financing activities on the Consolidated Statements of Cash Flows. There is no fixed completion date for the repurchase program.

Dividends

In February 2015, the Board of Directors suspended the quarterly dividend which was adopted by the Company in December 2011. The Company paid aggregate dividends of $7.3 million and $9.6 million in 2015 and 2014, respectively. We did not pay any dividends in 2016.

23. 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.

24. 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. Our chief operating decision maker is our Chief Executive Officer. During 2016, we operated 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. The Company uses Generally Accepted Account Principles ("GAAP") accounting for segment reporting consistent with the accounting policies of the consolidated entity. Refer to footnote 2. Summary of Significant Accounting Policies for more information.

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.

Net sales by segment were as follows:

(In thousands)	2016	2015	2014
Component Processing	$ 152,284	$ 124,598	$ 141,401
Micromachining	32,107	34,520	39,766
	$ 184,391	$ 159,118	$ 181,167

Gross profits by segment were as follows:

(In thousands)	2016	2015	2014
Component Processing	$ 66,693	$ 50,970	$ 63,914
Micromachining	9,386	6,383	12,175
Corporate and other	(3,376)	(2,672)	(16,218)
	$ 72,703	$ 54,681	$ 59,871

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

(In thousands)	2016	2015	2014
Asia	$ 152,259	$ 124,049	$ 136,336
Americas	21,206	18,067	31,596
Europe	10,926	17,002	13,235
	$ 184,391	$ 159,118	$ 181,167

Long-lived assets, exclusive of investments and net deferred tax assets, by geographic area were as follows:

(In thousands)	2016	2015
Americas	$ 26,359	$ 28,606
Asia	17,318	19,775
Europe	5,579	5,960
	$ 49,256	$ 54,341

The amounts shown for 2015 long-lived assets by geographic area have been revised to include the Goodwill impairment recorded and included in results from operations in the fourth quarter of 2015.

25. Restructuring and Cost Management Plans

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 our 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 .

Net restructuring costs related to the above mentioned restructuring plan were $2.8 million in 2016 and $3.0 million in 2015. Included in these costs were write-offs of leasehold improvements associated with the abandoned manufacturing facility, employee severance and related payments, inventory write-off charges associated with discontinued products and other wind-down costs. As of April 2, 2016, most of the restructuring activities have been completed, and we expect to pay the accrued expenses primarily related to severance and employee benefits in the first quarter of 2017.

At April 2, 2016 and March 28, 2015, the amount of unpaid restructuring costs included in accrued liabilities on the Consolidated Balance Sheets was $0.8 million and $2.0 million , respectively. Included in the payable balance are amounts for severance and employee benefits, asset retirement obligation and net lease commitments.

The following table presents the amounts related to restructuring and cost management amounts payable (in thousands):

Restructuring & cost management amounts payable as of March 30, 2013	$ 485
Cash payments and other adjustments	(204)
Costs incurred	769
Restructuring & cost management amounts payable as of March 29, 2014	1,050
Cash payments and other adjustments	(985)
Costs incurred	1,932
Restructuring & cost management amounts payable as of March 28, 2015	1,997
Cash payments and other adjustments	(4,064)
Costs incurred	2,824
Restructuring & cost management amounts payable as of April 2, 2016	$ 757

26. Quarterly Financial Information (Unaudited)

(In thousands, except per share data)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Year Ended April 2, 2016				
Net sales				
Systems	$ 32,062	$ 35,570	$ 31,282	$ 44,043
Service	11,029	10,902	12,060	7,443
Total net sales	43,091	46,472	43,342	51,486
Cost of sales:				
Systems	21,285	22,345	20,292	25,247
Service	6,429	5,706	5,329	5,055
Total cost of sales	27,714	28,051	25,621	30,302
Gross profit	15,377	18,421	17,721	21,184
Net (loss) income	(6,364)	(3,260)	(4,586)	1,953
Basic net (loss) income per share	(0.20)	(0.10)	(0.15)	0.06
Diluted net (loss) income per share	(0.20)	(0.10)	(0.15)	0.06
Dividends per outstanding common share				
Declared	$ —	$ —	$ —	$ —
Paid	$ —	$ —	$ —	$ —
Year Ended March 28, 2015				
Net sales				
Systems	$ 23,424	$ 30,273	$ 31,750	$ 26,156
Service	11,606	12,583	11,911	11,415
Total net sales	35,030	42,856	43,661	37,571
Cost of sales:				
Systems	16,934	20,742	22,031	18,488
Service	5,808	7,349	6,917	6,168
Total cost of sales	22,742	28,091	28,948	24,656
Gross profit	12,288	14,765	14,713	12,915
Net loss	(8,251)	(6,243)	(6,376)	(22,941)
Basic net loss per share	(0.27)	(0.20)	(0.21)	(0.75)
Diluted net loss per share	(0.27)	(0.20)	(0.21)	(0.75)
Dividends per outstanding common share				
Declared	$ 0.08	$ 0.08	$ 0.08	$ —
Paid	$ 0.08	$ 0.08	$ 0.08	$ —

The sum of the quarterly data presented in the table above for fiscal 2016 and 2015 may not equal annual results due to rounding.

1. In the fourth quarter of 2016, gross profit included $0.4 million of charges for intangible write-off related to discontinued products.
2. In each of the second, third and fourth quarters of 2016, net loss included $0.6 million , $1.9 million and $0.2 million of restructuring charges related to the Chelmsford, Massachusetts restructuring plan. Second quarter charge included $1.1 million of asset write-off due to the closure of the Chelmsford, Massachusetts manufacturing plant.
3. In the third quarter of 2016, gross profit included $1.4 million of charges for inventory write-offs related to discontinued products.
4. In the first and second quarters of 2016, net loss included $0.2 million and $0.1 million of acquisition and integration charges related to Topwin.
5. In the fourth quarter of 2015, gross profit included $1.0 million of charges for inventory write-offs related to the Chelmsford, Massachusetts restructuring plan.

