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EMCORE CORP  
Form 10-K  
December 14, 2015

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended September 30, 2015  
or

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

Commission File Number 001-36632

EMCORE Corporation  
(Exact name of registrant as specified in its charter)  
New Jersey  
(State or other jurisdiction of incorporation or organization)

22-2746503  
(I.R.S. Employer Identification No.)

2015 W. Chestnut Street, Alhambra, California, 91803  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (626) 293-3400

Securities registered pursuant to Section 12(b) of the Act:  
Common Stock, no par value  
(Title of each class)

NASDAQ Stock Market  
(Name of each exchange on which registered)

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 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 website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  Yes " No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the 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 definition 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 our common stock held by non-affiliates as of March 31, 2015 (the last business day of our most recently completed second fiscal quarter) was approximately \$156.3 million, based on the closing sale price of \$5.44 per share of common stock as reported on the NASDAQ Global Market. For purposes of this disclosure, shares of common stock held by officers and directors and by each person known by us to own 5% or more of our outstanding common stock have been excluded.

As of December 7, 2015, the number of shares outstanding of our no par value common stock totaled 25,711,928.

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## DOCUMENTS INCORPORATED BY REFERENCE

In accordance with General Instruction G(3) of Form 10-K, certain information required by Part III hereof will either be incorporated into this Form 10-K by reference to our Definitive Proxy Statement for our Annual Meeting of Stockholders filed within 120 days of September 30, 2015 or will be included in an amendment to this Form 10-K filed within 120 days of September 30, 2015.

## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the Securities Act) and Section 21E of the Securities and Exchange Act of 1934, as amended (the Exchange Act). These forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are largely based on our current expectations and projections about future events and financial trends affecting the financial condition of our business. Such forward-looking statements include, in particular, projections about our future results included in our Exchange Act reports, statements about our plans, strategies, business prospects, changes and trends in our business and the markets in which we operate. These forward-looking statements may be identified by the use of terms and phrases such as “anticipates”, “believes”, “can”, “could”, “estimates”, “expects”, “forecasts”, “intends”, “may”, “plans”, “projects”, “targets”, “will”, “would”, and similar expressions or variations of these terms and similar phrases. Additionally, statements concerning future matters such as our expected liquidity, development of new products, enhancements or technologies, sales levels, expense levels, and other statements regarding matters that are not historical are forward-looking statements. Management cautions that these forward-looking statements relate to future events or our future financial performance and are subject to business, economic, and other risks and uncertainties, both known and unknown, that may cause actual results, levels of activity, performance, or achievements of our business or our industry to be materially different from those expressed or implied by any forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include without limitation those discussed under Item 1A - Risk Factors as well as those discussed elsewhere in this Annual Report. These cautionary statements apply to all forward-looking statements wherever they appear in this Annual Report.

Forward-looking statements are based on certain assumptions and analysis made in light of our experience and perception of historical trends, current conditions and expected future developments as well as other factors that we believe are appropriate under the circumstances. While these statements represent our judgment on what the future may hold, and we believe these judgments are reasonable, these statements are not guarantees of any events or financial results. All forward-looking statements in this Annual Report are made as of the date hereof, based on information available to us as of the date hereof, and subsequent facts or circumstances may contradict, obviate, undermine, or otherwise fail to support or substantiate such statements. We caution you not to rely on these statements without also considering the risks and uncertainties associated with these statements and our business that are addressed in this Annual Report. Certain information included in this Annual Report may supersede or supplement forward-looking statements in our other reports filed with the Securities and Exchange Commission. We assume no obligation to update any forward-looking statement to conform such statements to actual results or to changes in our expectations, except as required by applicable law or regulation.

EMCORE Corporation  
 FORM 10-K  
 For The Fiscal Year Ended September 30, 2015

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PART I

ITEM 1. Business

Company Overview

EMCORE Corporation and its subsidiaries (referred to herein as the “Company”, “we”, “our”, or “EMCORE”), established in 1984 as a New Jersey corporation, designs and manufactures Indium Phosphide (InP) optical chips, components, subsystems and systems for the broadband and specialty fiber optics market. EMCORE was the pioneer in linear fiber optic transmission technology, and today, is a leader in optical components, as well as a provider of complete end-to-end solutions for high-speed communications network infrastructures, enabling systems and service providers to meet growing demand for bandwidth and connectivity. EMCORE’s advanced optical technologies are designed for cable television (CATV) and fiber-to-the-premise (FTTP) networks, telecommunications and data centers, satellite communications, aerospace and defense, wireless networks, and broadcast and professional audio/video systems. With its world-class InP semiconductor wafer fabrication facility, EMCORE has fully vertically-integrated manufacturing capability and also provides contract design, foundry and component packaging services.

We currently have one reporting segment: Fiber Optics. Until the first quarter of 2015, we operated as two segments: Fiber Optics and Photovoltaics. EMCORE's Solar Photovoltaics business, which was sold in December 2014, provided products for space power applications including high-efficiency multi-junction solar cells, Covered Interconnect Cells and complete satellite solar panels. In addition, as further discussed below, EMCORE sold certain assets, and transferred certain liabilities, of the Company's telecommunications business, including the ITLA, micro-ITLA, T-TOSA and T-XFP product lines within the Company’s telecommunications business in January 2015.

Our headquarters and principal executive offices are located at 2015 W. Chestnut Avenue, Alhambra, California, 91803 and our main telephone number is (626) 293-3400. For specific information about us, our products or the markets we serve, please visit our website at <http://www.emcore.com>. The information contained in or linked to our website is not a part of, nor incorporated by reference into, this Annual Report on Form 10-K or a part of any other report or filing with the Securities and Exchange Commission (SEC).

We are subject to the information requirements of the Securities Exchange Act of 1934 (Exchange Act). We file periodic reports, current reports, proxy statements, and other information with the SEC. The SEC maintains a website at <http://www.sec.gov> that contains all of our information that has been filed or furnished electronically with the SEC. We make available free of charge on our website a link to our Annual Reports 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 reasonable practicable, after such material is electronically filed with, or furnished to, the SEC.

Overview of Our Industry and Markets We Serve

Compound semiconductor-based products provide the foundation of components, subsystems, and systems used in a broad range of technology markets. Compound semiconductor materials are capable of providing electrical or electro-optical functions, such as emitting optical communications signals and detecting optical communications signals.

Collectively, our products serve the telecommunications, CATV, FTTP, defense and homeland security, satellite communications and broadcast and professional audio video markets.



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Fiber Optics Products

Our fiber optics products enable information that is modulated on light signals to be transmitted, routed (switched) and received in communication systems and networks. EMCORE primarily offers the following product lines:

**Laser, Receiver and Photodetector Component Products** - We believe that we are a leading provider of optical components including lasers, photodetectors, and various forms of packaged subassemblies. Our products include bare die (or chip), distributed feedback (DFB) lasers, positive-intrinsic-negative (PIN) and avalanche photodiode (APD) components for 10 Gb/s Ethernet, InfiniBand, FTTP, and telecom applications. We provide component products to the global fiber optics industry, and we also leverage the benefits of our vertically-integrated infrastructure through low-cost manufacturing and early access to newly developed internally-produced components.

**Cable Television (CATV) Products** - We believe that we are a market leader in providing radio frequency (RF) over fiber products for the CATV industry. Our products are used in hybrid fiber coaxial (HFC) networks that enable cable service operators to offer multiple advanced services to meet the expanding demand for high-speed Internet, on-demand and interactive video, and other advanced services, such as high-definition television (HDTV) and voice over IP (VoIP). Our CATV products include forward and return-path analog and digital lasers, photodetectors and subassembly components, broadcast analog and digital fiber-optic transmitters, and quadrature amplitude modulation (QAM) transmitters and receivers. Our products provide our customers with increased data transmission distance, speed and bandwidth, lower noise video reception, and lower power consumption.



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Fiber-To-The-Premises (FTTP) Products - Telecommunications companies are extending their optical infrastructure to their business enterprise and residential customers because of higher bandwidth requirements. We have developed customer qualified FTTP components and subsystem products to support plans by telecommunications companies to offer voice, video, and data services through the deployment of new fiber optics-based access networks. Our FTTP products include passive optical network (PON) transceivers, RF over glass (RFoG) optical transceivers, analog fiber optic transmitters for video overlay and high-power erbium-doped fiber amplifiers (EDFA), analog and digital lasers, photodetectors and subassembly components, analog video receivers, and multi-dwelling unit (MDU) video receivers. Our products provide our customers with higher performance analog and digital designs, and support exceptional network performance capabilities for service providers.

