

MoSys, Inc.  
Form 10-K  
March 15, 2016

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

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

**For the Fiscal Year December 31, 2015 or**

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

**Commission file number: 000-32929**

**MOSYS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**77-0291941**  
(IRS Employer  
Identification Number)

**3301 Olcott Street**  
**Santa Clara, California 95054**  
(Address of principal executive offices)  
**(408) 418-7500**  
(Registrant's telephone number, including area code)

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

**Title of each class**  
Common Stock, par value \$0.01 per share

**Name of each exchange on which registered**  
Global Select Market of the NASDAQ  
Stock Market, LLC

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

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**Title of each class**

**Name of each exchange on which registered**

Series AA Preferred Stock, par value \$0.01 per share

None

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

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

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

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

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

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

Large accelerated  
filer

Accelerated filer

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

Smaller reporting  
company

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

The aggregate market value of the common stock held by non-affiliates of the registrant, as of June 30, 2015 was \$120,238,800 based upon the last sale price reported for such date on the Global Select Market of the NASDAQ Stock Market. For purposes of this disclosure, shares of common stock held by persons who beneficially own more than 5% of the outstanding shares of common stock and shares held by officers and directors of the Registrant have been excluded because such persons may be deemed to be affiliates. This determination is not necessarily conclusive.

As of March 2, 2016, 65,975,362 shares of the registrant's common stock, \$0.01 par value per share, were outstanding.

## DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement to be delivered to stockholders in connection with the registrant's 2016 Annual Meeting of Stockholders to be held on or about June 7, 2016 are incorporated by reference into Part III of this Form 10-K. The registrant intends to file its proxy statement within 120 days after its fiscal year end.

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ANNUAL REPORT ON FORM 10-K  
FOR THE YEAR ENDED DECEMBER 31, 2015

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**Part I**

*This Annual Report on Form 10-K and the documents incorporated herein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, which include, without limitation, statements about the market for our products, technology, our strategy, competition, expected financial performance and other aspects of our business identified in this Annual Report, as well as other reports that we file from time to time with the Securities and Exchange Commission. Any statements about our business, financial results, financial condition and operations contained in this Annual Report that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "expects," "intends," "plans," "projects," or similar expressions are intended to identify forward-looking statements. Our actual results could differ materially from those expressed or implied by these forward-looking statements as a result of various factors, including the risk factors described in Part I, Item 1A, "Risk Factors," and elsewhere in this report. We undertake no obligation to update publicly any forward-looking statements for any reason, except as required by law, even as new information becomes available or other events occur in the future.*

MoSys®, 1T-SRAM®, Bandwidth Engine® and GigaChip® are registered trademarks of MoSys, Inc. LineSpeed is a trademark of MoSys, Inc.

**Item 1. Business**

**Overview**

MoSys, Inc., together with its subsidiaries ("MoSys," the "Company," "we," "our" or "us"), is a fabless semiconductor company focused on the development and sale of integrated circuits, or ICs, for the high-speed networking, communications, storage and computing markets. Our solutions deliver time-to-market, performance, signal integrity, power, area and economic benefits for system original equipment manufacturers, or OEMs. We have developed two IC product lines under the Bandwidth Engine and LineSpeed product names. Bandwidth Engine ICs integrate our proprietary 1T-SRAM high-density embedded memory with our integrated macro function technology and a highly efficient serial interface protocol resulting in a monolithic memory IC solution optimized for transaction performance. As the bandwidth requirements and amount of processing per packet increase in high-speed networking systems, critical memory access bottlenecks occur. Our Bandwidth Engine IC, with its combination of serial I/O, high-speed memory, offload functions and efficient, intelligent access, drastically increases memory accesses per second, removing these bottlenecks. In addition, the serial interface and high memory capacity reduce the board footprint, number of pins and complexity using less power. The LineSpeed IC product line, which we announced in March 2013, is comprised of non-memory, high-speed serialization-deserialization, or SerDes, I/O physical layer, or PHY, devices that ensure signal integrity between interfaces commonly referred to as clock data recovery, or CDR, or retimer functionality, which perform multiplexing to transition from one speed to another, commonly referred to as Gearbox functionality. These PHY devices reside within optical modules and networking equipment line cards designed for next-generation Ethernet and optical transport network applications.

