

COHU INC  
Form 10-K  
March 02, 2018

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**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D. C. 20549**

**FORM 10-K**

(Mark One)

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

**For the fiscal year ended December 30, 2017**

**OR**

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

**Commission file number 1-4298**

**COHU, INC.**

*(Exact name of registrant as specified in its charter)*

**Delaware**

*(State or other jurisdiction of  
Incorporation or Organization)*

**95-1934119**

*(I.R.S. Employer Identification No.)*

**12367 Crosthwaite Circle, Poway, California 92064-6817**

*(Address of principal executive offices) (Zip Code)*

**Registrant's telephone number, including area code: (858) 848-8100**

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

<u>Title of Each Class</u>	<u>Name of Exchange on Which Registered</u>
Common Stock, \$1.00 par value	The NASDAQ Stock Market LLC

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

None

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 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 definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

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

Smaller reporting company      Emerging growth company

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

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

The aggregate market value of voting stock held by non-affiliates of the registrant was approximately \$283,000,000 based on the closing stock price as reported by the NASDAQ Stock Market LLC as of June 23, 2017. Shares of common stock held by each officer and director and by each person or group who owns 5% or more of the outstanding common stock have been excluded in that such persons or groups may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 16, 2018, the Registrant had 28,539,627 shares of its \$1.00 par value common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Proxy Statement for Cohu, Inc.'s 2018 Annual Meeting of Stockholders to be held on May 16, 2018, and to be filed pursuant to Regulation 14A within 120 days after registrant's fiscal year ended December 30, 2017, are incorporated by reference into Part III of this Report.

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COHU, INC.

FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 30, 2017

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*The following discussion should be read in conjunction with the Consolidated Financial Statements and notes thereto included elsewhere in this Annual Report on Form 10-K. This Annual Report on Form 10-K contains certain forward-looking statements including expectations of market conditions, challenges and plans, within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and is subject to the Safe Harbor provisions created by that statute. These forward-looking statements are based on management’s current expectations and beliefs, including estimates and projections about our business. Statements concerning financial position, business strategy, and plans or objectives for future operations are forward-looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties, and assumptions that are difficult to predict and may cause actual results to differ materially from management’s current expectations. Such risks and uncertainties include those set forth in this Annual Report on Form 10-K under the heading “Item 1A. Risk Factors”. The forward-looking statements in this report speak only as of the time they are made and do not necessarily reflect management’s outlook at any other point in time. We undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events, or for any other reason. However, readers should carefully review the risk factors set forth in other reports or documents we file from time-to-time with the Securities and Exchange Commission (“SEC”) after the date of this Annual Report.*

## **PART I**

### **Item 1. Business.**

Cohu, Inc. (“Cohu”, “we”, “our” and “us”) was incorporated under the laws of California in 1947, as Kalbfell Lab, Inc. and commenced active operations in the same year. Our name was changed to Kay Lab in 1954. In 1957, Cohu was reincorporated under the laws of the State of Delaware as Cohu Electronics, Inc. and in 1972 our name was changed to Cohu, Inc.

On January 4, 2017, we acquired Kita Manufacturing Co. LTD. (“Kita”), a Japan-based manufacturer of spring probe contacts used in final test contactors, probe cards, Printed Circuit Board (PCB) test and connectors sold to customers worldwide. The results of Kita’s operations have been included in our consolidated financial statements since that date. In 2015, we sold our mobile microwave communications equipment business, Broadcast Microwave Services, Inc. (“BMS”). Our decision to sell BMS resulted from the determination that this business was no longer a strategic fit within our organization. The operating results of BMS are being presented as discontinued operations. Unless otherwise noted, all amounts presented are from continuing operations.

Subsequent to the sale of BMS, we have one reportable segment, semiconductor equipment. Financial information on our reportable segment for each of the last three years is included in Note 7, “Segment and Geographic Information” in Part IV, Item 15(a) of this Form 10-K.

Cohu is a leading supplier of semiconductor test and inspection handlers, micro-electro mechanical system (MEMS) test modules, test contactors and thermal sub-systems used by global semiconductor manufacturers and test subcontractors. We develop, manufacture, sell and service a broad line of equipment capable of handling a wide range of integrated circuits and light-emitting diodes (LEDs). Handlers are electromechanical systems used to automate testing and inspection of integrated circuits and LEDs in the back-end of the semiconductor manufacturing process to determine the quality and performance of the semiconductor devices, such as microprocessors, logic, analog, memory or mixed signal devices. The majority of handlers use either pick-and-place, gravity-feed, turret or test-in-strip technologies. The type of device, test parallelism, thermal requirements and signal interface requirements normally determines the appropriate handling approach.

MEMS test modules are independent physical stimuli units for testing sensor integrated circuits typically used in the automotive and consumer electronics industries. These MEMS test modules can be integrated to our gravity-feed, pick-and-place, turret or test-in-strip handlers for testing a variety of sensors, including pressure, acoustic, magnetic field hall effect, optical and others.

To ensure quality, semiconductors are typically tested at hot and/or cold temperatures, which can simulate the final operating environment. Our test handler products are designed to provide a precisely controlled test environment, often over the range of -60 degrees Celsius to +175 degrees Celsius. As the speed and power of certain integrated circuits, such as microprocessors and mobile processors, have increased so has the need to actively manage the self-generated heat during the test process to maximize yield. This heat is capable of damaging or destroying the integrated circuit and can result in speed downgrading, when devices self-heat and fail to successfully test at their maximum possible speed. Device yields are extremely important and speed grading directly affects the selling price of the integrated circuit and the profitability of the semiconductor manufacturer. In addition to temperature capability, other key factors in the design of test handlers are handling speed, flexibility, parallel test capability, alignment to the test contactors, system size, reliability and cost.

Thermal sub-systems are used in advanced burn-in and system-level test applications to maintain and control the temperature of integrated circuits during the testing process. Burn-in stresses devices for detection of early failures (infant mortality) prior to distribution. The burn-in process is also used by semiconductor manufacturers to develop reliability models of newly introduced devices. The objective of reliability testing is to determine a device's fault-free operation and estimated useful life by exposing the device to various electrical and thermal conditions that impact its performance. System-level testing is required for functional testing of high-end microprocessors as well as mobile processors combined with memory. This is typically the last test operation of complex, expensive integrated circuits prior to the final electronic integration process.

Our products are used in high-volume production environments and many are in service twenty-four hours per day, seven days a week. Customers continuously strive to increase the utilization of their production test equipment and expect high reliability from test handlers, MEMS test modules and thermal subsystems used in burn-in and system-level test. The availability of trained technical support personnel is an important competitive factor in the marketplace. Accordingly, we deploy service engineers worldwide, often within customers' production facilities, who work with customer personnel to maintain, repair and continuously improve the performance of our equipment.

## **Our Products**

We offer products for the pick-and-place, gravity-feed, test-in-strip and turret handling, MEMS, burn-in and system-level test markets. We currently sell the following products:

The **Delta MATRiX** is a high-performance pick-and-place handler capable of thermally conditioning devices from -60 degrees Celsius to +175 degrees Celsius. This system is mainly used for testing of semiconductors used in automotive and industrial markets.