Satellite/Microwave Communications Products - We believe that we are a leading provider of optical components and systems for use in equipment that provides high-performance optical data links for the terrestrial portion of satellite communications networks. Our products include transmitters, receivers, subsystems, and systems that transport wideband RF and microwave signals between satellite hub equipment and antenna dishes. Our products provide our customers with increased bandwidth and lower power consumption.

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Broadcast & A/V Video Transport Products - Our video transport product line focuses on developing targeted solutions that meet the evolving technology needs of our customers in broadcasting, government, transportation, IP television, and security and surveillance applications over private and public networks. Our video, audio, data, and RF transmission systems serve both analog and digital requirements, providing cost-effective, flexible solutions geared for infrastructure upgrades and expansion.

Defense and Homeland Security Products - Leveraging our expertise in RF module design and high-speed parallel optics, we provide a suite of ruggedized products that meet the reliability and durability requirements of the U.S. government and defense markets. Our specialty defense products include fiber optic gyro components used in commercial and military applications, high-frequency RF fiber optic link components for towed decoy systems, optical delay lines for radar systems, erbium-doped fiber amplifiers, pulse lasers for light detection and ranging spectroscopy systems and other products. Our products provide our customers with high frequency and dynamic range, compact form-factor, and extreme temperature, shock and vibration tolerance.

Customers include: Arris Technology Inc., BAE Systems, BUPT-GuoAn Broadband, Cisco Systems Inc. and Pace Plc. Significant customers are defined as customers representing greater than 10% of our consolidated revenue. Revenue from four of our significant customers represented 61% of our consolidated revenue for the fiscal year ended September 30, 2015. Revenue from three of our significant customers represented 41% and 40% of our consolidated revenue for the fiscal years ended September 30, 2014 and 2013, respectively. See Note 16 - Geographical Information in the notes to our consolidated financial statements for additional information about our significant customers.

## Geographical Information

See Note 16 - Geographical Information in the notes to our consolidated financial statements for disclosures related to geographic revenue and long-lived assets.

## Strategic Plan

### Strategy Committee of the Board of Directors

In addition to organic growth and development of our existing Fiber Optics business, we intend to pursue other strategies to enhance shareholder value. The Strategy and Alternatives Committee of the Company's Board of Directors (the "Strategy Committee"), which was established in December 2013, is charged with evaluating strategic opportunities for the Company that may enhance shareholder value. The Strategy Committee may from time to time consider strategic opportunities to enhance shareholder value, which may include acquisitions, investments in joint ventures, partnerships, and other strategic alternatives, such as dispositions, reorganizations, recapitalizations or other similar transactions, the repurchase of shares of our outstanding common stock or payment of dividends to our shareholders, and may engage financial and other advisors to assist it in doing so. Accordingly, the Strategy Committee of the Board of Directors and our management may from time to time be engaged in evaluating potential strategic opportunities and may enter into definitive agreements with respect to such transactions or other strategic alternatives. However, there is no assurance that the Strategy Committee will identify further strategic opportunities that the Company will determine to pursue, or that the consideration of any such opportunity would result in the completion of a strategic transaction.



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### Sale of Photovoltaics and Digital Products Businesses

On September 17, 2014, EMCORE entered into an Asset Purchase Agreement (the "Photovoltaics Agreement") with SolAero Acquisition Corporation ("SolAero"), a Delaware corporation and an affiliate of private equity firm Veritas Capital, pursuant to which SolAero agreed to acquire substantially all of the assets, and assume substantially all of the liabilities, primarily related to or used in connection with the Company's photovoltaics business, including EMCORE's subsidiaries EMCORE Solar Power, Inc. and EMCORE IRB Company, LLC (collectively, the "Photovoltaics Business" and, the sale of the Photovoltaics Business, the "Photovoltaics Asset Sale") for \$150.0 million in cash, prior to a \$0.1 million working capital adjustment pursuant to the Photovoltaics Agreement finalized and paid by EMCORE during the fiscal year ended September 30, 2015. On December 10, 2014, EMCORE completed the Photovoltaics Asset Sale.

On October 22, 2014, EMCORE entered into an Asset Purchase Agreement (the "Digital Products Agreement") with NeoPhotonics Corporation, a Delaware corporation ("NeoPhotonics") pursuant to which the Company agreed to sell certain assets, and transfer certain liabilities of the Company's telecommunications business (collectively, the "Digital Products Business" and, the sale of the Digital Products Business, the "Digital Products Assets Sale") to NeoPhotonics for an aggregate purchase price of \$17.5 million, subject to certain purchase price adjustments, consisting of \$1.5 million in cash at closing and a promissory note in the principal amount of \$16.0 million (the "Promissory Note"). The Promissory Note provided that it would bear interest of 5.0% per annum for the first year and 13.0% per annum for the second year, payable semi-annually in cash, and would mature two years from the closing of the transaction. In addition, the Promissory Note was subject to prepayments under certain circumstances, and is secured by certain of the assets sold to NeoPhotonics in the transaction.

On January 2, 2015, EMCORE and NeoPhotonics entered into Amendment No. 1 (the "APA Amendment") to the Digital Products Agreement. Among other things, the APA Amendment revised the nature and timing of the financial deliverable requirements of the Company to NeoPhotonics under the original Digital Products Agreement. The assets sold pursuant to the Digital Products Agreement included certain fixed assets, inventory, accounts receivable and intellectual property for the ITLA, micro-ITLA, T-TOSA and T-XFP product lines within the Company's telecommunications business. On January 2, 2015, EMCORE completed the sale of the Digital Products Business. On April 16, 2015, EMCORE and NeoPhotonics entered into an agreement to adjust the purchase price for the Digital Products Business, resulting in an adjusted balance of the Promissory Note of \$15.5 million. On April 17, 2015, NeoPhotonics paid in full the balance outstanding of the Promissory Note of \$15.5 million, plus accrued interest of \$0.2 million.

We used a portion of the proceeds from the Photovoltaics Asset Sale and the Digital Products Assets Sale (collectively, the "Asset Sales") to pay for transaction costs associated with the Asset Sales, make payments required pursuant to existing retention award agreements, repay certain indebtedness, and for general working capital purposes. In June 2015, we also used a portion of the proceeds from the Asset Sales to repurchase 6.9 million shares of our common stock for an aggregate cost of \$45.0 million (excluding fees and expenses) pursuant to a modified "Dutch auction" tender offer we commenced in May 2015. At the discretion of our Board of Directors, we may use a portion of our existing balances of cash and cash equivalents to provide liquidity to our shareholders through one or more special dividends or the repurchase of additional shares of our common stock, make investments in other businesses and pursue other strategic opportunities or a combination thereof.

### Sources of Raw Materials

We depend on a limited number of suppliers for certain raw materials, components, and equipment used in our products. We continually review our supplier relationships to mitigate risks and lower costs, especially where we depend on one or two suppliers for critical components or raw materials. While maintaining inventories that we believe are sufficient to meet our near-term needs, we strive not to carry significant inventories of raw materials. Accordingly, we maintain ongoing communications with our suppliers in order to prevent any interruptions in supply, and have implemented a supply-chain management program to maintain quality and lower purchase prices through standardized purchasing efficiencies and design requirements. To date, we generally have been able to obtain sufficient quantities of critical supplies in a timely manner.

We are subject to rules promulgated by the SEC pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act regarding the use of "conflict minerals". These rules have imposed and will continue to impose additional costs and may introduce new risks related to our ability to verify the origin of any "conflict minerals" used in our products.

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### Manufacturing

We utilize MOCVD (metal-organic chemical vapor deposition) systems that are capable of processing virtually all compound semiconductor-based materials. Our operations include wafer fabrication, device design and production, fiber optic module, subsystem and system design and manufacture, and solar panel engineering and assembly. Many of our manufacturing operations are computer monitored or controlled to enhance production output and statistical control. We employ a strategy of minimizing ongoing capital investments, while maximizing the variable nature of our cost structure. We maintain supply agreements with key suppliers. Where we can gain cost advantages while maintaining quality and intellectual property control, we outsource the production of certain products, subsystems, components, and subassemblies to contract manufacturers located overseas. Our contract manufacturers maintain comprehensive quality assurance and delivery systems, and we continuously monitor them for compliance.

Our various manufacturing processes involve extensive quality assurance systems and performance testing. Our facilities have acquired and maintain certification status for their quality management systems. Our manufacturing facilities located in Alhambra, California; Ivyland, Pennsylvania; and Langfang, China are registered to ISO 9001 standards.