6. In the fourth quarter of 2015, net operating expenses included a non-cash goodwill impairment charge of $7.9 million to write down the goodwill to its implied fair value as of March 28, 2015 , a $2.0 million restructuring cost related to the Chelmsford, Massachusetts restructuring plan, primarily consisting of employee severance and related costs.
7. In each of the third and fourth quarters of 2015, net loss included $0.3 million and $0.5 million of acquisition and integration charges related to Topwin.
8. In the fourth quarter of 2015, net loss included a loss on a cost method investment of $4.3 million and a $0.6 million gain on liquidation of a foreign subsidiary.

27. Subsequent Events

The Company has evaluated subsequent events from the statement of assets, liabilities and shareholders' equity date through the date at which the financial statements were available to be issued, and determined there are no other items to disclose.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Attached to this annual 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 “Controls and Procedures” section of our annual report on Form 10-K is our disclosure of the conclusions of our management, including our CEO and our CFO, 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 section of the Annual Report on Form 10-K should be read in conjunction with the Section 302 Certifications for a more complete understanding of the topics presented.

(a) Evaluation of Disclosure Controls and Procedures

We performed an evaluation of our disclosure controls and procedures in connection with preparation of this Annual Report on Form 10-K. This controls evaluation was performed under the supervision and with the participation of management, including our CEO and CFO. Disclosure controls are procedures that are designed to ensure that information required to be disclosed in our reports filed under the Securities Exchange Act of 1934 (the Exchange Act), such as this Annual Report on Form 10-K, is recorded, processed, summarized and reported within the time periods specified by the Securities and Exchange Commission (the SEC). Disclosure controls are also designed to ensure that such information is accumulated and communicated to our management, including the CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Based on the controls evaluation, our CEO and CFO have concluded that, subject to the limitations noted in (c) below, as of the end of the period covered by this Form 10-K, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified by the SEC, and that material information relating to the Company is made known to management, including the CEO and the CFO, particularly during the time when our periodic reports are being prepared.

(b) Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our CEO and CFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of April 2, 2016 using the criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, our management has concluded that we maintained effective internal control over financial reporting as of April 2, 2016.

Deloitte & Touche LLP, an independent registered public accounting firm, who audited the 2016 consolidated financial statements included in this annual report on Form 10-K, has audited the effectiveness of our internal control over financial reporting as of April 2, 2016, as referenced in their report included in (f) below.

(c) Limitations on Effectiveness of Controls

The effectiveness of any system of internal control over financial reporting is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting can only provide reasonable, not absolute, assurances. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure that such improvements will be sufficient to provide us with effective internal control over financial reporting.

(d) Remediation of Material Weaknesses in Internal Control Over Financial Reporting

A material weakness is defined as a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of a company's annual or interim financial statements will not be prevented or detected on a timely basis.

As previously disclosed in Item 9A of our Annual Report on Form 10-K for the fiscal year ended March 28, 2015, we did not (1) effectively design our risk assessment process and certain review and process level controls over the accounting and disclosure of complex, judgmental accounting matters and non-routine transactions to operate at an appropriate level of precision to a) identify and analyze changes in the business, b) ensure that the Company's financial reporting was aligned with those changes, and c) to ensure sufficient technical accounting expertise was applied in the judgments related to significant, complex, and non-routine transactions.

Our management made significant efforts in 2016 to improve internal controls over financial reporting as they relate to the findings above. We committed considerable resources to the design, implementation, documentation, and testing of our internal controls. With the oversight of senior management and our audit committee, we took steps to remediate the underlying causes of the material weaknesses described above. Specifically, the Company' management took the following actions to remediate:

Overall

The Company assessed and documented the design and operation of certain controls in light of the associated risks, particularly those controls relating to the risk assessment process, complex and judgmental accounting matters and non-routine transactions. This analysis was done to remediate the material weaknesses and also as part of our adoption of COSO 2013. We identified the need for several improvements, discussed below.

Enterprise risk assessment

We made changes to improve the integration of the enterprise risk assessment within the control environment, including regular communication of findings to the Audit Committee and evaluation of risks as they might impact the Company across multiple areas. We have improved documentation relating to this risk assessment and our evaluation of the impacts on financial reporting and internal controls.

Monitoring of significant changes in the business and alignment with financial reporting

We have implemented a quarterly monitoring and impact assessment, which institutionalizes regular monitoring to identify and evaluate significant, unusual, non-routine and complex accounting matters. This analysis is driven by cross-functional inputs from within the Company, monitoring of external indicators, and consideration of how changes in the business may impact historical conclusions or policies in the current period. All identified significant or unusual items require further analysis and disposition regarding accounting treatment.

Accounting expertise

The Company developed and implemented a process to determine when and if to involve a subject matter expert for significant, unusual, non-routine and complex accounting matters.

Management has concluded that the material weaknesses in our internal control over financial reporting identified in fiscal 2015 have been remediated as of April 2, 2016.

(e) Changes in Internal Control

Other than the remediation of the material weaknesses noted in 9(d) above, there were no changes in the Company's internal control over financial reporting that occurred during the quarter ended April 2, 2016 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. Based on the remediation actions above, the Company's management believes that these efforts have improved our internal control over financial reporting as of April 2, 2016.

(f) Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of
Electro Scientific Industries, Inc.

Portland, Oregon

We have audited the internal control over financial reporting of Electro Scientific Industries, Inc. and subsidiaries (the "Company") as of April 2, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of April 2, 2016, based on the criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended April 2, 2016 of the Company and our report dated June 14, 2016 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP
Portland, Oregon
June 14, 2016

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item, including information about the Company's audit committee, is included under the headings "Proposal 1: Election of Directors," "Board Committees," "Executive Officers" and "Section 16(a) Beneficial Ownership Reporting Compliance" in our Proxy Statement for our 2016 Annual Meeting of Shareholders and is incorporated herein by reference.