The **Delta Pyramid** is a high performance thermal handler for microprocessors, graphics processors and other high power integrated circuits. The Pyramid incorporates our proprietary **T-Core** thermal control technology that optimizes test yield of power dissipative integrated circuits.

**Delta Eclipse** is a pick-and-place handler tailored for testing advanced computing and mobile processors that require Cohu's **T-Core** active thermal control technology. This product can also be configured without active thermal control for testing of standard analog and digital semiconductors

**Delta LinX** is our platform serving assembly automation. Back-end semiconductor assembly is the major process step prior to device testing and validation. The LinX product line offers advanced JEDEC handling automation that efficiently links various assembly test processes.

The **Rasco SO1000** is a high throughput gravity-feed platform that provides an economical solution for testing up to 4 devices in parallel. This handler can be configured for tube-to-tube or metal magazine input and output, ambient-hot or tri-temperature testing and is easily kit-able for a wide range of integrated circuit packages.

The **Rasco SO1000** and **SO2000** are high throughput gravity-feed platforms that provide economical solutions for testing up to 8 devices in parallel. These handlers can be configured for tube-to-tube or metal magazine input and output, bowl feeding, tape-and-reel. Additionally, these handlers can be configured for ambient-hot or tri-temperature testing.

**Rasco Saturn** and **Jupiter** are gravity handlers that deliver fast index time capability with up to 8 devices tested in parallel at cold and/or hot temperature. Saturn has a configuration that covers testing of very small to medium size packaged integrated circuits, and Jupiter is a version that enables testing of medium to very large packaged integrated circuits typically serving the power management device market.

The **Rasco Jaguar** test-in-strip handler can process an entire strip at once or index the strip for single/multiple device testing. The system has tri-temperature capability, accommodates either stacked or slotted input/output media and is configured with automated vision alignment. The Jaguar is also a solution for in-process testing of next generation multi-stacked packages.

The **Ismecca NY32** is a scalable, 32-position turret handler used for testing and inspection of integrated circuits, LEDs, and discrete devices. There are many configurations of the NY32 turret handler: handling wafers in film-frame for input and/or output that is common for LEDs and wafer level package (WLP) devices; tray and tube input and/or output used for integrated circuits and discrete devices; and bowl feeding, tape and de-taping, alignment, laser marking, inspection and test modules. The NY32 is capable of testing devices at ambient and hot temperature.



The **Ismecca NY20** is a turret handler platform that delivers high throughput combined with fast device change-over time for both high-volume and high-mix testing and inspection of integrated circuits, LEDs and discrete devices. The 20-position turret offers many of the functional modules and capabilities available on the NY32 platform in a smaller footprint, higher throughput handler.

**MEMS test modules** generate physical stimuli for testing of sensor integrated circuits. These are typically used in the automotive (e.g. tire pressure, airbag sensors) and consumer electronics (e.g. tilt, motion, microphone and light sensors) industries. The MEMS modules are stand-alone units that can be integrated into our pick-and-place, turret, test-in-strip, or gravity-feed handlers.

**Thermal Sub-Systems** are used by integrated circuit manufacturers in high performance burn-in and system level test. The **Delta T-Core** thermal sub-systems provide fast and accurate temperature control of the integrated circuit during the testing process using the same technology available in the Pyramid handler.

**Delta Fusion HD** is a tri-temperature thermal sub-system that utilizes T-Core technology for testing mobile processors.

**PANTHER** is a prober that optimizes test and vision inspection of wafer level package (WLP) and bumped dies, delivering a substantial improvement in semiconductor manufacturing quality that is required for today's high-end consumer products.

**Solstice** is a system-level test automation platform for complex, integrated semiconductors that typically combine a processor and memory. This product enables greater semiconductor manufacturing quality by testing devices under the actual end-usage conditions.

We design, manufacture, sell and support various lines of **Test Contactor** solutions. These are consumable, electro-mechanical assemblies that connect the device under test, inside our test handlers, and the automated test equipment. Cohu contactors are used in testing digital semiconductor devices utilizing spring probe technology, such as the ones produced by Kita, also power management and LED semiconductor devices utilizing cantilever technology, and RF semiconductor devices based on high performance contacts designed to operate at frequencies up to 34 GHz.

We provide consumable, non-consumable and spare items that are used to maintain, sustain or otherwise enable customer's equipment to meet its performance, availability and production requirements.

We design and manufacture a wide range of device dedication kits that enable handlers to process different semiconductor packages. Our Philippines operation designs and manufactures the majority of our handler kits and provides applications support to customers in the southeast Asia region.

### Sales by Product Line

During the last three years, our consolidated sales were distributed as follows:

	2017	2016	2015
Semiconductor test systems	56%	57%	54%
Spares, contactors, tooling (kits) and service	44%	43%	46%

### Customers

Our customers include semiconductor integrated device manufacturers and test subcontractors. Repeat sales to existing customers represent a significant portion of our sales. During the last three years, the following customers comprised 10% or greater of our consolidated net sales:

	2017	2016	2015
Intel	11.2%	17.2%	18.0%
NXP Semiconductors N.V. <sup>(1)</sup>	15.9%	13.7%	11.4%

<sup>(1)</sup> *The merger of NXP Semiconductors N.V. and Freescale Semiconductor, Ltd. was completed on December 7, 2015. Sales to these customers have been combined for all periods presented.*

The loss of, or a significant reduction in, orders by these or other significant customers, including reductions due to market, economic or competitive conditions or the outsourcing of final integrated circuit test to subcontractors that are not our customers would adversely affect our financial condition and results of operations and as a result, we believe that our customer concentration is a significant business risk.

Additional financial information on revenues from external customers by geographic area for each of the last three years is included in Note 7, “Segment and Geographic Information” in Part IV, Item 15(a) of this Form 10-K.

## **Sales and Marketing**

We market our products worldwide through a combination of a direct sales force and independent sales representatives. In geographic areas where we believe there is sufficient sales potential, we generally employ our own personnel. Our U.S. sales office is located in Poway, California. The Europe sales offices are located in Kolbermoor, Germany and La Chaux-de-Fonds, Switzerland. We operate in Asia with offices in Singapore, Malaysia, Thailand, Philippines, Taiwan, China, Korea, and Japan.

## **Competition**

The semiconductor equipment industry is intensely competitive and is characterized by rapid technological change and demanding worldwide service requirements. Significant competitive factors include product performance, price, reliability, lead-time, customer support and installed base of products. While we are a leading worldwide supplier of semiconductor test handling equipment, we face substantial competition. The Japanese and Korean markets for test handling equipment are large and represent a significant percentage of the worldwide market. During each of the last three years our sales to Japanese and Korean customers, who have historically purchased test handling equipment from Asian suppliers, have represented less than 10% of our total sales. Some of our current and potential competitors are part of larger corporations that have substantially greater financial, engineering, manufacturing and customer support capabilities and offer more extensive product offerings than Cohu. To remain competitive we believe we will require significant financial resources to offer a broad range of products, maintain customer support and service centers worldwide and to invest in research and development of new products. Failure to introduce new products in a timely manner or the introduction by competitors of products with actual or perceived advantages could result in a loss of competitive position and reduced sales of existing products. No assurance can be given that we will continue to compete successfully throughout the world.