### Sales and Marketing

We sell our products worldwide through our direct sales force, application engineers, third party sales representatives and distributors. Our sales force communicates with our customers' engineering, manufacturing, and purchasing personnel to provide optimized customer solutions through product design, qualifications, performance, and price. Our strategy is to use our direct sales force to sell to original equipment manufacturers and key accounts and to expand our use of distribution partners for increased coverage in both international markets and certain domestic segments.

Throughout our sales cycle, we work closely with our customers to qualify our products into their product lines and platforms. As a result, we develop strategic and long-lasting customer relationships with products and services that are tailored to our customers' requirements. We focus our marketing communication efforts on increasing brand awareness, communicating our technologies' advantages, and generating leads for our sales force. We use a variety of marketing methods, including our website, participation at trade shows, and selective advertising to achieve these goals.

Externally, our marketing group works with customers to define requirements, characterize market trends, define new product development activities, identify cost reduction initiatives, and manage new product introductions. Internally, our marketing group communicates and manages customer requirements with the goal of ensuring that our product development activities are aligned with our customers' needs. These product development activities allow our marketing group to manage new product introductions and new product and market trends. See Note 16 - Geographical Information in the notes to the consolidated financial statements for disclosures related to geographic revenue, and significant customers.

### Research and Development

Our research and development efforts have been focused on maintaining our technological competitive edge by working to improve the quality and features of our product lines. We are also making investments to expand our existing technology and infrastructure in an effort to develop new products and production technology that we can use to expand into new markets. Our industry is characterized by rapid changes in process technologies with increasing levels of functional integration. Our efforts are focused on designing new proprietary processes and products, on

improving the performance of our existing materials, components, and subsystems, and on reducing costs in the product manufacturing process.

As part of the ongoing effort to cut costs, many of our projects have focused on developing lower cost versions of our existing products. In view of the high cost of development, we solicit research contracts that provide opportunities to enhance our core technology base and promote the commercialization of targeted products. Generally, internal research and development funding is used for the development of products that will be released within twelve months and external funding is used for long-term research and development efforts.

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We believe that in order to remain competitive, we must invest significant financial resources in developing new product features and enhancements and in maintaining customer satisfaction worldwide. Research and development expense was \$9.1 million, \$9.3 million and \$10.5 million for the fiscal years ended September 30, 2015, 2014 and 2013, respectively. As a percentage of revenue, research and development expenses were 11.2%, 16.8% and 17.2% for the fiscal years ended September 30, 2015, 2014 and 2013, respectively. Our research and development expense consists primarily of compensation expense including non-cash stock-based compensation expense, as well as engineering and prototype costs, depreciation expense, and other overhead expenses, as they related to the design, development, and testing of our products. These costs are expensed as incurred.

## Intellectual Property and Licensing

We protect our proprietary technology by applying for patents, where appropriate, and in other cases by preserving the technology, related know-how, and information as trade secrets. The success and competitive advantage enjoyed by our product lines depends heavily on our ability to obtain intellectual property protection for our proprietary technologies. We also acquire, through license grants or assignments, rights to patents on inventions originally developed by others. As of September 30, 2015, we held approximately 80 U.S. patents and approximately 40 foreign patents and had over 30 additional patent applications pending. The issued patents cover various products in the major markets we serve. Our U.S. patents will expire on varying dates between 2016 and 2031. These patents and patent applications claim protection for various aspects of current or planned commercial versions of our materials, components, subsystems, and systems.

We also have entered into license agreements with the licensing agencies of universities and other organizations, under which we have obtained exclusive or non-exclusive rights to practice inventions claimed in various patents and applications issued or pending in the U.S. or other foreign jurisdictions. We do not believe our financial obligations under any of these agreements adversely affects our business, financial condition, or results of operations.

We rely on trade secrets to protect our intellectual property when we believe that publishing patents would make it easier for others to reverse engineer our proprietary processes. We also rely on other intellectual property rights such as trademarks and copyrights where appropriate. See Note 9 - Intangible Assets in the notes to our consolidated financial statements for additional disclosures related to intellectual property.

## Environmental Regulations

We are subject to U.S. federal, state, and local laws and regulations concerning the use, storage, handling, generation, treatment, emission, release, discharge, and disposal of certain materials used in our research and development and production operations, as well as laws and regulations concerning environmental remediation, homeland security, and employee health and safety. The production of wafers and devices involves the use of certain hazardous raw materials, including, but not limited to, ammonia, phosphine, and arsine. We have in-house professionals to address compliance with applicable environmental, homeland security, and health and safety laws and regulations. We believe that we are currently in compliance with all applicable federal, state, and local environmental protection laws and regulations.

## Competition

The markets for our products are extremely competitive and are characterized by rapid technological change, frequent introduction of new products, short product life cycles, and significant price erosion. We face actual and potential competition from numerous domestic and international companies. Many of these companies have significant



engineering, manufacturing, marketing, and financial resources.

Partial lists of our competitors in the markets in which we participate include:

CATV Networks. Our primary competitors include Applied Optoelectronics and Finisar at the subsystem level and Applied Optoelectronics and Sumitomo Electric Device Innovations at the component product level.

Satellite Communications Networks. Our primary competitors include Foxcom and MITEQ, Inc.

Video Transport Products. Our primary competitors include Evertz and Telecast.

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In addition to the companies listed above, we compete with many research institutions and universities for research funding. We also sell our products to current competitors and companies with the capability of becoming competitors. As the markets for our products grow, new competitors are likely to emerge and current competitors may increase their market share. In the European Union (“EU”), political and legal arrangements encourage the purchase of EU-produced goods, which places us at a disadvantage against European competitors.

There are substantial barriers to entry by new competitors across our product lines. These barriers include the large number of existing patents, the time and costs required to develop products, the technical difficulty in manufacturing semiconductor-based products, the lengthy sales and qualification cycles, and the difficulties in hiring and retaining skilled employees with the required scientific and technical backgrounds. We believe that the primary competitive factors within our current markets are product cost, yield, throughput, performance and reliability, breadth of product line, product heritage, customer satisfaction, and customer commitment to competing technologies. Competitors may develop enhancements to or future generations of competitive products that offer superior price and performance characteristics. We believe that in order to remain competitive, we must invest significant financial resources in developing new product features and enhancements and in maintaining customer satisfaction worldwide.

### Order Backlog

EMCORE's product sales are made pursuant to purchase orders, often with short lead times. These orders are subject to revision or cancellation and often are made without deposits. Products typically ship within the same quarter in which a purchase order is received; therefore, our order backlog at any particular date is not necessarily indicative of actual revenue or the level of orders for any succeeding period.

### Employees

As of September 30, 2015, we had approximately 543 employees, including approximately 297 international employees that are located primarily in China. This represents a decrease of approximately 226 employees when compared to September 30, 2014, primarily as a result of the sales of the Photovoltaics Business and the Digital Products Business. None of our employees are covered by a collective bargaining agreement. We have never experienced any labor-related work stoppage and believe that our employee relations are good.

Competition is intense in the recruiting of personnel in the semiconductor industry. Our ability to attract and retain qualified personnel is essential to our continued success. We are focused on retaining key contributors, developing our staff, and cultivating their commitment to our Company.

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ITEM 1A. Risk Factors

We are a much smaller company than in the recent past and dependent on fewer products for our success.

We are a much smaller company than in the recent past with a narrower, less diversified and more focused portfolio of products. Our smaller size could cause our cash flow and growth prospects to be more volatile and make us more vulnerable to focused competition. As a smaller company, we will be subject to greater revenue fluctuations if our older product lines sales were to decline faster than we anticipate. In addition, we may not be able to appropriately restructure our supporting functions to fit the needs of a smaller company.

We have a history of incurring losses from continuing operations and our future profitability is not assured.

For the fiscal years ended September 30, 2015, and 2013, loss from continuing operations was \$2.3 million, \$5.6 million and we had income from continuing operations of \$4.1 million for the fiscal year ended September 30, 2014. Our operating results for future periods are subject to numerous uncertainties and we cannot assure you that we will be profitable or that we will not experience substantial losses in the future. If we are not able to increase revenue and reduce our costs, we may not be able to achieve profitability in future periods and our cash flow and financial condition may be adversely affected.

Our future revenue is inherently unpredictable. As a result, our operating results are likely to fluctuate from period to period, and we may fail to meet the expectations of our analysts and/or investors, which may cause volatility in our stock price and may cause our stock price to decline.