We are currently supporting existing design win customers, primarily for Bandwidth Engine, and actively pursuing additional design wins for the use of our ICs in networking communications and data center equipment. We have established initial pricing of our IC products ordered to date, but longer-term volume prices will be subject to negotiations with our customers and may vary substantially from these initial prices.

Historically, our primary business was the design, development, marketing, sale and support of differentiated intellectual property, or IP, including embedded memory and high-speed parallel and serial I/O used in advanced systems-on-chips, or SoCs. Currently, we are focused on developing differentiated IP-rich IC products and are dedicating all our research and development, marketing and sales budget to these IC products. Royalty and other revenue generated from our existing IP

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agreements represented 58% of our total revenue in 2014 and 45% in 2015. We expect royalty and other revenue to continue to decline in 2016 both in absolute dollars and as a percentage of revenues.

Our future success and ability to achieve and maintain profitability are dependent on the marketing and sales of our IC products into networking, communications and other markets. Since the beginning of 2010, we have invested substantially all of our research and development resources toward development of our ICs, and, as of the end of 2012, had ceased our efforts to actively market our IP and establish license agreements for customers' new SoC development projects.

**Industry Background**

The amount of data being transferred by networking, storage and computing systems is increasing rapidly, primarily driven by the growth of the Internet and demand for real-time processing of bandwidth intensive applications, such as video-on-demand, Internet protocol TV, peer-to-peer and cloud computing, web2.0 applications, 4G/LTE wireless, voice-over-Internet protocol, and many others. In order to meet these demands, the network backbone, access, storage and data center infrastructure must scale in bandwidth and processing capability. In addition, system designers face the challenge of increasing the throughput of all subsystems for a variety of applications, such as video games, medical record and imaging transfers, and file sharing. These increased demands strain communication between onboard IC devices, limiting the data throughput in network switches and routers and the network backbone.

To meet these demands, carrier and enterprise networks are undergoing significant changes and, most significantly, are migrating to packet-based Ethernet networks that enable higher throughput, lower cost and uniform technology across access, core and metro network infrastructure. These networks are now being designed to deliver voice, video and high-speed Internet access on one converged, efficient and flexible network. These trends require networking systems, especially the high-speed switches and routers that primarily comprise these networks, to comply with evolving market requirements and be capable of providing new services and better quality of service while supporting new protocols and standards. To support these trends, OEM network and telecommunications equipment manufacturers, such as Alcatel-Lucent (a subsidiary of Nokia Corporation), Brocade Communications Systems, Inc., Cisco Systems, Inc., Tel. LM Ericsson, Fujitsu Ltd., Hitachi Ltd., Huawei Technologies, Juniper Networks, Inc., Nokia Corporation, and ZTE Corporation, must offer higher levels of packet forwarding rates, bandwidth density and be optimized to enable higher-density, lower power data path connectivity in the next generations of their networking systems.

Networking and telecommunications systems throughout the network must operate at higher speed and performance levels and so require new generations of packet processors and improved memory subsystems, as well as new physical interface products, to enable system performance. These systems and their component line cards generally need to support aggregate rates of 100 gigabits per second, or Gbps, and above to meet the continued growth in network traffic. Cloud services have accelerated this transition with applications such as security. Data centers and access equipment that were previously aggregating slower traffic such as 1Gbps to 10Gbps, and 40Gbps, now are being designed to aggregate traffic at 10Gbps to 100Gbps, or more. The transition to 100 Gbps networks has begun, and 100 Gbps networks are expected to grow rapidly over the coming years.