## **Backlog**

Our backlog of unfilled orders for products, was \$107.6 million at December 30, 2017, and \$65.1 million at December 31, 2016. Backlog at December 30, 2017, will be impacted by our adoption of Accounting Standards Update (“ASU”) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* (ASU 2014-09), on December 31, 2017, the first day of our fiscal 2018. This new accounting guidance amends the existing accounting standards for revenue recognition. For additional information see recently issued accounting pronouncements in Note 1 “Accounting Policies” in Part IV, Item 15(a) of this Form 10-K.

Backlog is generally expected to be shipped within the next twelve months. Our backlog at any point in time may not be representative of actual sales in any future period due to the possibility of customer changes in delivery schedules, cancellation of orders, potential delays in product shipments, difficulties in obtaining parts from suppliers, failure to satisfy customer acceptance requirements resulting in the inability to recognize revenue under accounting requirements. Furthermore, many orders are subject to cancellation or rescheduling by the customer with limited or no penalty. A reduction in backlog during any period could have a material adverse effect on our business, financial condition and results of operations.

### **Manufacturing and Raw Materials**

Our principal manufacturing operations are currently located in Malacca, Malaysia (handler operations and kits); Laguna, Philippines (kits and test contractors), Osaka, Japan (test contractors); Poway, California; and Kolbermoor, Germany.

Many of the components and subassemblies we utilize are standard products, although some items are made to our specifications. Certain components are obtained or are available from a limited number of suppliers. We seek to reduce our dependence on sole and limited source suppliers, however in some cases the complete or partial loss of certain of these sources could have a material adverse effect on our operations while we attempt to locate and qualify replacement suppliers.

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## **Patents and Trademarks**

Our technology is protected by various intellectual property laws including patent, license, trademark, copyright and trade secret laws. In addition, we believe that, due to the rapid pace of technological change in the semiconductor equipment industry, the successful manufacture and sale of our products also depends upon our experience, technological know-how, manufacturing and marketing skills and speed of response to sales opportunities. In the absence of patent protection, we would be vulnerable to competitors who attempt to copy or imitate our products or processes. We believe our intellectual property has value and we have in the past and will in the future take actions we deem appropriate to protect such property from misappropriation. However, there can be no assurance such actions will provide meaningful protection from competition. Protecting our intellectual property rights or defending against claims brought by other holders of such rights, either directly against us or against customers we have agreed to indemnify, would likely be expensive and time consuming and could have a material adverse effect on our operations.

## **Research and Development**

Research and development activities are carried on in our various subsidiaries and are directed toward development of new products and equipment, as well as enhancements to existing products and equipment. Our total research and development expense was \$40.7 million in 2017, \$34.8 million in 2016 and \$33.1 million in 2015.

We work closely with our customers to make improvements to our existing products and in the development of new products. We expect to continue to invest heavily in research and development and must manage product transitions successfully as introductions of new products could adversely impact sales of existing products.

## **Environmental Laws**

Our business is subject to numerous federal, state, local and international environmental laws. On occasion, we have been notified by local authorities of instances of noncompliance with local and/or state environmental laws. We believe we are in compliance with applicable federal, state, local and international regulations. Compliance with foreign, federal, state and local laws that have been enacted or adopted regulating the discharge of materials into the environment or otherwise relating to the protection of the environment and the prevention of climate change have not had a material effect and are not expected to have a material effect upon our capital expenditures, results of operations or our competitive position. However, future changes in regulations may require expenditures that could adversely impact earnings in future years.

**Executive Officers of the Registrant**

The following sets forth the names, ages, positions and offices held by all executive officers of Cohu as of February 16, 2018. Executive Officers serve at the discretion of the Board of Directors, until their successors are appointed.

<b>Name</b>	<b>Age</b>	<b>Position</b>
Luis A. Müller	48	President and Chief Executive Officer
Jeffrey D. Jones	56	Vice President, Finance and Chief Financial Officer
Thomas D. Kampfer	54	Vice President, Corporate Development, General Counsel and Secretary
Christopher G. Bohrson	58	Vice President and General Manager, Digital Test Handlers
Hock W. Chiang	60	Vice President, Global Sales & Service
Ian von Fellenberg	58	Vice President and General Manager, Analog Test Handlers

Dr. Müller joined Cohu's Delta Design subsidiary in 2005 and has been President and Chief Executive Officer of Cohu, Inc. since December 2014. Dr. Müller was previously President of Cohu's Semiconductor Equipment Group (SEG) from January 2011 until being named CEO of Cohu, Managing Director of SEG's Rasco GmbH business unit in Germany from January 2009 to December 2010, and Vice President of SEG's High Speed Pick-and-Place handler products from July 2008 to December 2010. Prior to joining Cohu, Inc. Dr. Müller spent nine years at Teradyne, where he held various management positions in engineering and business development.

Mr. Jones joined Cohu's Delta Design in July 2005 as Vice President Finance and Controller. In November 2007, Mr. Jones was named Vice President, Finance and Chief Financial Officer of Cohu. Prior to joining Delta Design, Mr. Jones, was a consultant and Vice President and General Manager of the Systems Group at SBS Technologies, Inc., a designer and manufacturer of embedded computer products. Prior to SBS Technologies, Mr. Jones was an Audit Manager for Coopers & Lybrand (now PricewaterhouseCoopers).

Mr. Kampfer joined Cohu in May 2017 as Vice President Corporate Development, General Counsel and Secretary. Mr. Kampfer most recently served from June 2015 to May 2017 as Executive Vice President and Chief Financial Officer of Multi-Fineline Electronix, Inc. Prior to that, Mr. Kampfer served from 2012 to 2015 as President of CohuHD, formerly a division of Cohu, which was divested in 2014. Previously, Mr. Kampfer spent eight years with Iomega Corporation, holding several executive positions, including President and Chief Operating Officer and Vice President, General Counsel and Secretary. Earlier, Mr. Kampfer served in various legal and business development executive roles with Proxima Corporation, and also held various positions in manufacturing engineering and legal at IBM.

Mr. Bohrson joined Cohu in May 2016 as Vice President Sales and Service, Americas. Since January 2017, he has served as Vice President and General Manager for Digital Test Handlers. Prior to joining Cohu, from 2007 through 2016 Mr. Bohrson held several executive positions at Bosch Automotive Service Solutions/SPX lastly as Vice President and General Manager of the OEM Diagnostics and Information Solutions group. Prior to this, Mr. Bohrson spent twenty years working in a variety of management and technical roles at Teradyne, Inc.'s ("Teradyne") semiconductor and broadband test division in the US and Asia.

Mr. Chiang joined Cohu in October 2012 as Vice President, Global Sales & Service for Cohu's Semiconductor Equipment Group. Prior to joining Cohu, Mr. Chiang served as a Director for AXElite Technology Corporation. From 1989 through 2011, Mr. Chiang held a variety of positions at Teradyne including Director – Asia SOC Marketing & New Business Development, Managing Director of Teradyne's Singapore and China operations and Director of Worldwide Field Total Quality Management.