Our quarterly and annual operating results have fluctuated substantially in the past and are likely to fluctuate significantly in the future due to a variety of factors, some of which are outside of our control. Factors that could cause our quarterly or annual operating results to fluctuate include:

- a downturn in the markets for our customers' products;
- discontinuation by our vendors, or unavailability of, components or services used in our products;
- disruptions or delays in our manufacturing processes or in our supply of raw materials or product components;
- a failure to anticipate changing customer product requirements;
- market acceptance of our products;
- cancellations or postponements of previously placed orders;
- increased financing costs or any inability to obtain necessary financing;
- the impact on our business of current or future cost reduction measures;
- a loss of key personnel or the shortage of available skilled workers;
- economic conditions in various geographic areas where we or our customers do business;
  - the impact of political uncertainties, such as government sequestration and uncertainties surrounding the federal budget, customer spending and demand for our products;
- significant warranty claims, including those not covered by our suppliers;
- other conditions affecting the timing of customer orders;
- reductions in prices for our products or increases in the costs of our raw materials;
- effects of competitive pricing pressures, including decreases in average selling prices of our products;
- fluctuations in manufacturing yields;
- obsolescence of products;
- research and development expenses incurred associated with new product introductions;

natural disasters, such as hurricanes, earthquakes, fires, and floods;  
the emergence of new industry standards;  
the loss or gain of significant customers;  
the introduction of new products and manufacturing processes;  
changes in technology;  
intellectual property disputes;  
customs, import/export, and other regulations of the countries in which we do business;  
the occurrence of M&A activities;  
and acts of terrorism or violence and international conflicts or crises.

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In addition, the limited lead times with which several of our customers order our products restrict our ability to forecast revenue. We may also experience a delay in generating or recognizing revenue for a number of reasons. For example, orders at the beginning of each quarter typically represent a small percentage of expected revenue for that quarter and are generally cancelable at any time. We depend on obtaining orders during each quarter for shipment in that quarter to achieve our revenue objectives. Failure to ship these products by the end of a quarter may adversely affect our results of operations and cash flows.

As a result of the foregoing factors, we believe that period-to-period comparisons of our results of operations should not be solely relied upon as indicators of future performance.

We may undergo an "ownership change" within the meaning of Section 382 of the Code, which could affect our ability to offset U.S. federal income tax against our net operating losses and certain of our tax credit carryovers.

Section 382 of the Internal Revenue Code, as amended (the "Code") contains rules that limit the ability of a company that undergoes an ownership change to utilize its net operating losses and tax credits (the "Tax Benefits") existing as of the date of such ownership change. Under the rules, such an ownership change is generally any change in ownership of more than 50% of a company's stock within a rolling three-year period. The rules generally operate by focusing on changes in ownership among shareholders considered by the rules as owning, directly or indirectly, 5% or more of the stock of a company and any change in ownership arising from new issuances of stock by the company.

If we were to undergo one or more "ownership changes" within the meaning of Section 382 of the Code, our net operating losses and certain of our tax credits existing as of the date of each ownership change may be unavailable, in whole or in part, to offset U.S. federal income tax resulting from our operations or any gains from the disposition of any of our assets and/or business, which could result in increased U.S. federal income tax liability.

On September 17, 2014, our Board of Directors adopted a Tax Benefits Preservation Plan (the "Rights Plan") to help preserve the value of our Tax Benefits by reducing the risk of limitation of our Tax Benefits. The Rights Plan was approved by our shareholders on March 10, 2015. The Rights Plan is intended to reduce the likelihood that we will experience an ownership change by discouraging any person or group from becoming a "5% shareholder" or increasing their ownership of our common stock if they are already a "5% shareholder." Although the Rights Plan is intended to reduce the likelihood of an "ownership change" that could adversely affect us, there is no assurance that the Rights Plan will prevent all transfers of our common stock that could result in such an "ownership change."

Our business and results of operations may continue to be negatively impacted by general economic, financial market conditions and market conditions in the industries in which we operate, and such conditions may increase the other risks that affect our business.

In recent years, the world's financial markets have experienced significant turmoil, resulting in reductions in available credit, increased costs of credit, extreme volatility in security prices, potential changes to existing credit terms, and rating downgrades of investments. These conditions materially and adversely affected the market conditions in the industries in which we operate and caused many of our customers to reduce their spending plans, leading them to draw down their existing inventory and reduce orders for our products, which, in turn, had a material adverse impact on our revenues. We cannot predict the timing, strength or duration of any economic slowdown or subsequent economic recovery, worldwide or within our industry. It is possible that economic conditions could result in further setbacks, and that these customers, or others, could as a result significantly reduce their capital expenditures, draw down their inventories, reduce production levels of existing products, defer introduction of new products or place

orders and accept delivery for products for which they do not pay us due to their economic difficulties or other reasons. If any of these events occur, our business, financial condition, cash flows and results of operations may be adversely affected.

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We expect to consider from time to time further strategic opportunities that may involve acquisitions, dispositions, investments in joint ventures, partnerships, and other strategic alternatives that may enhance shareholder value, any of which may result in the use of a significant amount of our management resources or significant costs, and we may not be able to fully realize the potential benefit of such transactions.

We expect to continue to consider acquisitions, dispositions, investments in joint ventures, partnerships, and other strategic alternatives that may enhance shareholder value. The Strategy Committee of the Board and our management may from time to time be engaged in evaluating potential transactions and other strategic alternatives. In addition, from time to time, we may engage financial advisors, enter into non-disclosure agreements, conduct discussions, and undertake other actions that may result in one or more transactions. Although there would be uncertainty that any of these activities or discussions would result in definitive agreements or the completion of any transaction, we may devote a significant amount of our management resources to analyzing and pursuing such a transaction, which could negatively impact our operations. In addition, we may incur significant costs in connection with seeking such transactions or other strategic alternatives regardless of whether the transaction is completed. In the event that we consummate an acquisition, dispositions, partnerships, or other or strategic alternatives in the future, we cannot assure you that we would fully realize the potential benefit of such a transaction and cannot predict the impact that such strategic transaction might have on our operations or stock price. We do not undertake to provide updates or make further comments regarding the evaluation of strategic alternatives, unless otherwise required by law.

Acquisitions of other companies or investments in joint ventures with other companies could adversely affect our operating results, dilute our shareholders' equity, or cause us to incur additional debt or assume contingent liabilities.

To increase our business, maintain our competitive position or for other business or strategic reasons, we may acquire other companies or engage in joint ventures or similar transactions in the future. Acquisitions, joint ventures and similar transactions involve a number of risks that could harm our business and result in the acquired business or joint venture not performing as expected, including:

- insufficient experience with technologies and markets in which the acquired business is involved, which may be necessary to successfully operate and integrate the business;
- problems integrating the acquired operations, personnel, technologies, or products with the existing business and products;
- diversion of management's time and attention from our core business to the acquired business or joint venture;
- potential failure to retain key technical, management, sales, and other personnel of the acquired business or joint venture;
- difficulties in retaining relationships with suppliers and customers of the acquired business, particularly where such customers or suppliers compete with us;
- reliance upon joint ventures which we do not control;
- subsequent impairment of goodwill and acquired long-lived assets, including intangible assets; and
- assumption of liabilities including, but not limited to, lawsuits, tax examinations, warranty issues, etc.

We may decide that it is in our best interests to enter into acquisitions, joint ventures or similar transactions that are dilutive to earnings per share or that adversely impact margins as a whole. In addition, acquisitions or joint ventures could require investment of significant financial resources and require us to obtain additional equity financing, which may dilute our shareholders' equity, or require us to incur indebtedness.



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We are subject to the cyclical nature of the markets in which we compete and any future downturn may reduce demand for our products and revenue.

In the past, the markets in which we compete have experienced significant downturns, often connected with, or in anticipation of, the maturation of product cycles, for both manufacturers' and their customers' products, and declining general economic conditions. These downturns have been characterized by diminished product demand, production overcapacity, high inventory levels, and accelerated erosion of average selling prices. These markets are impacted by the aggregate capital expenditures of service providers and enterprises as they build out and upgrade their network infrastructure. These markets are highly cyclical and characterized by constant and rapid technological change, pricing pressures, evolving standards, and wide fluctuations in product supply and demand.

We may experience substantial period-to-period fluctuations in future results of operations. Any future downturn in the markets in which we compete, or changes in demand for our products from our customers, could result in a significant reduction in our revenue. It may also increase the volatility of the price of our common stock.