Several types of semiconductors are included on each line card, including PHY, one or more packet processors and multiple memory chips. Packet processors are complex ICs or IC chipsets that perform high speed processing for functions, such as traffic routing, shaping, metering, billing, statistics, detection and steering. The line cards use various types of memory ICs to facilitate temporary packet storage and assist in the analysis and tracking of information embedded within each packet flowing through the processors. After a packet enters the line card through a PHY, a packet or data processor helps separate the packet into smaller pieces for rapid analysis. Typically, the data is broken up into the packet header, which contains vital information on packet destination and type, such as the Internet

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protocol address, and the payload, which contains the data being sent. Generally, the line card operations must occur at full data rates and typically require accessing memory ICs many times. Simultaneously, the packet's payload, which may be substantially larger than the packet header, is also stored in memory ICs until processing is complete and the packet can re-combine and be sent to its next system destination. Within the line card, communication between the packet processor and memory ICs occurs through an interface consisting of combinations of physical pins on each type of chip. These pins are grouped together in a parallel or a serial architecture to form a pathway, called a bus, through which information is transferred from one IC to the next.

Today, the majority of physical buses that connect networking equipment and components use a parallel architecture to communicate between processors and memory ICs, which means information can travel only in one direction and in one instance at a time. As processing speeds increase, the number of pins required and the speed of the bus in a parallel architecture become a limitation on system performance and capability. In contrast, the number of connections is reduced substantially across fewer, higher-rate pins in a serial architecture, and data is transferred simultaneously in both directions. Data transfer rates with high-speed serial bus architectures and more advanced I/O protocols are limited by the capabilities of the various ICs included on the line card, thus leading to bottlenecks when these ICs perform inadequately. In order to remove these bottlenecks and meet next-generation bandwidth requirements, the line card ICs must support high-speed serial bus architectures and these more advanced I/O protocols.

Most networking and communication systems sold and in operation today include line cards that process data at speeds ranging from 10 Gbps, to 100 Gbps, and support many aggregated slower ports. To accommodate the substantial and growing increase in demand for networking communications and applications, networking systems manufacturers are developing and bringing to market next-generation systems that run at aggregate speeds of 100 to 400 Gbps or more with developments underway to scale to thousands of Gbps, or terabits, per second. However, although processor performance in applications such as computing and networking has continued to double nearly every 18 months, or even sooner, the performance of memory technology has generally been able to double only once every 10 years. Existing memory IC solutions based on parallel I/O architecture easily support speeds up to 40 Gbps, but are not optimal for meeting speeds of 100 Gbps and beyond due to system-level limitations for pin counts, power and performance. These networking and communications systems are generally comprised of a chassis populated by four to 16 line cards. Often, these systems are shipped to customers with only a portion of the line card slots populated, and the customer will add additional line cards subsequently to increase system performance and capacity.

Each line card requires a significant amount of memory to support its processing capabilities. Traditional external memory IC solutions currently used on line cards include both dynamic random access memory, or DRAM, and static random access memory, or SRAM. Line cards in networking systems use both specialized, high-performance DRAM ICs, such as reduced-latency DRAM, or RLDRAM, low-latency DRAM, or LLDRAM, and commodity DRAM, such as double data rate, or DDR ICs. In addition, networking systems use higher-performance SRAM ICs such as quad data rate, or QDR SRAM. Substantially all of these traditional memory IC solutions use parallel interfaces, which are slower than serial interfaces, so we believe they will be increasingly challenged to meet the performance, pin count, area and power requirements as networking systems expand beyond 100 Gbps. The result is a gap between processor and memory performance. To meet the higher performance requirements being demanded by the industry, while using current components and architectural approaches, system designers must add more discrete memory ICs to the line cards and/or add more embedded memory on the packet processor. This results in higher cost and power consumption, the use of more space on the line cards and additional communication interference between the ICs, which in turn results in additional bandwidth limitation problems. We believe our Bandwidth Engine family of products is well suited to address these challenges and replace these traditional memory solutions.

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In addition, each line card requires PHY products to provide interoperability and signal integrity functions. As network speeds increase beyond 100Gbps, the serial data rates are transitioning from 10Gbps to 25Gbps. This means that the signal integrity challenges (maintaining the quality of the electrical signals) of moving these high speed signals around within line cards, or between line cards and systems using fiber optic or copper cable, increase as data rates increase. These networking systems often use copper or optical modules to modify signals for transmission over longer distances ranging from tens of meters to thousands of kilometers. Optical modules convert electrical signals to optical signals for transportation over longer distances from one system to another system. Because of the challenges arising from the increase in network speeds, new 100Gbps standards have emerged that specify a CDR or retimed interface on optical modules, which was not the case at 10Gbps based interfaces. Each 100Gbps module and above using 25Gbps per lane will require a CDR/retimer function inside the module to meet these requirements. In addition, the systems themselves also require additional support to move signals between the module and the system, and these challenges become more acute as the distance increases. Our LineSpeed products address these new line card and optical module challenges by providing unique signal integrity and feature sets that align with the industry standards, as well as provide backward compatibility for the previous data rates. We believe our LineSpeed PHY products are well suited ensure the quality of signals and/or increase the transmission distance for both short reach (e.g., between ICs on a line card) or long-reach (e.g., between line cards or systems).