The Company has adopted the ESI Code of Conduct, a code of ethics and business practices with which every person who works for the Company is expected to comply. In addition, the Company has adopted a Code of Ethics for Financial Managers applicable to the chief executive officer, principal financial officer, principal accounting officer or controller and any other person performing similar functions on behalf of the Company. The ESI Code of Conduct and Code of Ethics for Financial Managers are publicly available on the Company's website under "Corporate Governance" in the Investors Section (at http://investors.esi.com/governance.cfm). This website address is intended to be an inactive, textual reference only; none of the materials on this website are part of this report. If any waiver is granted, including any implicit waiver, from a provision of the Code of Ethics for Financial Managers, the Company will disclose the nature of such waiver on that website or in a report on Form 8-K.

Item 11. Executive Compensation

The information required by this item is included under the headings "Board Compensation," "Executive Compensation," "Potential Payments Upon Termination or Change in Control," "Compensation Discussion and Analysis," "Compensation Committee Report" and "Compensation Committee Interlocks and Insider Participation" in our Proxy Statement for our 2016 Annual Meeting of Shareholders and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

Certain information required by this item is included under the headings "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" in our Proxy Statement for our 2016 Annual Meeting of Shareholders and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item is included under "Certain Relationships and Related Transactions" and "Corporate Governance Guidelines and Independence" in our Proxy Statement for our 2016 Annual Meeting of Shareholders and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this item is included under "Principal Accounting Fees and Services" in our Proxy Statement for our 2016 Annual Meeting of Shareholders and is incorporated herein by reference.

We have agreed to indemnify and hold KPMG LLP (KPMG) harmless against and from any and all legal costs and expenses incurred by KPMG in successful defense of any legal action or proceeding that arises as a result of KPMG's consent to the incorporation by reference of its audit report on our past financial statements incorporated by reference into our registration statements on Form S-8.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) and (a)(2) Financial Statements and Schedules

The Consolidated Financial Statements, together with the reports thereon of our independent registered public accounting firm, are included on the pages indicated below:

	Page
Reports of Independent Registered Public Accounting Firms	37
Consolidated Balance Sheets as of April 2, 2016 and March 28, 2015	39
Consolidated Statements of Operations for the years ended April 2, 2016, March 28, 2015, and March 29,2014	40
Consolidated Statements of Comprehensive Loss for the years ended April 2, 2016, March 28, 2015, and March 29,2014	41
Consolidated Statements of Shareholders' Equity for the years ended April 2, 2016, March 28, 2015, and March 29,2014	42
Consolidated Statements of Cash Flows for the years ended April 2, 2016, March 28, 2015, and March 29,2014	43
Notes to Consolidated Financial Statements	44

There are no schedules required to be filed herewith.

(a)(3) Exhibits

The following exhibits are filed herewith and this list is intended to constitute the exhibit index. An asterisk (*) beside the exhibit number indicates the exhibits containing a management contract, compensatory plan or arrangement, which are required to be identified in this report.

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	*	2000 Stock Option Plan. Incorporated by reference to Exhibit 10-F of the Company’s Annual Report on Form 10-K for the fiscal year ended June 3, 2000.
10.2	*	2000 Stock Option Incentive Plan. Incorporated by reference to Appendix A of the Company’s definitive Proxy Statement for its 2000 Annual Meeting of Shareholders.
10.3	*	Loan and Security Agreement, dated March 20, 2015, 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 March 23, 2015.
10.4	*	Form of Change in Control Agreement between the Company and Edward Grady. Incorporated by reference to Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q for the quarter ended December 27, 2014 (the “December 2014 10-Q”).
10.5	*	Form of Stock Settled Stock Appreciation Rights Agreement between the Company and Edward Grady (November 18, 2014 awards). Incorporated by reference to Exhibit 10.2 to the December 2014 10-Q.
10.6	*	Form of Performance-Based Restricted Stock Unit Award Agreement between the Company and Edward Grady (November 18, 2014). Incorporated by reference to Exhibit 10.3 to the December 2014 10-Q.
10.7	*	Form of Performance-Based Restricted Stock Unit Award Agreement between the Company and executives other than Edward Grady (November 18, 2014). Incorporated by reference to Exhibit 10.4 to the December 2014 10-Q.
10.8		Form of Performance-Based Restricted Stock Unit Agreement (May 2014 grants). Incorporated by reference to Exhibit 10 of the Company’s Quarterly Report on Form 10-Q for the quarter ended September 27, 2014
10.9	*	2004 Stock Incentive Plan, as amended. Incorporated by reference to Exhibit 10.2 of the Company’s Current Report on Form 8-K filed on August 25, 2014.