In addition, the communication networks industry from time to time has experienced and may again experience a pronounced downturn. To respond to a downturn, many service providers and enterprises may slow their capital expenditures, cancel or delay new developments, reduce their workforces and inventories, and take a cautious approach to acquiring new equipment and technologies, any of which could cause our results of operations to fluctuate from period to period and harm our business.

If spending for optical communications networks declines, our business may suffer.

Our future success depends on continued capital investment in global communications networks infrastructure and on continued demand for high-bandwidth, high-speed communications networks and the ability of original equipment manufacturers to meet this demand. Spending on communications networks is limited by several factors, including limited investment resources, uncertainty regarding the long-term evolution and sustainability of service provider business models, and a changing regulatory environment. We cannot be certain that demand for bandwidth-intensive content will continue to grow at the same pace in the future or that communications service providers will continue to increase spending to meet such demand. If expectations for growth of communications networks and bandwidth consumption are not realized and investment in communications networks does not grow as anticipated, our business, results of operations, and gross margins could be harmed.

If we fail to remediate deficiencies in our current system of internal controls, we may not be able to accurately report our financial results or prevent fraud. As a result, our business could be harmed and current and potential investors could lose confidence in our financial reporting, which could have a material adverse effect on the trading price of our equity securities.

We are subject to the ongoing internal control provisions of Section 404 of the Sarbanes-Oxley Act of 2002. These provisions provide for the identification of material weaknesses in internal control over financial reporting, which is a process to provide reasonable assurance regarding the reliability of financial reporting for external purposes in accordance with accounting principals generally accepted in the United States of America ("U.S. GAAP"). If we cannot provide reliable and timely financial reports, our brand, operating results, and the market value of our equity securities could be harmed. We have in the past discovered, and may in the future discover, areas of our internal controls that need improvement.

We have devoted significant resources to remediate and improve our internal controls. We have also been monitoring the effectiveness of these remediated measures. We cannot be certain that these measures will ensure adequate

controls over our financial processes and reporting in the future. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations.

Inadequate internal controls could also cause investors to lose confidence in our reported financial information, which could have an adverse effect on the trading price of our equity securities. Further, the impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our Board of Directors (the "Board") or as executive officers, which could harm our business.

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We could be required to record an impairment charge as a result of changes to assumptions used in our impairment testing.

We have substantial long-lived assets recorded on our balance sheet. We will continue to evaluate the recoverability of the carrying amount of our property, plant and equipment on an ongoing basis, and we may incur substantial impairment charges, which would adversely affect our financial results. There can be no assurance that the outcome of such reviews in the future will not result in substantial impairment charges. Impairment assessment inherently involves judgment as to assumptions about expected future cash flows and the impact of market conditions on those assumptions. Future events and changing market conditions may impact our assumptions as to prices, costs, holding periods, or other factors that may result in changes in our estimates of future cash flows. Although we believe the assumptions we used in testing for impairment are reasonable, significant changes in any one of our assumptions could produce a significantly different result. In any period where our stock price, as determined by our market capitalization, is less than our book value, this too could indicate a potential impairment and we may be required to record an impairment charge in that period.

Our ability to achieve operational and material cost reductions and to realize production efficiencies for our operations is critical to our ability to achieve long-term profitability.

We have implemented a number of operational and material cost reductions and productivity improvement initiatives, which are intended to reduce our expense structure at both the cost of revenue and the operating expense levels. Cost reduction initiatives often involve the re-design of our products, which requires our customers to accept and qualify the new designs, potentially creating a competitive disadvantage for our products. These initiatives can be time-consuming, disruptive to our operations, and costly in the short-term. Successfully implementing these and other cost-reduction initiatives throughout our operations is critical to our future competitiveness and ability to achieve long-term profitability. However, there can be no assurance that these initiatives will be successful in creating profit margins sufficient to sustain our current operating structure and business.

The market price for our common stock has experienced significant price and volume volatility and is likely to continue to experience significant volatility in the future. This volatility may impair our ability to finance strategic transactions with our stock and otherwise harm our business.

Our stock price has experienced significant price and volume volatility for the past several years, and our stock price is likely to experience significant volatility in the future. The trading price of our common stock may be influenced by factors beyond our control, such as the recent unprecedented volatility of the financial markets and the current uncertainty surrounding domestic and foreign economies. The historical market prices of our common stock may not be indicative of future market prices and we may be unable to sustain or increase the value of our common stock. We have historically used equity incentive compensation as part of our overall compensation arrangements. The effectiveness of equity incentive compensation in retaining key employees may be adversely impacted by volatility in our stock price. Significant declines in our stock price may also interfere with our ability, if needed, to raise additional funds through equity financing or to finance strategic transactions with our stock. In addition, there may be increased risk of securities litigation following periods of fluctuations in our stock price. Securities class action lawsuits are often brought against companies after periods of volatility in the market price of their securities. These and other consequences of volatility in our stock price which could be exacerbated by macroeconomic conditions that affect the market generally, or our industry in particular, could have the effect of diverting management's attention and could materially harm our business.

We are substantially dependent on a small number of customers and the loss of any one of these customers could adversely affect our business, financial condition, results of operations, and cash flows.

A small number of customers account for a significant portion of our revenue and our dependence on orders from a relatively small number of customers makes our relationship with each customer critically important to our business. If there is consolidation among our customer base, our customers may be able to command increased leverage in negotiating prices and other terms of sale, which could adversely affect our profitability. If we are required to reduce our pricing, our revenue and gross margins would be adversely impacted. Consolidation among our customer base may also lead to reduced demand for our products, replacement of our products by the combined entity with those of our competitors and cancellations of orders, each of which could adversely affect our business, financial condition, results of operations, and cash flows.

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For example, in April 2015, Arris Group Inc. (“Arris”) announced plans to purchase Pace Plc (“Pace”). Pace and Arris are two of our largest customers. If the merger between Pace and Arris is completed, the combined entity would have accounted for approximately 32% of our consolidated revenue in fiscal year 2015. If we fail to achieve historical levels of sales of our products to the new entity, the loss or reduction in sales could have a material adverse effect on our business, financial condition, results of operations, and cash flows. Furthermore, to the extent that unexpected delays or transition issues occur in connection with this transaction, we could experience an adverse effect on our business.

Customer demand is difficult to forecast and, as a result, we may be unable to optimally match production with customer demand.

We make planning and spending decisions, including determining the levels of business that we will seek and accept, production schedules, component procurement commitments, personnel needs and other resource requirements, based on our estimates of customer demand. The majority of our products are purchased pursuant to individual purchase orders. While our customers generally provide us with their demand forecasts, they are typically not contractually committed to buy any quantity of products beyond firm purchase orders. The short-term nature of our customer commitments and the possibility of unexpected changes in demand for their products limit our ability to accurately predict future customer demand. On occasion, customers have required rapid increases in production, which has strained our resources. We may not have sufficient capacity at any given time to meet the volume demands of our customers, or one or more of our suppliers may not have sufficient capacity at any given time to meet our volume demands. Conversely, a downturn in the markets in which our customers compete can cause, and in the past has caused, our customers to significantly reduce the amount of products ordered from us or to cancel existing orders, leading to lower utilization of our facilities. Because many of our costs and operating expenses are relatively fixed, reduction in customer demand would have an adverse effect on our gross margin, income (loss) from operations, and cash flow. During an industry downturn, there is also a higher risk that our trade receivables would be uncollectible.

Our operating results could be harmed if we are unable to obtain timely deliveries of sufficient components of acceptable quality from sole or limited sources of materials, components, or services, or if the prices of components for which we do not have alternative sources increase.

We currently obtain some materials, components, and services used in our products from limited or sole sources. We generally do not carry significant inventories of any raw materials. Because we often do not account for a significant part of our suppliers' businesses, we may not have access to sufficient capacity from these suppliers in periods of high demand. In addition, since we generally do not have guaranteed supply arrangements with our suppliers, we risk serious disruption to our operations if an important supplier terminates product lines, changes business focus, or goes out of business. Because some of these suppliers are located overseas, we may be faced with higher costs of purchasing these materials if the U.S. dollar weakens against other currencies. If we were to change any of our limited or sole source suppliers, we would be required to re-qualify each new supplier. Re-qualification could prevent or delay product shipments that could adversely affect our results of operations and cash flows. In addition, our reliance on these suppliers may adversely affect our production if the components vary in quality or quantity. If we are unable to obtain timely deliveries of sufficient components of acceptable quality or if the prices of components for which we do not have alternative sources increase, our business, financial condition, results of operations, and cash flows could be materially adversely affected.