We have developed our Bandwidth Engine and LineSpeed families of ICs to synergistically address the need for high-speed data access and throughput currently confronting networking system designers. We expect our IC products to meet the increasing demands placed on conventional memory technology used on the line cards in high-bandwidth networking systems. We believe that our products and technology are well positioned as replacements for existing IC solutions in order to meet the needs of the next-generation networking systems that will require a large number of packet lookups and to support aggregated rates greater than 100 Gbps.

**Our Approach**

Our historical business was focused on the licensing of our proprietary 1T-SRAM and SerDes I/O technologies. We have leveraged our proprietary IP to design our Bandwidth Engine and LineSpeed IC product families to help networking OEMs address the growing bottlenecks in system performance. We have incorporated critical features into our product families to accomplish this objective.

*On-chip Functionality*

One significant performance bottleneck in any network line card is the need to transfer data between discrete ICs. Many of these data-transfer operations are iterative in nature, requiring subsequent, back-to-back accesses of the memory IC by the processor IC. Our Bandwidth Engine ICs include an arithmetic logic unit, or ALU, which enables the Bandwidth Engine IC to perform mathematical operations on data. Moving certain processing functions from the processor IC to the Bandwidth Engine IC through the use of this embedded ALU, reduces the number of I/O transactions and frees the processor IC to perform other important networking or micro-processing functions.

*High-Performance Interface*

High-speed, efficient interface I/Os are critical building blocks to meet high data transfer rate requirements for communication between ICs on network line cards. We believe that current networking system requirements necessitate an industry transition from parallel to serial I/O. As a result, semiconductor companies are increasingly turning to serial I/O architectures to achieve needed system performance. For example, high-performance ICs that are sold into wide markets, such as field programmable gate arrays, or FPGAs, and network processing units, NPUs, are using serial I/Os to ensure they can compete with custom designed application specific ICs, or ASICs, by matching their

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performance. Using serial I/O, IC developers also are able to reduce pin count (the wired electrical pins that connect an IC to the network line card on which it is mounted) on the IC. With reducing geometries, the size of most high-performance ICs is dictated by the number of pins required, rather than the amount of logic and memory embedded in the chip. As a result, using serial I/O facilitates cost reduction and reduced system power consumption, while improving the performance of both the IC itself and the overall system. While SerDes I/Os provide significantly enhanced performance over parallel I/Os, SerDes I/Os traditionally have had higher power consumption, which is a challenge for IC designers. Our SerDes I/Os, however, are tuned for low power consumption to meet our customers' stringent power consumption requirements.

We make our I/O technologies compliant with industry standards so that they can interoperate with interfaces on existing ICs. In addition, we make them programmable to support multiple data rates, which allows for greater flexibility for the system designer, while lowering their development and validation costs. Interoperability reduces development time, thereby reducing the overall time to market of our customers' systems.

*Analog Design Capabilities*

We have invested in personnel needed to define, design and market high-performance analog IC products. We have built a team of experienced engineers who combine industry expertise with advanced semiconductor design expertise to meet customer requirements and develop new products to bring to market. We intend to leverage these capabilities to achieve new levels of integration, power reduction and performance, enabling our customers to achieve differentiation in their end systems. We initially developed our team of analog engineers to develop the SerDes I/O used in our Bandwidth Engine families of products. We leveraged the capabilities of this team to produce our LineSpeed IC products, which are primarily comprised of analog circuitry.