10.10	*	Deferred Compensation Plan 2008 Restatement. Incorporated by reference to Exhibit 10.14 of the Company's Annual Report on Form 10-K for the fiscal year ended March 29, 2008 (the "2008 10-K").
10.11	*	Amendment No. 1 to Deferred Compensation Plan 2008 Restatement. Incorporated by reference to Exhibit 10.31 of the 2008 10-K.
10.12	*	Amendment No. 2 to Deferred Compensation Plan 2008 Restatement, dated February 16, 2012. Incorporated by reference to Exhibit 10.15 of the Company's Annual Report on Form 10-K for the fiscal year ended March 31, 2012 (the "2012 10-K").
10.13	*	Form of Change in Control Agreement between the Company and each of Robert DeBakker, Paul Oldham and Bing Fai Wong. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed May 18, 2015.
10.14	*	Form of Restricted Stock Unit Agreement for directors. Incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K filed July 25, 2006.
10.15	*	Form of Notice of Grant of Stock Options and Option Agreement and related Terms and Conditions (for awards made after February 2008). Incorporated by reference to Exhibit 10.27 of the 2008 10-K.
10.16	*	Form of Stock Appreciation Rights Agreement (for awards made prior to May 2010). Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended September 26, 2009.
10.17	*	Form of Indemnification Agreement for directors and certain officers. Incorporated by reference to Exhibit 10 of the Company's Current Report on Form 8-K filed on February 17, 2010.
10.18	*	Form of Stock Appreciation Rights Agreement (for awards made on May 13, 2010). Incorporated by reference to Exhibit 10.34 of the Company's Annual Report on Form 10-K for the fiscal year ended April 22, 2011.
10.19	*	Form of Restricted Stock Units Award Agreement (for awards made on or after May 12, 2011). Incorporated by reference to Exhibit 10.40 of the Company's Annual Report on Form 10-K for the fiscal year ended March 31, 2012.
10.20	*	Separation and Release Agreement, dated November 9, 2015, between the Company and Kerry Mustoe. Incorporated by reference to Exhibit 10 of the Company's Current Report on Form 8-K filed on November 10, 2015.
10.21	*	Offer Letter, dated February 23, 2014, between Electro Scientific Industries, Inc. and Edward C. Grady. Incorporated by reference to Exhibit 10 of the Company's Current Report on form 8-K filed February 27, 2014.
10.22	*	Offer Letter, dated February 23, 2014, between Electro Scientific Industries, Inc. and Edward C. Grady. Incorporated by reference to Exhibit 10 of the Company's Current Report on form 8-K filed February 27, 2014.
10.23	*	Form of Stock Appreciation Rights Agreement (for awards made between May 2011 and April 2015)
10.24	*	Form of Stock Appreciation Rights Agreement (for awards made after April 2015)
21		Subsidiaries of the Company
23.1		Consent of Independent Registered Public Accounting Firm - Deloitte & Touche LLP
23.2		Consent of Independent Registered Public Accounting Firm - KPMG LLP
24.1		Power of Attorney for Frederick Ball
24.2		Power of Attorney for Robert R. Walker
24.3		Power of Attorney for Edward C. Grady
24.4		Power of Attorney for Laurence E. Cramer
24.5		Power of Attorney for Raymond A. Link
24.6		Power of Attorney for John Medica
24.7		Power of Attorney for Richard H. Wills
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

Table of Contents

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: June 14, 2016

ELECTRO SCIENTIFIC INDUSTRIES, INC.

By: /s/ Edward C. Grady

Edward C. Grady

President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated on June 14, 2016 .

Signature	Title
/s/ Edward C. Grady **Edward C. Grady**	President, Chief Executive Officer and Director (Principal Executive Officer)
/s/ PAUL OLDHAM **Paul Oldham**	Senior Vice President of Administration, Chief Financial Officer and Corporate Secretary (Principal Financial Officer and Principal Accounting Officer)
*FREDERICK A. BALL **Frederick Ball**	Director
*LAURENCE E. CRAMER **Laurence E. Cramer**	Director
*RAYMOND A. LINK **Raymond A. Link**	Director
*JOHN MEDICA **John Medica**	Director
*ROBERT R. WALKER **Robert R. Walker**	Director
*RICHARD H. WILLS **Richard H. Wills**	Chairman of the Board

* By: /s/ PAUL OLDHAM

Paul Oldham, ***Attorney-in-fact***

ELECTRO SCIENTIFIC INDUSTRIES, INC.
STOCK APPRECIATION RIGHTS AGREEMENT

This STOCK APPRECIATION RIGHTS AGREEMENT dated as of May 12, 2011, is between Electro Scientific Industries, Inc., an Oregon corporation (the "Company"), and ______________________________ (the "Recipient"), pursuant and subject to the Company's 2004 Stock Incentive Plan (the "Plan"). The Company and the Recipient agree as follows:

1. SAR Grant. The Company hereby grants to the Recipient on the terms and conditions of this Agreement ____________ stock appreciation rights ("SARs"). Upon exercise of a SAR in accordance with this Agreement, Recipient shall receive the number of shares of the Company's Common Stock ("Common Stock") equal to (i) the excess of the closing price of the Common Stock on the date of exercise (the "Market Price") over $_____, (ii) multiplied by the number of SARs being surrendered, and (iii) dividing the result by the Market Price. No fractional shares shall be issued upon exercise of a SAR and in lieu thereof the Company will pay Recipient cash in an amount equal to the fraction. The terms and conditions of the SAR grant set forth in attached Exhibit A are incorporated into and made a part of this Agreement.

2. Grant Date. The Grant Date for this SAR is May 12, 2011. The SAR shall continue in effect until the date ten years after the Grant Date (the "Expiration Date") unless earlier terminated as provided in Section 1.5 of Exhibit A or pursuant to the Plan.

3. Time of Exercise. Except as provided in Exhibit A or in the Plan, the SAR may be exercised from time to time in the following amounts:

_______ on May 12, 2012;

_______ on May 12, 2013;

_______ on May 12, 2014; and

_______ on May 12, 2015.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date written above.

ELECTRO SCIENTIFIC INDUSTRIES, INC. RECIPIENT

By:
Name:
Title: [Print Name]

[address]

EXHIBIT A

SAR TERMS AND CONDITIONS
2004 Stock Incentive Plan

Pursuant to the Company's 2004 Stock Incentive Plan (the "2004 Plan"), the Board of Directors has voted in favor of granting to the Recipient stock settled stock appreciation rights to receive Common Stock of the Company (the "SAR") in the amount determined pursuant to the attached Agreement.

1. The SAR is granted upon the following terms:

1.1 Duration of SAR. Subject to reductions in the SAR period as hereinafter provided in the event of termination of employment or death of the Recipient, the SAR shall continue in effect for a period of 10 years from the Grant Date.