If our contract manufacturers fail to deliver qualified quality products at reasonable prices and on a timely basis, our business, financial condition, results of operations, and cash flows could be adversely affected.

We use contract manufacturers located outside of the U.S. as a less-expensive alternative to our performing manufacturing of certain products. Contract manufacturers in Asia currently manufacture a significant portion of our high-volume fiber optics products. We supply inventory to our contract manufacturers, and we bear the risk of loss, theft, or damage to our inventory while it is held in their facilities.

If these contract manufacturers do not fulfill their obligations to us, or if we do not properly manage these relationships and the transition of production to these contract manufacturers, our existing customer relationships may suffer. In addition, by undertaking these activities, we run the risk that the reputation and competitiveness of our products and services may deteriorate as a result of the reduction of our ability to oversee and control quality and delivery schedules.

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The use of contract manufacturers located outside of the U.S. also subjects us to the following additional risks that could significantly impair our ability to source our contract manufacturing requirements internationally, including:

- unexpected changes in regulatory requirements;
- legal uncertainties regarding liability, tariffs, and other trade barriers;
- inadequate protection of intellectual property in some countries;
- greater incidence of shipping delays;
- greater difficulty in overseeing manufacturing operations;
- greater difficulty in hiring talent needed to oversee manufacturing operations;
- potential political and economic instability and natural disasters;
- potential adverse actions by the U.S. government pursuant to its stated intention to reduce the loss of U.S. jobs;
- trade and travel restrictions; and
- the outbreak of infectious diseases which could result in travel restrictions or the closure of the facilities of our contract manufacturers.

Any of these factors could significantly impair our ability to source our contract manufacturing requirements internationally. Prior to our customers accepting products manufactured at our contract manufacturers, they must qualify the product and manufacturing processes. The qualification process can be lengthy and expensive, with no guarantee that any particular product qualification process will lead to profitable product sales. The qualification process determines whether the product manufactured at our contract manufacturer achieves our customers' quality, performance, and reliability standards. Our expectations as to the time periods required to qualify a product line and ship products in volumes to our customers may be erroneous. Delays in qualification can impair our expected timing of the transfer of a product line to our contract manufacturer and may impair our expected amount of sales of the affected products. Any of these uncertainties could materially adversely affect our operating results and customer relationships.

If we do not keep pace with rapid technological change, our products may not be competitive.

We compete in markets that are characterized by rapid technological change, frequent new product introductions, changes in customer requirements, evolving industry standards, continuous improvement in products and the use of our existing products in new applications. We may not be able to develop the underlying core technologies necessary to create new products and enhancements at the same rate as or faster than our competitors, or to license the technology from third parties that is necessary for our products. Product development delays may result from numerous factors, including:

- changing product specifications and customer requirements;
- unanticipated engineering complexities;
- expense reduction measures we have implemented and others we may implement;
- difficulties in hiring and retaining necessary technical personnel; and
- difficulties in allocating engineering resources and overcoming resource limitations.

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, cost effective, or repeatable basis. Our future performance will depend on our successful development and introduction of, as well as market acceptance of, new and enhanced products that address market changes, as well as current and potential customer requirements and our ability to respond effectively to product announcements by competitors, technological changes, or emerging industry standards. Because it is generally not possible to predict the amount of time required and the costs involved in achieving certain research,

development and engineering objectives, actual development costs may exceed budgeted amounts and estimated product development schedules may be extended. If we are unable to develop, manufacture, market, or support new or enhanced products successfully, or incur budget overruns or delays in our research and development efforts, our business, financial condition, results of operations, and cash flows may be materially adversely affected.



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Spending to develop and improve our technology may adversely impact our financial results.

We may need to increase our research and development and/or capital expenditures and expenses above our historical run-rate model in order to attempt to improve our existing technology and develop new technology. Increasing our investments in research and development of technology could cause our cost structure to fall out of alignment with demand for our products, which would have a negative impact on our financial results. If we are unable to obtain financing or implement cost reduction measures necessary to fund these types of expenditures, we may be unable to improve our technology or develop new technologies, which could have a material adverse effect on our business, financial condition and results of operations.

The competitive and rapidly evolving nature of our industries has in the past resulted and is likely in the future to result in reductions in our product prices and periods of reduced demand for our products.

We face substantial competition from a number of companies, many of which have greater financial, marketing, manufacturing, and technical resources than we do. Larger-sized competitors often spend more on research and development, which could give those competitors an advantage in meeting customer demands and introducing technologically innovative products before we do. We expect that existing and new competitors will continue to improve the design of their existing products and will introduce new products with enhanced performance characteristics.

The introduction of new products and more efficient production of existing products by our competitors have resulted and are likely in the future to result in price reductions, increases in expenses, and reduced demand for our products. In addition, some of our competitors may be willing to provide their products at lower prices, accept a lower profit margin, or spend more capital in order to obtain or retain business. Competitive pressures have required us to reduce the prices of some of our products. These competitive forces could diminish our market share and gross margins, resulting in an adverse effect on our business, financial condition, results of operations, and cash flows.

New competitors may also enter our markets, including some of our current and potential customers who may attempt to integrate their operations by producing their own components and subsystems or acquiring one of our competitors, thereby reducing demand for our products. In addition, rapid product development cycles, increasing price competition due to maturation of technologies, the emergence of new competitors in Asia with lower cost structures, and industry consolidation resulting in competitors with greater financial, marketing, and technical resources could result in lower prices or reduced demand for our products, which could have an adverse effect on our business, financial condition, results of operations, and cash flows.

Expected and actual introductions of new and enhanced products may cause our customers to defer or cancel orders for existing products and may cause our products to become obsolete. A slowdown in demand for existing products ahead of a new product introduction could result in a write-down in the value of inventory on hand related to existing products. We have in the past experienced a slowdown in demand for existing products and delays in new product development and such delays may occur in the future. To the extent customers defer or cancel orders for existing products due to a slowdown in demand or in anticipation of a new product release, or if there is any delay in development or introduction of our new products or enhancements of our products, our business, financial condition, results of operations, and cash flows could be materially adversely affected.

Our products are difficult to manufacture. Our production could be disrupted and our results of operations and cash flows could suffer if our production yields are low as a result of manufacturing difficulties.

We manufacture many of our wafers and products in our own production facilities. Difficulties in the production process, such as contamination, raw material quality issues, human error, or equipment failure, could cause a substantial percentage of wafers and devices to be nonfunctional. These problems may be difficult to detect at an early stage of the manufacturing process and often are time-consuming and expensive to correct. Lower-than-expected production yields may delay shipments or result in unexpected levels of warranty claims, either of which could adversely affect our results of operations and cash flows. We have experienced difficulties in achieving planned yields in the past, particularly in pre-production and upon initial commencement of full production volumes, which have adversely affected our gross margins. Because the majority of our manufacturing costs are fixed, achieving planned production yields is critical to our results of operations and cash flows. Changes in manufacturing processes required as a result of changes in product specifications, changing customer needs and the introduction of new product lines could significantly reduce our manufacturing yields, resulting in low or negative margins on those products.

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Also, we have substantial risk of interruption in manufacturing resulting from fire, natural disaster, equipment failures, or similar events, because we manufacture most of our products using a few facilities, and do not have back-up facilities available for manufacturing these products. We could also incur significant costs to repair and/or replace products that are defective and in some cases costly product redesigns and/or rework may be required to correct a defect. Additionally, any defect could adversely affect our reputation and result in the loss of future orders.

Some of the capital equipment used in the manufacture of our products have been developed and made specifically for us, is not readily available from multiple vendors, and would be difficult to repair or replace if it were to become damaged or stop working. If any of these suppliers were to experience financial difficulties or go out of business, or if there were any damage to, or a breakdown of our manufacturing equipment at a time when we are manufacturing commercial quantities of our products, our business, financial condition, results of operations, and cash flows could be materially adversely affected.

We are subject to warranty claims, product recalls, and product liability.

We may be subject to warranty or product liability claims that may lead to increased expenses in order to defend or settle such claims. We maintain product liability insurance, but such insurance is subject to significant deductibles and there is no guarantee that such insurance will be available or adequate to protect against any or all such claims. We may incur costs and expenses relating to a recall of one of our customers' products containing one of our products. The process of identifying a recalled product in devices that have been widely distributed may be lengthy and require significant resources, and we may incur significant replacement costs, contract damage claims from our customers, and harm to our reputation. Payments and expenses in connection with warranty and product liability claims could materially adversely affect our business, financial condition, results of operations, and cash flows.

It could be discovered that our products contain defects that may cause us to incur significant costs, divert management's attention, result in a loss of customers, and result in product liability claims.