*GigaChip Interface Protocol*

In addition to the physical characteristics of the serial I/O, the protocol used to transmit data is also an important element that impacts speed and performance. To address this and complement our Bandwidth Engine devices, we have developed the GigaChip Interface®, or GCI, which is an open-interface transport protocol optimized for efficient chip-to-chip communications. The GCI electrical interface is compatible with the current industry standard (Common Electrical Interface, release #11, or CEI-11G-SR and XFI) to simplify electrical interoperability between devices. GCI can enable highly efficient serial chip-to-chip communications, and its transport efficiency averages 90% for the data transfers it handles. GCI is included in our Bandwidth Engine ICs, and is offered to customers and prospective partners on terms intended to encourage widespread adoption.

*High-Performance and High-Density Memory Architecture*

The high-density of our proprietary 1T-SRAM technologies stems from the use of a single-transistor, or 1T, which is similar to DRAM, with a storage cell for each bit of information. Embedded memory utilizing our 1T-SRAM technologies is typically two to three times denser than the six-transistor storage cells used by traditional SRAM, or 6T-SRAM. Embedded memory utilizing our 1T-SRAM technologies typically provides speeds essentially equal to or greater than the speeds of traditional SRAM and DRAM, particularly for larger memory sizes. Our 1T-SRAM memory designs can sustain random access cycle times of less than three nanoseconds, significantly faster than embedded 6T-SRAM technology. Embedded memory utilizing our 1T-SRAM technologies can consume as little as one-half the active power and generate less heat than traditional SRAM when operating at the same speed. This reduces system level heat dissipation and enables reliable operation using lower cost packaging.



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**Our Strategy**

Our primary business objective is to be an IP-rich fabless semiconductor company offering ICs that deliver unparalleled memory bandwidth performance for packet processing and improved signal integrity performance for networking, security and data center systems. The key components of the expansion of our strategic plan to become an IC supplier include the following strategies:

*Target Large and Growing Markets*

Our initial strategy is to target the multi-billion dollar networking telecommunications, security and data center OEM equipment markets, and we have developed products to support the growth in 100 Gbps and higher networking speeds. We are currently supporting approximately 25 existing customers, with whom we have achieved over 85 design wins, which reflects broadening acceptance of our products. We define a design win as the point at which a customer has made a commitment to build a board against the fixed schematic for his system, and this board will utilize our IC products. We continue to actively pursue additional design wins for the use of our ICs in our target markets. We believe our design wins represent the potential for significant future revenues. With limited history to date, however, we cannot estimate how much revenue each design win is likely to generate, or how much revenue all of these (and future design wins) are likely to generate. For example, our first design wins from 2012 and 2013 are starting to ramp into production, and, while we cannot predict how steep these ramps might be, we expect our revenues from them to grow in successive periods over the next few years. There is no assurance that these customer designs will be shipped in large volume by our customers to their customers, however.

*Leverage Technologies to Create New Products*

Our strategy is to combine our proprietary IP and design and applications expertise to address the needs of several upcoming generations of advanced networking systems. We believe an IC combining our 1T-SRAM and serial I/O with logic, such as in an ALU, and other functions can provide a system-level solution and significantly improve overall system performance at lower cost while using less power. We also seek to leverage our high-speed serial I/O to create non-memory denominated ICs, such as our LineSpeed products. Our initial LineSpeed products targeted the line card and the same customers as our Bandwidth Engine products. This has given us the opportunity to provide both memory and PHY solutions during the sale process. In 2013, we introduced our first LineSpeed products to address the requirements new industry standards were placing on optical modules, as well as line cards.

*Expand Adoption of the GigaChip Interface Protocol*

We have provided our GCI interface protocol as an open industry standard that may be designed into other ICs in the system, as we believe this will further enable serial communication on network line cards and encourage adoption of our Bandwidth Engine IC products. A number of IC providers and partners have publicly announced their support of GCI and Bandwidth Engine, including the largest FPGA providers, Altera Corporation (a subsidiary of Intel Corporation), Xilinx, Inc., and EZchip Semiconductor Ltd. (a subsidiary of Mellanox Technologies Ltd.), with whom we work closely to support common customers. In addition, multiple networking systems companies, including actual and prospective customers, have adopted GCI.