1.2 Time of Exercise. Except as provided in paragraphs 1.5 and 1.6 and the Plan (including Section 17 thereof), the SAR may be exercised as set forth in Section 3 of the Agreement.

1.3 Limitations on Rights to Exercise. Except as provided in paragraphs 1.5 and 1.6, the SAR may not be exercised unless at the time of such exercise the Recipient is employed by the Company or any parent or subsidiary of the Company and shall have been so employed continuously since the date such SAR was granted.

1.4 Nonassignability. The SAR is nonassignable and nontransferable by the Recipient except by will or by the laws of descent and distribution of the state or country of the Recipient's domicile at the time of death, and is exercisable during the Recipient's lifetime only by the Recipient.

1.5 Termination of Employment.

(a) Unless otherwise determined by the Board of Directors, if a Recipient's employment or service with the Company terminates for any reason other than in the circumstances specified in subsection (b) or (c) below or Section 1.6, his or her SAR may be exercised at any time before the expiration date of the SAR or the expiration of three months after the date of termination, whichever is the shorter period, but only if and to the extent the Recipient was entitled to exercise the SAR at the date of termination.

(b) Unless otherwise determined by the Board of Directors, if a Recipient's employment or service with the Company terminates because of total disability, his or her SAR may be exercised at any time before the expiration date of the SAR or before the date 12 months after the date of termination, whichever is the shorter period, but only if and to the extent the Recipient was entitled to exercise the SAR at the date of termination. 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 the Recipient to be unable to perform his or her duties as an employee, director, officer or consultant of the Company and unable to be engaged 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.

(c) Unless otherwise determined by the Board of Directors, if a Recipient dies while employed by or providing service to the Company, his or her SAR may be exercised at any time before the expiration date of the SAR or before the date 12 months after the date of death, whichever is the shorter period, but only if and to the extent the Recipient was entitled to exercise the SAR at the date of death and only by the person or persons to whom the Recipient's rights under the SAR shall pass by the Recipient's will or by the laws of descent and distribution of the state or country of domicile at the time of death.

(d) To the extent the SAR held by any deceased Recipient or by the Recipient whose employment is terminated shall not have been exercised within the limited periods provided above, all further rights to receive shares pursuant to the SAR shall cease and terminate at the expiration of such periods.

(e) Absence on leave approved by the Company or on account of illness or disability shall not be deemed a termination or interruption of employment or service. Unless otherwise determined by the Board of Directors, vesting of SARs shall continue during a medical, family, military or other leave of absence, whether paid or unpaid.

1.6 Double Trigger Acceleration on Change in Control.

(a) All of the SARs shall immediately vest if a Change in Control (as defined below) occurs and 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 or service is terminated by the Company (or its successor) without Cause (as defined below), or (ii) the Recipient's employment or service is terminated by the Recipient for Good Reason (as defined below).

(b) 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 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.

(c) 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).

(d) 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.

1.7 Method of Exercise. Shares may be acquired pursuant to the award only upon receipt by the Company of notice in writing from the Recipient of the Recipient's intention to exercise, specifying the number of SARs as to which the Recipient desires to exercise the award and the date on which the Recipient desires to complete the transaction, which shall not be more than 30 days after receipt of the notice, and, unless in the opinion of counsel for the Company such a representation is not required in order to comply with the Securities Act of 1933, as amended, containing a representation that it is the Recipient's present intention to acquire the shares for investment and not with a view to distribution. The Recipient shall have none of the rights of a shareholder until a certificate for shares is issued to the Recipient. No fractional shares shall be issued and in lieu thereof the Company shall pay Recipient cash equal to the value of such fractional share on the date of exercise. The Recipient may elect in the applicable notice of exercise to have the Company reduce the number of shares deliverable to the Recipient by an amount necessary to allow the Company to satisfy all applicable federal, state and local withholding tax requirements. If the Recipient does not so elect, the Recipient shall, upon notification of the amount due, if any, and prior to or concurrently with delivery of the certificates representing the shares with respect to which the SAR was exercised, pay to the Company amounts necessary to satisfy any applicable federal, state and local withholding tax requirements. If additional withholding becomes required beyond any amount deposited before delivery of the certificates, the Recipient shall pay such amount to the Company on demand.

1.8 Changes in Capital Structure. In the event that the outstanding shares of Common Stock of the Company are hereafter increased or decreased or changed into or exchanged for a different number or kind of shares or other securities of the Company or another corporation, by reason of any reorganization, merger, consolidation, recapitalization, reclassification, stock split-up, combination of shares, or dividend payable in shares, appropriate adjustment shall be made by the Board of Directors in the number of SARs subject to this Agreement and/or the amount payable on exercise of the SARs. Any such adjustment made by the Board of Directors shall be conclusive.

2. The obligations of the Company under this Agreement are subject to the approval of such state or federal authorities or agencies, if any, as may have jurisdiction in the matter. The Company will use its best efforts to take such steps as may be required by state or federal law or applicable regulations, including rules and regulations of the Securities and Exchange Commission and any stock exchange on which the Company's shares may then be listed, in connection with the issuance or sale of any shares acquired upon the exercise of the SAR.

3. Nothing in the 2004 Plan or this Agreement shall confer upon the Recipient any right to be continued in the employment of the Company or any subsidiary of the Company, or to interfere in any way with the right of the Company or any subsidiary by whom the Recipient is employed to terminate the Recipient's employment at any time, with or without cause.

4. This Agreement shall be binding upon and shall inure to the benefit of any successor or successors of the Company but except as hereinabove provided the SAR herein granted shall not be assigned or otherwise disposed of by the Recipient.