Our products are complex and undergo quality testing and formal qualification by our customers and us. However, defects may occur from time to time. Our customers' testing procedures involve evaluating our products under likely and foreseeable failure scenarios and over varying amounts of time. For various reasons, such as the occurrence of performance problems that are unforeseeable in testing or that are detected only when products age or are operated under peak stress conditions, our products may fail to perform as expected long after customer acceptance. Failures could result from faulty components or design, problems in manufacturing, or other unforeseen reasons. For the majority of our products, we provide a product warranty of one year or less from date of shipment. For select customers, we provide extended warranties beyond our normal product warranty period for specified failures on a case-by-case basis. As a result, we could incur significant costs to repair or replace defective products under warranty, particularly when such failures occur in installed systems. We have experienced failures in the past and will continue to face this risk going forward, as our products are widely deployed throughout the world in multiple demanding environments and applications. In addition, we may in certain circumstances honor warranty claims after the warranty has expired or for problems not covered by warranty in order to maintain customer relationships. Any significant product failure could result in lost future sales of the affected product and other products, as well as customer relations problems, litigation, and damage to our reputation.

In addition, our products are typically embedded in, or deployed in conjunction with, our customers' products, which incorporate a variety of components, modules and subsystems and may be expected to interpolate with modules and subsystems produced by third parties. As a result, not all defects are immediately detectable and when problems occur, it may be difficult to identify the source of the problem. These problems may cause us to incur significant

damages or warranty and repair costs, divert the attention of our engineering personnel from our product development efforts, and cause significant customer relations problems or loss of customers, all of which would harm our business. The occurrence of any defects in our products could also give rise to liability for damages caused by such defects. Although we carry product liability insurance to mitigate this risk, insurance may not adequately cover costs that may arise from defects in our products or otherwise, nor will it protect us from reputational harm that may result from such defects.

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We face lengthy sales and qualification cycles for our new products and, in many cases, must invest a substantial amount of time and money before we receive orders.

Most of our products are tested by current and potential customers to determine whether they meet customer or industry specifications. The length of the qualification process, which can span a year or more, varies substantially by product and customer and, thus, can cause our results of operations and cash flows to be unpredictable. During a given qualification period, we invest significant resources and allocate substantial production capacity to manufacture these new products prior to any commitment to purchase by customers. In addition, it is difficult to obtain new customers during the qualification period as customers are reluctant to expend the resources necessary to qualify a new supplier if they have one or more existing qualified sources. If we are unable to meet applicable specifications or do not receive sufficient orders to profitably use our allocated production capacity, our business, financial condition, results of operations, and cash flows could be materially adversely affected.

Our historical and future budgets for operating expenses, capital expenditures, operating leases, and service contracts are based upon our assumptions as to the future market acceptance of our products. Because of the lengthy lead times required for product development and the changes in technology that typically occur while a product is being developed, it is difficult to accurately estimate customer demand for any given product. If our products do not achieve an adequate level of customer demand, our business, financial condition, results of operations, and cash flows could be materially adversely affected.

Shifts in industry-wide demands and inventories could result in significant inventory write-downs.

The life cycles of some of our products depend heavily upon the life cycles of the end products into which our products are designed. Products with short life cycles require us to manage production and inventory levels closely. We evaluate our ending inventories on a quarterly basis for excess quantities, impairment of value, and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand based upon input received from our customers, sales team, and management. If inventories on hand are in excess of demand, or if they are greater than 12-months old, appropriate write-downs may be recorded. In addition, we write off inventories that are considered obsolete based upon changes in customer demand, manufacturing process changes that result in existing inventory obsolescence, or new product introductions, which eliminate demand for existing products. Remaining inventory balances are adjusted to approximate the lower of our manufacturing cost or market value.

If future demand or market conditions are less favorable than our estimates, inventory write-downs may be required. We cannot assure investors that obsolete or excess inventories, which may result from unanticipated changes in the estimated total demand for our products and/or the estimated life cycles of the end products into which our products are designed, will not affect us beyond the inventory charges that we have already taken.

The types of sales contracts we use in the markets we serve subject us to unique risks in each of those markets.

We generally do not have long-term supply contracts with our customers, and we typically sell our products pursuant to purchase orders with short lead times, and even where we do have supply contracts, our customers are not obligated to purchase any minimum amount of our products. As a result, our customers could stop purchasing our products at any time, and we must fulfill orders in a timely manner to keep our customers.

Risks associated with the absence of long-term purchase commitments with our customers include the following:

- our customers can stop purchasing our products at any time without penalty;

- our customers may purchase products from our competitors; and
- our customers are not required to make minimum purchases.

These risks are increased by the fact that our customers in this market are large sophisticated companies which have considerable purchasing power and control over their suppliers. If we are unable to fulfill these orders in a timely manner, it is likely that we will lose sales and customers.

Cancellations or rescheduling of customer orders could result in the delay or loss of anticipated sales without allowing us sufficient time to reduce, or delay the incurrence of, our corresponding inventory and operating expenses. In addition, changes in forecasts or the timing of orders expose us to the risks of inventory shortages or excess inventory.

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Fixed-price development work inherently has more uncertainty than production contracts and therefore, entails more variability in estimates of the cost to complete the work. Many of these development programs have very complex designs. As technical or quality issues arise, we may experience schedule delays and adverse cost impacts, which could increase our estimated cost to perform the work, either of which could adversely affect our results of operations. Some fixed-price development contracts include initial production units in their scope of work. Successful performance of these contracts depends on our ability to meet production specifications and delivery rates. If we are unable to perform and deliver to contract requirements, our contract price could be reduced through the incorporation of liquidated damages, termination of the contract for default, or other financially significant consequences. Management uses its best judgment to estimate the cost to perform the work and the price we will eventually be paid on fixed-price development programs. While we believe the cost and price estimates incorporated in the financial statements are appropriate, future events could result in either favorable or unfavorable adjustments to those estimates.

We have significant international sales, which expose us to additional risks and uncertainties.

For the fiscal years ended September 30, 2015, 2014 and 2013, sales to customers located outside the U.S. accounted for approximately 32%, 33% and 26%, respectively, of our annual consolidated revenue, with revenue assigned to geographic regions based on our customers' billing address. Sales to customers in Asia represent the majority of our international sales. We believe that international sales will continue to account for a significant percentage of our revenue as we seek international expansion opportunities. Because of this, the following international commercial risks may adversely affect our revenue:

- political and economic instability or changes in U.S. government policy with respect to these foreign countries may inhibit export of our products and limit potential customers' access to U.S. dollars in a country or region in which those potential customers are located;

- we may experience difficulties in enforcing our legal contracts or the collecting of foreign accounts receivable in a timely manner and we may be forced to write off these receivables;

- tariffs and other barriers may make our products less cost competitive;

- the laws of certain foreign countries may not adequately protect our trade secrets and intellectual property or may be burdensome to comply with;

- potentially adverse tax consequences to our customers may damage our cost competitiveness;

- customs, import/export, and other regulations of the countries in which we do business may adversely affect our business;

- currency fluctuations may make our products less cost competitive, affecting overseas demand for our products or otherwise adversely affecting our business; and

- language and other cultural barriers may require us to expend additional resources competing in foreign markets or hinder our ability to effectively compete.

In addition, we may be exposed to additional legal risks under the laws of both the countries in which we operate and in the United States, including the Foreign Corrupt Practices Act.

We have substantial operations in China, which exposes us to risks inherent in doing business in China.

EMCORE Hong Kong, Ltd., a wholly owned subsidiary of EMCORE, has a manufacturing facility in Langfang, China. Our Chinese subsidiary, Langfang EMCORE Optoelectronics Co. Ltd., is located approximately 20 miles southeast of Beijing and currently occupies a space of 52,000 square feet with a Class-10,000 clean room for optoelectronic device packaging. Another 36,000 square feet is available for future expansion. We have transferred the manufacturing of cost sensitive optoelectronic device packaging and testing to this facility. This facility, along with a strategic alignment with our existing contract-manufacturing partners, should enable us to improve our cost structure and gross margins across product lines. We expect to develop and provide improved service to our global customers by having a local presence in Asia.