Mr. von Fellenberg joined Cohu in 2013 with the acquisition of Ismeca Semiconductor by Cohu. He was Vice President and General Manager of the Ismeca Business Unit from 2013 until his appointment as Vice President and General Manager for Analog Test Handlers in January 2017. In 2004, he set up operations for Ismeca in China and managed both the North Asia and South Asia regions. Prior to Ismeca, Mr. Fellenberg spent six years at Orell Füssli Security Printing where he held several executive positions in the document security technology business. He has also held various positions in sales and product management for companies in the automation components (sensors, drives) industry.

## **Employees**

At December 30, 2017 we had approximately 1,800 employees. Our employee headcount has fluctuated in the last five years primarily due to the volatile and unpredictable business conditions in the semiconductor equipment industry. Our headcount has also been impacted by the acquisition of Kita and the divestiture of BMS. Our employees in the United States and most locations in Asia are not covered by collective bargaining agreements, however, certain employees in Kolbermoor, Germany, are represented by a works council, employees in La Chaux-de-Fonds, Switzerland are members of the micro-technology and Swiss watch trade union and, certain employees in our China operation belong to local trade unions. We have not experienced any work stoppages and consider our relations with our employees to be good. We believe that a great part of our future success will depend on our continued ability to attract and retain qualified employees. Competition for the services of certain personnel, particularly those with technical skills, is intense. There can be no assurance that we will be able to attract, hire, assimilate and retain a sufficient number of qualified employees.

## **Available Information**

Our web site address is [www.cohu.com](http://www.cohu.com). We make available free of charge, on or through our web site, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports, as soon as reasonably practicable after such material is electronically filed with the Securities and Exchange Commission. Our Code of Business Conduct and Ethics and other documents related to our corporate governance is also posted on our web site at [www.cohu.com/investors/corporategovernance](http://www.cohu.com/investors/corporategovernance). Information contained on our web site is not deemed part of this report.



**Item 1A. Risk Factors.**

*Set forth below and elsewhere in this report on Form 10-K and in other documents we file with the SEC, are risks and uncertainties that could cause actual results to differ materially from the results expressed or implied by the forward-looking statements contained in this Annual Report. Before deciding to purchase, hold or sell our common stock, you should carefully consider the risks described below in addition to the other cautionary statements and risks described elsewhere, and the other information contained, in this Annual Report on Form 10-K. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business. If any of these known or unknown risks or uncertainties actually occurs with material adverse effects on Cohu, our business, financial condition and results of operations could be seriously harmed. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment.*

***We are exposed to risks associated with acquisitions, investments and divestitures.***

As part of our business strategy, we regularly evaluate investments in, or acquisitions of, complementary businesses, joint ventures, services and technologies, and we expect that periodically we will continue to make such investments and acquisitions in the future, such as our acquisition of Kita, which was completed on January 4, 2017. Acquisitions and investments involve numerous risks, including, but not limited to:

difficulties and increased costs in connection with integration of the personnel, operations, technologies and products of acquired businesses;  
increasing the scope, geographic diversity and complexity of our business;  
the cost and risk of having to potentially develop new and unfamiliar sales channels for acquired businesses;  
diversion of management's attention from other operational matters;  
the potential loss of key employees, customers or suppliers of Cohu or acquired businesses;  
lack of synergy, or the inability to realize expected synergies, resulting from the acquisition;  
potential unknown liabilities associated with the acquired businesses;  
failure to commercialize purchased technology;  
the impairment of acquired intangible assets and goodwill that could result in significant charges to operating results in future periods; and  
challenges caused by distance, language and cultural differences

We may decide to finance future acquisitions and investments through a combination of borrowings, proceeds from equity or debt offerings and the use of cash, cash equivalents and short-term investments. If we finance acquisitions by issuing convertible debt or equity securities, our existing stockholders may be diluted which could affect the market price of our stock.

Mergers, acquisitions and investments are inherently risky and the inability to effectively manage these risks could materially and adversely affect our business, financial condition and results of operations. At December 30, 2017, we had goodwill and net purchased intangible assets balances of \$65.6 million and \$16.7 million, respectively.

***We are making investments in new products to enter new markets, which may adversely affect our operating results; these investments may not be successful.***

Given the highly competitive and rapidly evolving technology environment in which we operate, we believe it is important to develop new product offerings to meet strategic opportunities as they evolve. This includes developing products that we believe are necessary to meet the future needs of the marketplace. We are currently investing in new product development programs to enable us to compete in the test contactor and wafer level package (WLP) probe and inspection markets, which includes a significant ongoing investment in our PANTHER platform. We expect to continue to make investments and we may at any time, based on product need or marketplace demand, decide to significantly increase our product development expenditures in these or other products. The cost of investments in new product offerings can have a negative impact on our operating results and there can be no assurance that any new products we develop will be accepted in the marketplace or generate material revenues for us.

***We are exposed to the risks of operating a global business.***

We are a global corporation with offices and subsidiaries in certain foreign locations to manufacture our products, support our sales and services to the global semiconductor industry and, as such, we face risks in doing business abroad. Certain aspects inherent in transacting business internationally could negatively impact our operating results, including:

costs and difficulties in staffing and managing international operations;  
legislative or regulatory requirements and potential changes in or interpretations of requirements in the United States and in the countries in which we manufacture or sell our products;  
trade restrictions, including treaty changes, sanctions and the suspension of export licenses;  
compliance with and changes in import/export tariffs and regulations;  
difficulties in enforcing contractual and intellectual property rights;  
longer payment cycles;  
local political and economic conditions;  
potentially adverse tax consequences, including restrictions on repatriating earnings and the threat of “double taxation;” and  
fluctuations in foreign currency exchange rates against the U.S. Dollar, which can affect demand for our products and increase our costs.

Additionally, managing geographically dispersed operations presents difficult challenges associated with organizational alignment and infrastructure, communications and information technology, inventory control, customer relationship management, terrorist threats and related security matters and cultural diversities. If we are unsuccessful in managing such operations effectively, our business and results of operations will be adversely affected.

***We have manufacturing operations in Asia. Any failure to effectively manage multiple manufacturing sites and to secure raw materials meeting our quality, cost and other requirements, or failures by our suppliers to perform, could harm our sales, service levels and reputation.***

Our reliance on overseas manufacturers exposes us to significant risks including complex management, foreign currency, legal, tax and economic risks, which we may not be able to address quickly and adequately. In addition, it is time consuming and costly to qualify overseas supplier relationships. If we should fail to effectively manage overseas manufacturing operations, or if one or more of them should experience delays, disruptions or quality control problems, or if we had to change or add additional manufacturing sites, our ability to ship products to our customers could be delayed. Also, the addition of overseas manufacturing locations increases the demands on our administrative and operations infrastructure and the complexity of our supply chain management. If our overseas manufacturing locations are unable to meet our manufacturing requirements in a timely manner, our ability to ship products and to realize the related revenues when anticipated could be materially affected.