ELECTRO SCIENTIFIC INDUSTRIES, INC.
STOCK APPRECIATION RIGHTS AGREEMENT

This STOCK APPRECIATION RIGHTS AGREEMENT dated as of May 14, 2015, is between Electro Scientific Industries, Inc., an Oregon corporation (the "Company"), and ______________________________ (the "Recipient"), pursuant and subject to the Company's 2004 Stock Incentive Plan (the "Plan"). The Company and the Recipient agree as follows:

1. SAR Grant . The Company hereby grants to the Recipient on the terms and conditions of this Agreement ____________ stock appreciation rights ("SARs"). Upon exercise of a SAR in accordance with this Agreement, Recipient shall receive the number of shares of the Company's Common Stock ("Common Stock") equal to (i) the excess of the closing price of the Common Stock on the date of exercise (the "Market Price") over $_____, (ii) multiplied by the number of SARs being surrendered, and (iii) dividing the result by the Market Price. No fractional shares shall be issued upon exercise of a SAR and in lieu thereof the Company will pay Recipient cash in an amount equal to the fraction. The terms and conditions of the SAR grant set forth in attached Exhibit A are incorporated into and made a part of this Agreement.

2. Grant Date . The Grant Date for this SAR is May 14, 2015. The SAR shall continue in effect until the date ten years after the Grant Date (the "Expiration Date") unless earlier terminated as provided in Section 1.5 of Exhibit A or pursuant to the Plan.

3. Time of Exercise . Except as provided in Exhibit A or in the Plan, the SAR may be exercised from time to time in the following amounts:

_______ on May 14, 2016;

_______ on May 14, 2017;

_______ on May 14, 2018; and

_______ on May 14, 2019.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date written above.

ELECTRO SCIENTIFIC INDUSTRIES, INC. RECIPIENT

By:
Name:
Title: [Print Name]

[address]

EXHIBIT A

SAR TERMS AND CONDITIONS
2004 Stock Incentive Plan

Pursuant to the Company's 2004 Stock Incentive Plan (the "2004 Plan"), the Board of Directors has voted in favor of granting to the Recipient stock settled stock appreciation rights to receive Common Stock of the Company (the "SAR") in the amount determined pursuant to the attached Agreement.

1. The SAR is granted upon the following terms:

1.1 Duration of SAR. Subject to reductions in the SAR period as hereinafter provided in the event of termination of employment or death of the Recipient, the SAR shall continue in effect for a period of 10 years from the Grant Date.

1.2 Time of Exercise. Except as provided in paragraphs 1.5 and 1.6 and the Plan (including Section 17 thereof), the SAR may be exercised as set forth in Section 3 of the Agreement.

1.3 Limitations on Rights to Exercise. Except as provided in paragraphs 1.5 and 1.6, the SAR may not be exercised unless at the time of such exercise the Recipient is employed by the Company or any parent or subsidiary of the Company and shall have been so employed continuously since the date such SAR was granted.

1.4 Nonassignability. The SAR is nonassignable and nontransferable by the Recipient except by will or by the laws of descent and distribution of the state or country of the Recipient's domicile at the time of death, and is exercisable during the Recipient's lifetime only by the Recipient.

1.5 Termination of Employment.

(a) Unless otherwise determined by the Board of Directors, if a Recipient's employment or service with the Company terminates for any reason other than in the circumstances specified in subsection (b) or (c) below or Section 1.6, his or her SAR may be exercised at any time before the expiration date of the SAR or the expiration of three months after the date of termination, whichever is the shorter period, but only if and to the extent the Recipient was entitled to exercise the SAR at the date of termination.

(b) Unless otherwise determined by the Board of Directors, if a Recipient's employment or service with the Company terminates because of total disability, his or her SAR may be exercised at any time before the expiration date of the SAR or before the date 12 months after the date of termination, whichever is the shorter period, but only if and to the extent the Recipient was entitled to exercise the SAR at the date of termination. 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 the Recipient to be unable to perform his or her duties as an employee, director, officer or consultant of the Company and unable to be engaged 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.

(c) Unless otherwise determined by the Board of Directors, if a Recipient dies while employed by or providing service to the Company, his or her SAR may be exercised at any time before the expiration date of the SAR or before the date 12 months after the date of death, whichever is the shorter period, but only if and to the extent the Recipient was entitled to exercise the SAR at the date of death and only by the person or persons to whom the Recipient's rights under the SAR shall pass by the Recipient's will or by the laws of descent and distribution of the state or country of domicile at the time of death.

(d) To the extent the SAR held by any deceased Recipient or by the Recipient whose employment is terminated shall not have been exercised within the limited periods provided above, all further rights to receive shares pursuant to the SAR shall cease and terminate at the expiration of such periods.

(e) Absence on leave approved by the Company or on account of illness or disability shall not be deemed a termination or interruption of employment or service. Unless otherwise determined by the Board of Directors, vesting of SARs shall continue during a medical, family, military or other leave of absence, whether paid or unpaid.

1.6 Double Trigger Acceleration on Change in Control.

(a) All of the SARs shall immediately vest if a Change in Control (as defined below) occurs and 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 or service is terminated by the Company (or its successor) without Cause (as defined below), or (ii) the Recipient's employment or service is terminated by the Recipient for Good Reason (as defined below).

(b) 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 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.

(c) 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).

(d) For purposes of this Agreement, "Good Reason" shall mean Recipient's voluntary termination, within 30 days following the expiration of any Company cure period (discussed below) following the occurrence of one or more of the following, without Recipient's consent:

A. the assignment of a different title, job or responsibilities that results in a substantial reduction in the duties of the Recipient after the Change in Control when compared to the Recipient's duties with respect to the Company's operations prior to the Change in Control; provided that any change made solely as the result of the Company becoming a subsidiary or business unit of a larger company in a Change in Control shall not constitute Good Reason unless Recipient's new duties are substantially reduced from his or her prior duties;

B. a reduction in Recipient's target bonus or base salary;

C. the Company's requiring Recipient to be based more than 50 miles from the principal office at in which Recipient is based immediately prior to the Change in Control, except for reasonably required travel on the Company's business; or

D. the failure by any successor to the Company to expressly assume this Agreement or any obligation under this Agreement.