*Build Long-Term Relationships with Suppliers of Packet Processors*

We believe that having long-term relationships with packet processor providers is critical to our success, as such relationships may enable us to reduce our time-to-market, provide us with a competitive advantage and expand our target markets. A key consideration of network system designers is to demonstrate interoperability between our Bandwidth Engine IC and the packet processors utilized in their systems. To obtain design wins for our Bandwidth Engine IC, we must demonstrate this interoperability, and also show that our IC works optimally with the packet processor to achieve the

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performance requirements. In addition, our current strategy requires packet processor suppliers to adopt our GCI interface. To that end, we have been working closely with FPGA, ASIC and NPU providers, to enable interoperability between our Bandwidth Engine IC products and their high-performance products. To facilitate the acceptance of our Bandwidth Engine ICs, we have made available development and characterization kits for system designers to evaluate and develop code for next-generation networking systems. Our characterization kits are fully-functional hardware platforms that allow FPGA and ASIC providers, and their customers, to demonstrate interoperability of the Bandwidth Engine IC with the ASIC or FPGA the designers use within their networking systems. Our recent announcement of the third-generation Bandwidth Engine Z30 device, designed for interoperability with the EZ-chip NPS-400, is an example and direct result of this strategy.

**Our Products**

*Bandwidth Engine*

The Bandwidth Engine is a memory-dominated IC that has been designed to be a high-performance companion IC to packet processors. While the Bandwidth Engine primarily functions as a memory device with a high-performance and high-efficiency interface, it also can accelerate certain processing operations by serving as a co-processor element. Our Bandwidth Engine ICs combine: (1) our proprietary high-density, high-speed, low latency embedded memory, (2) our high-speed serial interface technology, or SerDes, (3) an open-standard interface protocol and (4) intelligent access technology. We believe an IC combining our 1T-SRAM memory and serial I/O with logic and other intelligence functions provides a system-level solution and significantly improves overall system performance at lower cost, size and power consumption. Our Bandwidth Engine ICs can provide up to and over 4.5 billion memory accesses per second, which is more than twice the performance of current memory-based solutions. They also can enable system designers to significantly narrow the gap between processor and memory IC performance. Customers that design Bandwidth Engine ICs onto the line cards in their networking systems will re-architect their systems at the line-card level and use our product to replace traditional memory solutions. When compared with existing commercially available solutions, our Bandwidth Engine ICs may:

provide up to four times the performance;

reduce power by approximately 50%;

reduce cost by greater than 50%; and

result in a dramatic reduction in IC pin counts on the line card.

Our first generation Bandwidth Engine IC products contain 576 megabytes, or MB, of memory and use a serial I/O with up to 16 lanes operating at up to 10.3 Gbps per lane. Variations of this IC can have up to two interface ports, with up to eight serial receiver and eight serial transmitter lanes per port for a total of 16 lanes of 10.3 Gbps SerDes interface. These ICs include an ALU, which can perform read-modify-write operations. We have been shipping our initial Bandwidth Engine products since 2012.

Our second generation Bandwidth Engine IC products contain 576 MB of memory and use serial I/O with up to 16 lanes operating at up to 15 Gbps per lane. In addition to a speed improvement of up to 50%, the architecture will enable several family member parts with added specialized features. To date, we have announced three unique devices in this product family:

MSR620 with burst features optimized for oversubscription buffer applications;

MSR720 with a write cache and memory coherency capability that allows for deterministic look-ups optimized for state and queue type applications; and

MSR820 with increased intelligence for lookup, metering and statistics applications by adding dual counters, atomic and extensive metering functions.



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We have been shipping our Bandwidth Engine 2 IC products since 2013.

Our third generation Bandwidth Engine IC products contain 1152 MB of memory and use serial I/O with up to 16 lanes operating at up to 30 Gbps per lane. Bandwidth Engine 3 targets support for packet-processing applications with up to five billion memory single word accesses per second, as well as burst mode to enable full duplex buffering up to 400Gbps for ingress, egress and oversubscription applications. To date, we have announced three unique devices in this product family:

MSR630 enables high rate lookup or high-performance buffer capabilities; and

MSR830 offers additional offload capabilities for functions such as statistics and metering to increase performance and add features for next-generation networking and communications equipment; and

MSRZ30 builds upon the capabilities and performance of the MSR830, with data rates, interface protocol and data structures that are optimized for the EZchip NPS-400 network processing unit, or NPU, and can increase memory bandwidth by up to 50%.