Our suppliers are subject to the fluctuations in general economic cycles, and global economic conditions may impact their ability to operate their business. They may also be impacted by increasing costs of raw materials, labor and

distribution, resulting in demands for less attractive contract terms or an inability for them to meet our requirements or conduct their own businesses. The performance and financial condition of a supplier may cause us to alter our business terms or to cease doing business with a particular supplier, or change our sourcing practices generally, which could in turn adversely affect our own business and financial condition.

***Failure of critical suppliers to deliver sufficient quantities of parts in a timely and cost-effective manner could adversely impact our operations.***

We use numerous vendors to supply parts, components and subassemblies for the manufacture of our products. It is not always possible to maintain multiple qualified suppliers for all of our parts, components and subassemblies. As a result, certain key parts may be available only from a single supplier (“sole source”) or a limited number of suppliers. In addition, suppliers may significantly raise prices or cease manufacturing certain components (with or without advance notice to us) that are difficult to replace without significant reengineering of our products. On occasion, we have experienced problems in obtaining adequate and reliable quantities of various parts and components from certain key or sole source suppliers. Our results of operations may be materially and adversely impacted if we do not receive sufficient parts to meet our requirements in a timely and cost effective manner.

***The semiconductor industry we serve is seasonal, volatile and unpredictable.***

Visibility into our markets is limited. The semiconductor equipment business is highly dependent on the overall strength of the semiconductor industry. Historically, the semiconductor industry has been seasonal with recurring periods of oversupply and excess capacity, which often have had a significant effect on the semiconductor industry’s demand for capital equipment, including equipment of the type we manufacture and market. We anticipate that the markets for newer generations of semiconductors and semiconductor equipment will also be subject to similar cycles and severe downturns. Any significant reductions in capital equipment investment by semiconductor integrated device manufacturers and test subcontractors will materially and adversely affect our business, financial position and results of operations. In addition, the seasonal, volatile and unpredictable nature of semiconductor equipment demand has in the past and may in the future expose us to significant excess and obsolete and lower of cost or net realizable value inventory write-offs and reserve requirements. In 2017, 2016 and 2015, we recorded pre-tax inventory-related charges of approximately \$1.1 million, \$1.1 million, and \$2.4 million, respectively, primarily as a result of changes in customer forecasts.

***Due to the nature of our business, we need continued access to capital, which if not available to us or if not available on favorable terms, could harm our ability to operate or expand our business.***

Our business requires capital to finance accounts receivable and product inventory that is not financed by trade creditors when our business is expanding. If cash from available sources is insufficient or cash is used for unanticipated needs, we may require additional capital sooner than anticipated.

We believe that our existing sources of liquidity, including cash resources and cash provided by operating activities will provide sufficient resources to meet our working capital and cash requirements for at least the next twelve months. In the event we are required, or elect, to raise additional funds, we may be unable to do so on favorable terms, or at all, and may incur expenses in raising the additional funds and future indebtedness could adversely affect our operating results and severely limit our ability to plan for, or react to, changes in our business or industry. We could also be limited by financial and other restrictive covenants in credit arrangements, including limitations on our borrowing of additional funds and issuing dividends. If we choose to issue new equity securities, existing stockholders may experience dilution, or the new equity securities may have rights, preferences or privileges senior to those of existing holders of common stock. If we cannot raise funds on acceptable terms, we may not be able to take advantage of future opportunities or respond to competitive pressures or unanticipated requirements. Any inability to raise additional capital when required could have an adverse effect on our business and operating results.

***The semiconductor equipment industry is intensely competitive.***

The semiconductor test handler industry is intensely competitive and we face substantial competition from numerous companies throughout the world. The test handler industry, while relatively small in terms of worldwide market size compared to other segments of the semiconductor equipment industry, has several participants resulting in intense competitive pricing pressures. Future competition may include companies that do not currently supply test handlers. Some of our competitors are part of larger corporations that have substantially greater financial, engineering, manufacturing and customer support capabilities and provide more extensive product offerings. In addition, there are emerging semiconductor equipment companies that provide or may provide innovative technology incorporated in products that may compete successfully against our products. We expect our competitors to continue to improve the design and performance of their current products and introduce new products with improved performance capabilities. Our failure to introduce new products in a timely manner, the introduction by our competitors of products with perceived or actual advantages, or disputes over rights to use certain intellectual property or technology could result in a loss of our competitive position and reduced sales of, or margins on our existing products. Intense competition has adversely impacted our product average selling prices and gross margins on certain products. If we are unable to reduce the cost of our existing products and successfully introduce new lower cost products, then we expect that these competitive conditions would negatively impact our gross margin and operating results in the foreseeable future.

In addition, with the acquisition of Kita in 2017, we increased our investments in our test contactor business, and announced significant growth targets for the business over the next several years. The test contactor market is fragmented, with many entrenched regional players, and subject to intense price competition and also high customer support requirements. We believe that customer support and responsiveness and an ability to consistently meet tight deadlines is critical to our success. If we are unable to reduce the cost of our test contactor products, while also

meeting customer support requirements and deadlines, then we expect that these competitive conditions would negatively impact our gross margin and operating results in the foreseeable future.

***Semiconductor equipment is subject to rapid technological change, product introductions and transitions which may result in inventory write-offs, and our new product development involves numerous risks and uncertainties.***

Semiconductor equipment and processes are subject to rapid technological change. We believe that our future success will depend in part on our ability to enhance existing products and develop new products with improved performance capabilities. We expect to continue to invest heavily in research and development and must manage product transitions successfully, as introductions of new products, including the products obtained in our acquisitions, may adversely impact sales and/or margins of existing products. In addition, the introduction of new products by us or by our competitors, the concentration of our revenues in a limited number of large customers, the migration to new semiconductor testing methodologies and the custom nature of our inventory parts increases the risk that our established products and related inventory may become obsolete, resulting in significant excess and obsolete inventory exposure. This exposure resulted in charges to operations during each of the years in the three-year period ended December 30, 2017. Future inventory write-offs and increased inventory reserve requirements could have a material adverse impact on our results of operations and financial condition.

The design, development, commercial introduction and manufacture of new semiconductor equipment is an inherently complex process that involves a number of risks and uncertainties. These risks include potential problems in meeting customer acceptance and performance requirements, integration of the equipment with other suppliers' equipment and the customers' manufacturing processes, transitioning from product development to volume manufacturing and the ability of the equipment to satisfy the semiconductor industry's constantly evolving needs and achieve commercial acceptance at prices that produce satisfactory profit margins. The design and development of new semiconductor equipment is heavily influenced by changes in integrated circuit assembly, test and final manufacturing processes and integrated circuit package design changes. We believe that the rate of change in such processes and integrated circuit packages is accelerating. As a result of these changes and other factors, assessing the market potential and commercial viability of handling, MEMS, system-level and burn-in test equipment and test contactors is extremely difficult and subject to a great deal of risk. In addition, not all integrated circuit manufacturers employ the same manufacturing processes. Differences in such processes make it difficult to design standard test products that can achieve broad market acceptance. As a result, we might not accurately assess the semiconductor industry's future equipment requirements and fail to design and develop products that meet such requirements and achieve market acceptance. Failure to accurately assess customer requirements and market trends for new semiconductor test products may have a material adverse impact on our operations, financial condition and results of operations.