Recipient may not resign for Good Reason without first providing the Company with written notice within 90 days of the initial existence of the condition that Recipient believes constitutes Good Reason specifically identifying the acts or omissions constituting the grounds for Good Reason and a reasonable cure period of not less than 30 days following the date of such notice.

For purposes of the “Good Reason” definition, the term “Company” will be interpreted to include any subsidiary, parent, affiliate or successor thereto, if applicable.

1.7 Method of Exercise. Shares may be acquired pursuant to the award only upon receipt by the Company of notice in writing from the Recipient of the Recipient’s intention to exercise, specifying the number of SARs as to which the Recipient desires to exercise the award and the date on which the Recipient desires to complete the transaction, which shall not be more than 30 days after receipt of the notice, and, unless in the opinion of counsel for the Company such a representation is not required in order to comply with the Securities Act of 1933, as amended, containing a representation that it is the Recipient’s present intention to acquire the shares for investment and not with a view to distribution. The Recipient shall have none of the rights of a shareholder until a certificate for shares is issued to the Recipient. No fractional shares shall be issued and in lieu thereof the Company shall pay Recipient cash equal to the value of such fractional share on the date of exercise. The Recipient may elect in the applicable notice of exercise to have the Company reduce the number of shares deliverable to the Recipient by an amount necessary to allow the Company to satisfy all applicable federal, state and local withholding tax requirements. If the Recipient does not so elect, the Recipient shall, upon notification of the amount due, if any, and prior to or concurrently with delivery of the certificates representing the shares with respect to which the SAR was exercised, pay to the Company amounts necessary to satisfy any applicable federal, state and local withholding tax requirements. If additional withholding becomes required beyond any amount deposited before delivery of the certificates, the Recipient shall pay such amount to the Company on demand.

1.8 Changes in Capital Structure. In the event that the outstanding shares of Common Stock of the Company are hereafter increased or decreased or changed into or exchanged for a different number or kind of shares or other securities of the Company or another corporation, by reason of any reorganization, merger, consolidation, recapitalization, reclassification, stock split-up, combination of shares, or dividend payable in shares, appropriate adjustment shall be made by the Board of Directors in the number of SARs subject to this Agreement and/or the amount payable on exercise of the SARs. Any such adjustment made by the Board of Directors shall be conclusive.

2. The obligations of the Company under this Agreement are subject to the approval of such state or federal authorities or agencies, if any, as may have jurisdiction in the matter. The Company will use its best efforts to take such steps as may be required by state or federal law or applicable regulations, including rules and regulations of the Securities and Exchange Commission and any stock exchange on which the Company’s shares may then be listed, in connection with the issuance or sale of any shares acquired upon the exercise of the SAR.

3. Nothing in the 2004 Plan or this Agreement shall confer upon the Recipient any right to be continued in the employment of the Company or any subsidiary of the Company, or to interfere in any way with the right of the Company or any subsidiary by whom the Recipient is employed to terminate the Recipient’s employment at any time, with or without cause.

4. This Agreement shall be binding upon and shall inure to the benefit of any successor or successors of the Company but except as hereinabove provided the SAR herein granted shall not be assigned or otherwise disposed of by the Recipient.

EXHIBIT 21

ESI Subsidiaries
As of April 2, 2016

Name	**State/Country of Incorporation**	**Percentage of Voting Securities Owned**
ESI International Corp.	Oregon	100%
ESI China, Inc.	Oregon	100%
New Wave Research, Inc.	California	100%
ESI-Pyrophotonics Lasers, Inc.	Canada	100%
Electro Scientific Industries Europe Ltd.	United Kingdom	100%
Electro Scientific Industries, SARL	France	100%
Electro Scientific Industries GmbH	Germany	100%
Eolite Systems, SAS	France	100%
ESI Taiwan (Branch Office)	Taiwan	100%
ESI Electronic Equipment (Shanghai) Co., Ltd.	China	100%
ESI Korea Co. Ltd.	Korea	100%
Electro Scientific Industries Japan Co., Ltd.	Japan	100%
Electro Scientific Industries Singapore PTE Ltd.	Singapore	100%
ESI Technology Development, Pte. Ltd.	Singapore	100%
ESI China R&D Investment, Pte. Ltd.	Singapore	100%
ESI (Beijing) R&D Center Co., Ltd.	China	100%
ESI (Beijing) Electro Optic Manufacturing Co. Ltd.	China	100%
Wuhan Topwin Optoelectronics Technology Co. Ltd.	China	100%

EXHIBIT 23 .1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statements Nos. 333-55060, 333-67356, 333-88411, 333-122660, 333-122661, 333-137878, 333-137879, 333-146107, 333-151804, 333-155978, 333-162876 and 333-199166 on Form S-8 of our reports dated June 14, 2016, relating to the financial statements of Electro Scientific Industries, Inc., and the effectiveness of Electro Scientific Industries, Inc.'s internal control over financial reporting, appearing in this Annual Report on Form 10-K of Electro Scientific Industries, Inc. for the year ended April 2, 2016.

/s/ Deloitte & Touche LLP

Portland, Oregon
June 14, 2016

EXHIBIT 23 .2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors
Electro Scientific Industries, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-55060, 333-67356, 333-88411, 333-122660, 333-122661, 333-137878, 333-137879, 333-146107, 333-151804, 333-155978, 333-162876, and 333-199166) on Form S-8 of Electro Scientific Industries, Inc. of our report dated June 26, 2015, with respect to the consolidated balance sheet of Electro Scientific Industries, Inc. and subsidiaries as of March 28, 2015, and the related consolidated statements of operations, comprehensive loss, shareholders' equity, and cash flows for each of the years in the two-year period ended March 28, 2015, which report appears in the April 2, 2016 annual report on Form 10-K of Electro Scientific Industries, Inc.