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Our China-based activities are subject to greater political, legal, and economic risks than those faced by our other operations. In particular, the political, legal, and economic climate in China (both at the national and regional levels) is extremely volatile and unpredictable. Our ability to operate in China may be adversely affected by changes in Chinese laws and regulations, such as those relating to taxation, import and export tariffs, environmental regulations, land use rights, intellectual property, and other matters, which laws and regulations remain highly underdeveloped and subject to change for political or other reasons, with little or no prior notice. Moreover, the enforceability of applicable existing Chinese laws and regulations is uncertain. In addition, we may not obtain the requisite legal permits to continue to operate in China and costs or operational limitations may be imposed in connection with obtaining and complying with such permits. Our business could be adversely harmed by any changes in the political, legal, or economic climate in China or the inability to enforce applicable Chinese laws and regulations.

As a result of a government order to ration power for industrial use, operations in our China facility may be subject to possible interruptions or shutdowns, adversely affecting our ability to complete manufacturing commitments on a timely basis. If we are required to make significant investments in generating capacity to sustain uninterrupted operations at our facility, we may not realize the reductions in costs anticipated from our expansion in China.

We intend to export the majority of the products manufactured at our facilities in China. Accordingly, upon application to and approval by the relevant governmental authorities, we will not be subject to certain Chinese taxes and are exempt from customs duty assessment on imported components or materials when the finished products are exported from China. We are, however, required to pay income taxes in China, subject to certain tax relief. We may become subject to other forms of taxation and duty assessments in China or may be required to pay for export license fees in the future. In the event that we become subject to any increased taxes or new forms of taxation imposed by authorities in China, our results of operations and cash flows could be adversely affected.

Protecting our trade secrets and obtaining patent protection is critical to our ability to effectively compete.

Our success and competitive position depends on protecting our trade secrets and other intellectual property. Our strategy is to rely on trade secrets and patents to protect our manufacturing and sales processes and products. Effective trade secret and patent protection may be unavailable or limited in certain foreign jurisdictions. In addition, in certain circumstances, our intellectual property rights associated with government contracts may be limited. Also, reliance on trade secrets is only an effective business practice if trade secrets remain undisclosed and a proprietary product or process is not reverse engineered or independently developed. We take measures to protect our trade secrets, including executing non-disclosure agreements with our employees, consultants, customers, suppliers, and joint venture partners. If parties breach these agreements, the measures we take are not properly implemented, or if a competitor is able to reproduce or otherwise capitalize on our technology despite the safeguards we have in place, it may be difficult, expensive, or impossible for us to obtain necessary legal protection. Disclosure of our trade secrets or reverse engineering of our proprietary products, processes, or devices could adversely affect our business, financial condition, results of operations, and cash flows.

Our failure to obtain or maintain the right to use certain intellectual property may materially adversely affect our business, financial condition, results of operations, and cash flows.

Our industries are characterized by frequent litigation regarding patent and other intellectual property rights. From time to time we have received, and may receive in the future, notice of claims of infringement of other parties' proprietary rights and licensing offers to commercialize third party patent rights. There can be no assurance that:

\_infringement claims (or claims for indemnification resulting from infringement claims) will not be asserted against us  
\_or that such claims will not be successful;

\_future assertions will not result in an injunction against the sale of infringing products, which could adversely affect  
\_our business, results of operations, and cash flows;

-any patent owned or licensed by us will not be invalidated, circumvented, or challenged; or

\_we will not be required to obtain licenses, the expense of which may adversely affect our results of operations, and  
\_cash flows.

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In addition, effective copyright and trade secret protection may be unavailable or limited in certain foreign jurisdictions. Litigation, which could result in substantial cost and diversion of our resources, may be necessary to defend our rights or defend us against claimed infringement of the rights of others. In certain circumstances, our intellectual property rights associated with government contracts may be limited.

Protection of the intellectual property owned or licensed to us may require us to initiate litigation, which can be an extremely expensive protracted procedure with an uncertain outcome. The availability of financial resources may limit our ability to commence or defend such litigation.

If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, our business and results of operations could be materially harmed.

Our success depends to a significant degree on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patent, trademark, trade secret and unfair competition laws, as well as license agreements and other contractual provisions, to establish and protect our intellectual property and other proprietary rights. We have applied for patent registrations in the United States and selected international jurisdictions, most of which have been issued. We cannot guarantee that our pending applications will be approved by the applicable governmental authorities. Moreover, our existing and future patents and trademarks may not be sufficiently broad to protect our proprietary rights or may be held invalid or unenforceable in court. Failure to obtain patents registrations or a successful challenge to our registrations in the United States or other foreign countries may limit our ability to protect the intellectual property rights that these applications and registrations are intended to cover.

We also attempt to protect our intellectual property, including our trade secrets and know-how, through the use of trade secret and other intellectual property laws, and contractual provisions. We enter into confidentiality and invention assignment agreements with our employees and independent consultants. We also use non-disclosure agreements with other third parties who may have access to our proprietary technologies and information. Such measures, however, provide only limited protection, and there can be no assurance that our confidentiality and non-disclosure agreements will not be breached, especially after our employees or those of our third-party contract manufacturers end their employment or engagement, and that our trade secrets will not otherwise become known by competitors or that we will have adequate remedies in the event of unauthorized use or disclosure of proprietary information. Unauthorized third parties may try to copy or reverse engineer our products or portions of our products, otherwise obtain and use our intellectual property, or may independently develop similar or equivalent trade secrets or know-how. If we fail to protect our intellectual property and other proprietary rights, or if such intellectual property and proprietary rights are infringed or misappropriated, our business, results of operations or financial condition could be materially harmed.

Policing unauthorized use of our technology is difficult, and we cannot be certain that the steps we have taken will prevent the misappropriation, unauthorized use, or other infringement of our intellectual property rights. Further, we may not be able to effectively protect our intellectual property rights from misappropriation or other infringement in foreign countries where we have not applied for patent protections, and where effective patent, trademark, trade secret, and other intellectual property laws may be unavailable, or may not protect our proprietary rights as fully as U.S. law.

In the future, we may need to take legal actions to prevent third parties from infringing upon or misappropriating our intellectual property or from otherwise gaining access to our technology. Protecting and enforcing our intellectual property rights and determining their validity and scope could result in significant litigation costs and require significant time and attention from our technical and management personnel, which could significantly harm our business. In addition, we may not prevail in such proceedings. An adverse outcome of such proceedings may reduce

our competitive advantage or otherwise harm our financial condition and our business.

We may be obligated to indemnify our customers and vendors for claims that our intellectual property infringes the rights of others, which may result in substantial expenses to us.

We may be required to indemnify our customers or vendors for intellectual property claims made against them for products incorporating our technology. As such, claims against our customers and vendors may require us to incur substantial expenses, such as legal expenses, damages for past infringement or royalties for future use. Future indemnity claims could adversely affect our business relationships and result in substantial costs to us.

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We face certain litigation risks that could harm our business.

We are and may become subject to various legal proceedings and claims that arise in or outside the ordinary course of business. The results of complex legal proceedings are difficult to predict. Moreover, many of the complaints filed against us do not specify the amount of damages that plaintiffs seek, and we therefore are unable to estimate the possible range of damages that might be incurred should these lawsuits be resolved against us. While we are unable to estimate the potential damages arising from such lawsuits, certain of them assert types of claims that, if resolved against us, could give rise to substantial damages. Thus, an unfavorable outcome or settlement of one or more of these lawsuits could have a material adverse effect on our financial condition, liquidity, and results of operations. Even if these lawsuits are not resolved against us, the uncertainty and expense associated with unresolved lawsuits could seriously harm our business, financial condition, and reputation. Litigation is costly, time-consuming and disruptive to normal business operations. The costs of defending these lawsuits, particularly the securities class actions and stockholder derivative actions, have been significant, will continue to be costly, and may not be covered by our insurance policies. The defense of these lawsuits could also result in continued diversion of our management's time and attention away from business operations, which could harm our business. For additional discussion regarding litigation in which we are involved, see Note 14 - Commitments and Contingencies in the notes to our consolidated financial statements.

The costs of compliance with state, federal and international legal and regulatory requirements, such as environmental, labor, trade and tax regulations, and customers' standards of corporate citizenship could cause an increase in our operating costs.

We are subject to environmental and health and safety laws and regulations and must obtain certain permits and licenses relating to the use of hazardous materials. Our production activities involve the use of certain hazardous raw materials, including, but not limited to, ammonia, gallium, phosphine, and arsine. If our control systems are unsuccessful in preventing a release of these materials into the environment or other adverse environmental conditions or human exposure occurs, we could experience interruptions in our operations and incur substantial remediation and other costs or liabilities. In addition, certain foreign laws and regulations place restrictions on the concentration of certain hazardous materials, including, but not limited to, lead, mercury, and cadmium, in our products. Failure to comply with such laws a