The transition from product development to the manufacture of new semiconductor equipment is a difficult process and delays in product introductions and problems in manufacturing such equipment are common. We have in the past and may in the future experience difficulties in manufacturing and volume production of our new equipment. In addition, as is common with semiconductor equipment, after sale support and warranty costs have typically been significantly higher with new products than with our established products. Future technologies, processes and product developments may render our current or future product offerings obsolete and we might not be able to develop, introduce and successfully manufacture new products or make enhancements to our existing products in a timely manner to satisfy customer requirements or achieve market acceptance. Furthermore, we might not realize acceptable profit margins on such products.

***Global economic conditions may have an impact on our business and financial condition in ways that we currently cannot predict.***

Our operations and financial results depend on worldwide economic conditions and their impact on levels of business spending. Continued uncertainties may reduce future sales of our products and services. While we believe we have a strong customer base and have experienced strong collections in the past, if the current market conditions deteriorate, we may experience increased collection times and greater write-offs, either of which could have a material adverse effect on our cash flow.

In addition, the tightening of credit markets and concerns regarding the availability of credit may make it more difficult for our customers to raise capital, whether debt or equity, to finance their purchases of capital equipment, including the products we sell. Delays in our customers' ability to obtain such financing, or the unavailability of such financing would adversely affect our product sales and revenues and therefore harm our business and operating results. We cannot predict the timing, duration of or effect on our business of an economic slowdown or the timing or strength of a subsequent recovery.

***A limited number of customers account for a substantial percentage of our net sales.***

A small number of customers have been responsible for a significant portion of our net sales. During the past five years, the percentage of our sales derived from these significant customers has varied greatly. Such variations are due to changes in the customers' business, consolidation within the semiconductor industry and their purchase of products from our competitors. It is common in the semiconductor test handler industry for customers to purchase equipment from more than one equipment supplier, increasing the risk that our competitive position with a specific customer may deteriorate. No assurance can be given that we will continue to maintain our competitive position with these or other significant customers. Furthermore, we expect the percentage of our revenues derived from significant customers will vary greatly in future periods. The loss of, or a significant reduction in, orders by these or other significant customers as a result of competitive products, market conditions including end market demand for our customers' products, outsourcing final semiconductor test to test subcontractors that are not our customers or other factors, would have a material adverse impact on our business, financial condition and results of operations. Furthermore, the concentration of our revenues in a limited number of large customers is likely to cause significant fluctuations in our future annual and quarterly operating results.



***If we cannot continue to develop, manufacture and market products and services that meet customer requirements for innovation and quality, our revenue and gross margin may suffer.***

The process of developing new high technology products and services and enhancing existing products and services is complex, costly and uncertain, and any failure by us to anticipate customers' changing needs and emerging technological trends accurately could significantly harm our market share and results of operations. In addition, in the course of conducting our business, we must adequately address quality issues associated with our products and services, including defects in our engineering, design and manufacturing processes, as well as defects in third-party components included in our products. To address quality issues, we work extensively with our customers and suppliers and engage in product testing to determine the cause of quality problems and appropriate solutions. Finding solutions to quality issues can be expensive and may result in additional warranty, replacement and other costs, adversely affecting our profits. In addition, quality issues can impair our relationships with new or existing customers and adversely affect our reputation, which could lead to a material adverse effect on our operating results.

***The seasonal nature of the semiconductor equipment industry places enormous demands on our employees, operations and infrastructure.***

The semiconductor equipment industry is characterized by dramatic and sometimes rapid changes in demand for its products. These are generally dictated by introduction of new consumer products, launch of new model vehicles, implementation of new communications infrastructure, or in response to an increase in industrial equipment and machinery that utilizes semiconductors. A number of other factors including changes in integrated circuit design and packaging may affect demand for our products. Sudden changes in demand for semiconductor equipment commonly occur, and have a significant impact on our operations. We have in the past and may in the future experience difficulties, particularly in manufacturing, in training and recruiting the large number of additions to our workforce. The volatility in headcount and business levels, combined with the seasonal nature of the semiconductor industry, may require that we invest substantial amounts in new operational and financial systems, procedures and controls. We may not be able to successfully adjust our systems, facilities and production capacity to meet our customers' changing requirements. The inability to meet such requirements will have an adverse impact on our business, financial position and results of operations.

***The loss of key personnel could adversely impact our business.***

Certain key personnel are critical to our business. Our future operating results depend substantially upon the continued service of our key personnel, many of whom are not bound by employment or non-competition agreements. Our future operating results also depend in significant part upon our ability to attract and retain qualified management, manufacturing, technical, engineering, marketing, sales and support personnel. Competition for qualified personnel, particularly those with technical skills, is intense, and we cannot ensure success in attracting or retaining qualified personnel. In addition, the cost of living in the San Diego, California, Kolbermoor, Germany, La Chaux-de-Fonds, Switzerland and Osaka, Japan areas, where the majority of our engineering personnel are located, is high and we have had difficulty in recruiting prospective employees from other locations. There may be only a limited number of persons with the requisite skills and relevant industry experience to serve in these positions and it may become increasingly difficult for us to hire personnel over time. Our business, financial condition and results of operations could be materially adversely affected by the loss of any of our key employees, by the failure of any key employee to perform in his or her current position, or by our inability to attract and retain skilled employees.



***Third parties may violate our proprietary rights or accuse us of infringing upon their proprietary rights.***

We rely on patent, copyright, trademark and trade secret laws to establish and maintain proprietary rights in our technology and products. Any of our proprietary rights may expire due to patent life, or be challenged, invalidated or circumvented. In addition, from time-to-time, we receive notices from third parties regarding patent or copyright claims. Any such claims, with or without merit, could be time-consuming to defend, result in costly litigation, divert management's attention and resources and cause us to incur significant expenses. In the event of a successful claim of infringement against us and our failure or inability to license the infringed technology or to substitute similar non-infringing technology, our business, financial condition and results of operations could be adversely affected.

***A majority of our revenues are generated from exports to foreign countries, primarily in Asia, that are subject to economic and political instability and we compete against a number of Asian test handling equipment suppliers.***

The majority of our export sales are made to destinations in Asia. Political or economic instability, particularly in Asia, may adversely impact the demand for capital equipment, including equipment of the type we manufacture and market. In addition, we face intense competition from a number of Asian suppliers that have certain advantages over United States ("U.S.") suppliers, including us. These advantages include, among other things, proximity to customers, lower cost structures, favorable tariffs and affiliation with significantly larger organizations. In addition, changes in the amount or price of semiconductors produced in Asia could impact the profitability or capital equipment spending programs of our foreign and domestic customers.