/s/ KPMG LLP

Portland, Oregon
June 14, 2016

EXHIBIT 24.1

POWER OF ATTORNEY

(Annual Report on Form 10-K)

The undersigned, an officer and/or director of Electro Scientific Industries, Inc., constitutes and appoints Edward C. Grady and Paul Oldham, and each of them, his or her true and lawful attorney and agent to do any and all acts and things and execute in his or her name as an officer or director of the Company the Annual Report on Form 10-K for the year ended April 2, 2016 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; and the undersigned does hereby ratify and confirm all that said attorneys and agents and each of them shall do or cause to be done by virtue hereof. Any one of said attorneys or agents shall have, and may exercise, all powers conferred.

Dated: May 11, 2016

/s/ FREDERICK A. BALL

Frederick A. Ball

EXHIBIT 24.2

POWER OF ATTORNEY

(Annual Report on Form 10-K)

The undersigned, an officer and/or director of Electro Scientific Industries, Inc., constitutes and appoints Edward C. Grady and Paul Oldham, and each of them, his or her true and lawful attorney and agent to do any and all acts and things and execute in his or her name as an officer or director of the Company the Annual Report on Form 10-K for the year ended April 2, 2016 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; and the undersigned does hereby ratify and confirm all that said attorneys and agents and each of them shall do or cause to be done by virtue hereof. Any one of said attorneys or agents shall have, and may exercise, all powers conferred.

Dated: May 11, 2016

/s/ ROBERT R. WALKER

Robert R. Walker

EXHIBIT 24.3

POWER OF ATTORNEY

(Annual Report on Form 10-K)

The undersigned, an officer and/or director of Electro Scientific Industries, Inc., constitutes and appoints Edward C. Grady and Paul Oldham, and each of them, his or her true and lawful attorney and agent to do any and all acts and things and execute in his or her name as an officer or director of the Company the Annual Report on Form 10-K for the year ended April 2, 2016 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; and the undersigned does hereby ratify and confirm all that said attorneys and agents and each of them shall do or cause to be done by virtue hereof. Any one of said attorneys or agents shall have, and may exercise, all powers conferred.

Dated: May 11, 2016

/s/ EDWARD C. GRADY

Edward C. Grady

EXHIBIT 24.4

POWER OF ATTORNEY

(Annual Report on Form 10-K)

The undersigned, an officer and/or director of Electro Scientific Industries, Inc., constitutes and appoints Edward C. Grady and Paul Oldham, and each of them, his or her true and lawful attorney and agent to do any and all acts and things and execute in his or her name as an officer or director of the Company the Annual Report on Form 10-K for the year ended April 2, 2016 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; and the undersigned does hereby ratify and confirm all that said attorneys and agents and each of them shall do or cause to be done by virtue hereof. Any one of said attorneys or agents shall have, and may exercise, all powers conferred.

Dated: May 11, 2016

/s/ LAURENCE E. CRAMER

Laurence E. Cramer

EXHIBIT 24.5

POWER OF ATTORNEY

(Annual Report on Form 10-K)

The undersigned, an officer and/or director of Electro Scientific Industries, Inc., constitutes and appoints Edward C. Grady and Paul Oldham, and each of them, his or her true and lawful attorney and agent to do any and all acts and things and execute in his or her name as an officer or director of the Company the Annual Report on Form 10-K for the year ended April 2, 2016 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; and the undersigned does hereby ratify and confirm all that said attorneys and agents and each of them shall do or cause to be done by virtue hereof. Any one of said attorneys or agents shall have, and may exercise, all powers conferred.

Dated: May 11, 2016

/s/ RAYMOND A. LINK

Raymond A. Link

EXHIBIT 24.6

POWER OF ATTORNEY

(Annual Report on Form 10-K)

The undersigned, an officer and/or director of Electro Scientific Industries, Inc., constitutes and appoints Edward C. Grady and Paul Oldham, and each of them, his or her true and lawful attorney and agent to do any and all acts and things and execute in his or her name as an officer or director of the Company the Annual Report on Form 10-K for the year ended April 2, 2016 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; and the undersigned does hereby ratify and confirm all that said attorneys and agents and each of them shall do or cause to be done by virtue hereof. Any one of said attorneys or agents shall have, and may exercise, all powers conferred.

Dated: May 11, 2016

/s/ JOHN MEDICA

John Medica

EXHIBIT 24.7

POWER OF ATTORNEY

(Annual Report on Form 10-K)

The undersigned, an officer and/or director of Electro Scientific Industries, Inc., constitutes and appoints Edward C. Grady and Paul Oldham, and each of them, his or her true and lawful attorney and agent to do any and all acts and things and execute in his or her name as an officer or director of the Company the Annual Report on Form 10-K for the year ended April 2, 2016 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; and the undersigned does hereby ratify and confirm all that said attorneys and agents and each of them shall do or cause to be done by virtue hereof. Any one of said attorneys or agents shall have, and may exercise, all powers conferred.

Dated: May 11, 2016

/s/ RICHARD H. WILLS

Richard H. Wills

EXHIBIT 31.1

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

I, Edward C. Grady, certify that:

1. I have reviewed this annual report on Form 10-K 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: June 14, 2016

/s/ Edward C. Grady

Edward C. Grady
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 annual report on Form 10-K 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: June 14, 2016

/s/ Paul Oldham

Paul Oldham
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 annual report on Form 10-K of Electro Scientific Industries, Inc. (the Company) for the year ended April 2, 2016 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Edward C. Grady, 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/ Edward C. Grady

Edward C. Grady
President and Chief Executive Officer

June 14, 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 annual report on Form 10-K of Electro Scientific Industries, Inc. (the Company) for the year ended April 2, 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
Vice President of Administration,
Chief Financial Officer and Corporate Secretary

June 14, 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.