***Unanticipated changes in our tax provisions, enactment of new tax laws, or exposure to additional income tax liabilities could affect our profitability.***

We are subject to income and other taxes in the U.S. and numerous foreign jurisdictions. Our tax liabilities are affected by, among other things, the amounts our affiliated entities charge each other for intercompany transactions. We may be subject to ongoing tax examinations in various jurisdictions. Tax authorities may disagree with our intercompany charges or other matters and assess additional taxes. While we regularly assess the likely outcomes of these examinations to determine the appropriateness of our tax provision, tax audits are inherently uncertain and an unfavorable outcome could occur. An unanticipated, unfavorable outcome in any specific period could harm our operating results for that period or future periods. The financial cost and management attention and time devoted to defending income tax positions may divert resources from our business operations, which could harm our business and profitability. Tax examinations may also impact the timing and/or amount of our refund claims. In addition, our effective tax rate in the future could be adversely affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of our deferred tax assets and liabilities, changes in tax laws and the discovery of new information in the course of our tax return preparation process. In particular, the carrying value of our deferred tax assets and the utilization of our net operating loss and credit carryforwards are dependent on our ability to generate future taxable income in the U.S and other countries. Furthermore, these carryforwards may be subject to annual limitations as a result of changes in Cohu's ownership.

On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Act") was signed into law in the United States. The changes in the Tax Act are broad and complex and we continue to examine the impact the Tax Act may have on our business and

financial results. Among its many provisions, the Tax Act imposed a mandatory one-time transition tax on undistributed foreign earnings regardless of whether they are repatriated, reduced the U.S. corporate income tax rate from 35% to 21%, imposed limitations on the deductibility of interest and certain other corporate deductions, and moved from a “worldwide” system of taxation that generally allows deferral of U.S. tax on foreign earnings until repatriated to a “territorial”/dividend exemption system with a minimum tax that will subject foreign earnings to U.S. Tax when earned. In accordance with applicable SEC guidance, we recorded a provisional net tax benefit in the fourth quarter of 2017 however, this provisional tax benefit is subject to change, possibly materially, due to, among other things, changes in estimates, interpretations and assumptions we have made, changes in Internal Revenue Service (IRS) interpretations, the issuance of new guidance, legislative actions, changes in accounting standards or related interpretations in response to the Tax Act and future actions by states within the United States that have not currently adopted the Tax Act. For further information regarding the potential impact of the Tax Act, see “Liquidity and Capital Resources” and “Application of Critical Accounting Estimates and Policies” in Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and Note 5 to our consolidated financial statements.

In addition, in October 2015, the Organization for Economic Co-operation and Development (OECD) issued its reports on the 15 focus areas identified in its Action Plan on Base Erosion and Profit Shifting (“BEPS”). Some BEPS measures will require treaty based or legislative action by countries. The final impact of BEPS on Cohu’s income tax provision and liability is currently not quantifiable and is likely to result in additional recordkeeping and administrative cost to implement certain of its requirements.

***Compliance with regulations may impact sales to foreign customers and impose costs.***

Certain products and services that we offer require compliance with U.S. and other foreign country export and other regulations. Compliance with complex U.S. and other foreign country laws and regulations that apply to our international sales activities increases our cost of doing business in international jurisdictions and could expose us or our employees to fines and penalties. These laws and regulations include import and export requirements, the U.S. State Department International Traffic in Arms Regulations (“ITAR”) and U.S. and other foreign country laws such as the Foreign Corrupt Practices Act (“FCPA”), and local laws prohibiting corrupt payments to governmental officials. Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers or our employees, prohibitions on the conduct of our business and damage to our reputation. Although we have implemented policies and procedures designed to ensure compliance with these laws, there can be no assurance that our employees, contractors or agents will not violate our policies, or that our policies will be effective in preventing all potential violations. Any such violations could include prohibitions on our ability to offer our products and services to one or more countries, and could also materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees, our business and our operating results. Further, defending against claims of violations of these laws and regulations, even if we are successful, could be time-consuming, result in costly litigation, divert management’s attention and resources and cause us to incur significant expenses.

In addition to government regulations regarding sale and export, we are subject to other regulations regarding our products. For example, the U.S. Securities and Exchange Commission has adopted disclosure rules for companies that use conflict minerals in their products, with substantial supply chain verification requirements if the materials come from, or could have come from, the Democratic Republic of the Congo or adjoining countries. These new rules and verification requirements will impose additional costs on us and on our suppliers, and may limit the sources or increase the cost of materials used in our products. Further, if we are unable to certify that our products are conflict free, we may face challenges with our customers that could place us at a competitive disadvantage, and our reputation may be harmed.

***There may be changes in, and uncertainty with respect to, legislation, regulation and governmental policy in the United States.***

The change in administration in the United States has resulted and may continue to result in significant changes in, and uncertainty with respect to, legislation, regulation and government policy. While it is not possible to predict whether and when any such additional changes will occur, changes at the local, state or federal level could impact fuel cell market adoption in the U.S. and the alternative energy technologies sector in the U.S., generally. Specific legislative and regulatory proposals that could have a material impact on us include, but are not limited to, infrastructure renewal programs; and modifications to international trade policy, such as approvals by the Committee

on Foreign Investment in the United States; public company reporting requirements; environmental regulation and antitrust enforcement.

***Our business and operations could suffer in the event of security breaches.***

Attempts by others to gain unauthorized access to information technology systems are becoming more sophisticated and are sometimes successful. These attempts, which might be related to industrial or other espionage, include covertly introducing malware to our computers and networks and impersonating authorized users, among others. We seek to detect and investigate all security incidents and to prevent their recurrence, but in some cases, we might be unaware of an incident or its magnitude and effects. The theft, unauthorized use or publication of our intellectual property and/or confidential business information could harm our competitive position, reduce the value of our investment in research and development and other strategic initiatives or otherwise adversely affect our business. To the extent that any security breach results in inappropriate disclosure of our customers' or licensees' confidential information, we may incur liability as a result. In addition, we may be required to devote additional resources to the security of our information technology systems.

***Our implementation of enterprise resource planning (“ERP”) systems may adversely affect our business and results of operations or the effectiveness of internal controls over financial reporting.***

We recently implemented a new ERP system within our Switzerland and Malaysia operations, to conform these operations to the same ERP system used within our other principal business locations. We intend to continue to make investments and upgrades to our global ERP systems to support our business requirements. ERP implementations are complex and time-consuming projects that involve substantial expenditures on system software and implementation activities. If we do not effectively implement the ERP system or if the system does not operate as intended, it could adversely affect our financial reporting systems and our ability to produce financial reports and process transactions, the effectiveness of internal controls over financial reporting, and our business, financial condition, results of operations and cash flows.

***The occurrence of natural disasters and geopolitical instability caused by terrorist attacks and other threats may adversely impact our operations and sales.***

Our Corporate headquarters is located in San Diego, California, our Asian sales and service headquarters is located in Singapore and the majority of our sales are made to destinations in Asia. In addition, we have manufacturing plants in Malaysia, Philippines and Japan. These regions are known for being vulnerable to natural disasters and other risks, such as earthquakes, tsunamis, fires and floods, and geopolitical risks, which at times have disrupted the local economies. For example, a significant earthquake or tsunami could materially affect operating results. We are not insured for most losses and business interruptions of this kind, or for geopolitical or terrorism impacts, and presently have limited redundant, multiple site capacity in the event of a disaster. In the event of such disaster, our business would materially suffer.

*Our financial and operating results may vary and fall below analysts' estimates, which may cause the price of our common stock to decline.*

Our operating results may fluctuate from quarter to quarter due to a variety of factors including, but not limited to:

seasonal, volatile and unpredictable nature of the semiconductor equipment industry;

timing and amount of orders from customers and shipments to customers;

inability to recognize revenue due to accounting requirements;

inventory writedowns;

unexpected expenses or cost overruns in the introduction and support of products;

inability to deliver solutions as expected by our customers; and

intangible and deferred tax asset writedowns.

Due to these factors or other unanticipated events, quarter-to-quarter comparisons of our operating results may not be reliable indicators of our future performance. In addition, from time-to-time our quarterly financial results may fall below the expectations of the securities and industry analysts who publish reports on our company or of investors in general. This could cause the market price of our stock to decline, perhaps significantly.

*We have experienced significant volatility in our stock price.*

A variety of factors may cause the price of our stock to be volatile. The stock market in general, and the market for shares of high-technology companies in particular, including ours, have experienced extreme price fluctuations, which have often been unrelated to the operating performance of affected companies. During the three-year period ended December 30, 2017, the price of our common stock has ranged from \$26.17 to \$9.14. The price of our stock may be more volatile than the stock of other companies due to, among other factors, the unpredictable, volatile and seasonal nature of the semiconductor industry, our significant customer concentration, intense competition in the test handler industry, our limited backlog and our relatively low daily stock trading volume. The market price of our common stock is likely to continue to fluctuate significantly in the future, including fluctuations related and unrelated to our performance.

**Item 1B. Unresolved Staff Comments.**

None.

## Item 2. Properties.

Certain information concerning our principal properties at December 30, 2017, is set forth below:

<b><u>Location</u></b>	<b>Approximate Sq. Footage</b>	<b>Ownership</b>
Poway, California <sup>(1)</sup>	147,000	Leased
Kolbermoor, Germany	40,000	Owned
Malacca, Malaysia	84,000	Leased
Calamba City, Laguna, Philippines	51,000	Leased
La Chaux-de-Fonds, Switzerland	34,000	Leased
Osaka, Japan	67,000	Owned

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(1) Cohu Corporate offices.

In addition to the locations listed above, we lease other properties primarily for sales and service offices in various locations. We believe our facilities are suitable for their respective uses and are adequate for our present needs.



**Item 3. Legal Proceedings.**

From time-to-time we are involved in various legal proceedings, examinations by various tax and custom authorities and claims that have arisen in the ordinary course of our business.

The outcome of any litigation, examinations and claims is inherently uncertain. While there can be no assurance, at the present time we do not believe that the resolution of the matters described above will have a material adverse effect on our assets, financial position or results of operations.

**Item 4. Mine Safety Disclosures**

Not applicable.

**PART II****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.****(a) Market Information**

Cohu, Inc. stock is traded on the NASDAQ Global Select Market under the symbol "COHU". The following table sets forth the high and low sales prices as reported on the NASDAQ Global Select Market during the last two years.

	Fiscal 2017		Fiscal 2016	
	High	Low	High	Low
First Quarter	\$17.83	\$12.64	\$12.93	\$10.87
Second Quarter	\$21.64	\$16.30	\$12.60	\$10.49
Third Quarter	\$23.88	\$15.55	\$12.00	\$10.01
Fourth Quarter	\$26.17	\$20.30	\$14.43	\$10.72

**Holdings**

At February 16, 2018, Cohu had 412 stockholders of record.

**Dividends**

We have paid consecutive quarterly dividends since 1977 and, as discussed below, expect to continue doing so. Cash dividends, per share, declared in 2017 and 2016 were as follows:

	Fiscal 2017	Fiscal 2016
First Quarter	\$0.06	\$0.06
Second Quarter	\$0.06	\$0.06
Third Quarter	\$0.06	\$0.06
Fourth Quarter	\$0.06	\$0.06

Total \$0.24 \$0.24

We intend to continue to pay quarterly dividends subject to capital availability and periodic determinations by our Board of Directors that cash dividends are in the best interests of our stockholders. Our dividend policy may be affected by, among other items, our views on potential future capital requirements, including those related to research and development, investments and acquisitions, legal risks and stock repurchases.

### Equity Compensation Plan Information

The following table summarizes information with respect to equity awards under Cohu's equity compensation plans at December 30, 2017 (*in thousands, except per share amounts*):

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a) (1)	Weighted average exercise price of outstanding options, warrants and rights (b) (2)	Number of securities available for future issuance under equity compensation plans (excluding securities reflected in column (a))(c) (3)
Equity compensation plans approved by security holders	1,787	\$ 10.20	2,104
Equity compensation plans not approved by security holders	- 1,787	- \$ 10.20	- 2,104

(1) Includes options, restricted stock units ("RSUs") and performance stock units ("PSUs") outstanding under Cohu's equity incentive plans. No stock warrants or other rights were outstanding as of December 30, 2017.

(2) The weighted average exercise price of outstanding options, warrants and rights does not take RSUs and PSUs into account as RSUs and PSUs have a de minimus purchase price.

(3) Includes 601,340 shares of common stock reserved for future issuance under the Cohu 1997 Employee Stock Purchase Plan.

For further details regarding Cohu's equity compensation plans, see Note 6, "Employee Benefit Plans", included in Part IV, Item 15(a) of this Form 10-K.



## Comparative Stock Performance Graph

*The information contained in this Stock Performance Graph section shall not be deemed to be “soliciting material” or “filed” with the SEC or subject to the liabilities of Section 18 of the Exchange Act except to the extent that Cohu specifically incorporates it by reference into a document filed under the Securities Act or the Exchange Act.*

The graph below compares the cumulative total stockholder return on the common stock of Cohu for the last five fiscal years with the cumulative total return on custom Peer Group Indexes and a NASDAQ Market Index over the same period (assuming the investment of \$100 in Cohu’s common stock, Peer Group Index and NASDAQ Market Index on December 29, 2012 and reinvestment of all dividends). The custom Peer Group Index is comprised of the peer group companies associated with our performance stock units issued under our equity incentive plan. In 2017, the custom Peer Group Index was comprised of Advanced Energy Industries Inc., Advantest Corp, ASM Pacific Technology Ltd, Axcelis Technologies Inc., BE Semiconductor Industries NV, Brooks Automation Inc., Cabot Microelectronics Corp, Camtek Ltd, Electro Scientific Industries Inc., FormFactor Inc., Kulicke and Soffa Industries Inc., Micronics Japan Co Ltd, MKS Instruments Inc., Nanometrics Inc., Photronics Inc., Rudolph Technologies Inc., Teradyne Inc., Ultra Clean Holdings Inc., Veeco Instruments Inc.(includes Ultratech through acquisition) and Xcerra Corp. This peer group is revised annually to reflect acquisitions and to include additional equivalent companies in the semiconductor equipment market to ensure a sufficiently large number of companies in the peer group composition to enable a meaningful comparison of our stock performance. As it relates to our 2017 Peer Group Index, the only change from peer group companies used in 2016 resulted from Veeco Instruments Inc.’s acquisition of Ultratech, Inc.

	2012	2013	2014	2015	2016	2017
Cohu, Inc.	\$100	\$100	\$121	\$133	\$146	\$234
NASDAQ Index	\$100	\$142	\$162			