We commenced sampling of these products in the first quarter of 2016.

The devices provide benefits of size, power, pin count and cost savings to our customers.

*LineSpeed*

Our first generation LineSpeed products consist of single-chip PHY ICs, including a 100G multi-mode gearbox and a 100G quad retimer. These devices are designed to support 10, 40 and 100Gbps standards for high-density line cards or modules for next generation ethernet and optical transport network applications. These devices are capable of supporting both short and long reach connections across different specifications. We have developed these PHY ICs to provide the CDR function and to provide signal conversion from lower rates to higher rates both on the line card and within the optical module. We have defined performance and form factor (sizes) for specific devices for optimization of features and performance to solve challenges on the line card and in the optical module. We introduced and began sampling these devices in 2013.

Our second generation of LineSpeed products consists of our 100G low power retimer, which is optimized for ultra low power consumption, integrated test features and small size. The low-power retimer is primarily targeting opportunities in 100G CFP2, CFP4 and QSFP28 optical modules and active copper cables. We introduced and began sampling this product in 2014.

We announced our third generation of our LineSpeed products, the Flex family of 100G PHYs, and sampled first devices in the second half of 2015. These PHY devices are designed to support the latest industry standards and include gearbox, Multi-Link Gearbox, or MLG, and high density CDR/retimer devices designed to enable existing and next generation Ethernet and OTN line card applications to support the latest high-density electrical and optical interfaces. To date, we have announced four unique devices in this product family:

MSH320, a 100Gbps Gearbox with RS-FEC: For adapting 10x10 to 4x25 from 100Gbps optical standards to a host ASIC, MAC/Framer, NPU or FPGA with 10x10G interfaces. The MSH320 includes an integrated Reed-Solomon forward error correction, or RS-FEC, option to enable systems to also support new electrical and optical standards. The device also includes a 10x10Gbps retimer to allow seamless support of 10 and 40Gbps interfaces;

MSH225, a 10 Lane Full-Duplex Retimer: For high-density retiming applications where the line rates may be up to 28Gbps per lane and connect to host ASIC, framer, NPU or FPGA ICs equipped with 25Gbps interfaces. Each one of the 20 total independent lanes can be configured to support 10, 25, 40 or 100Gbps standards. The MSH225 integrates optional 100Gbps RS-FEC capability and includes a unique redundant link mode feature to support redundancy, scaling or monitoring features;

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MSH322, a 100Gbps Multi-Link Gearbox for Line Cards for support of high-density, independent 10GE and 40GE interfaces multiplexed into a 100GE (4x25Gbps) host interface, while supporting the latest optical industry standards. The device enables line cards with high-density switches based on 25Gbps interfaces to support two times the density of 10 and 40Gbps ports; and

MSH321, a derivative Multi-Link Gearbox built into a highly compact package and optimized layout to support the MLG function in module and compact daughter card applications.

We do not anticipate significant revenues from our LineSpeed ICs until 2017 or later. While we have a robust pipeline of design win opportunities, to date, less than 10% of our design wins claimed are for our LineSpeed products, and we expect these customers to take a minimum of 18 months to commence production.

**IP Licensing and Distribution**

Historically, we have offered our memory and I/O technologies on a worldwide basis to semiconductor companies, electronic product manufacturers, foundries, intellectual property companies and design companies through product development, technology licensing and joint marketing relationships. We licensed our IP technology to semiconductor companies who incorporated our technology into ICs that they sold to their customers. As a result of the change in our corporate strategy, since early 2012, our IP licensing activities have been limited, and we expect this to continue. However, during 2015, 45% of our total revenues were generated from royalties related to our existing licensing arrangements, as we continue to collect royalties from 1T- SRAM licensees. Licensing and royalty revenues have been declining since 2010, and we expect continued decline in 2016.

**Research and Development**

Our ability to compete in the future depends on successfully improving our technology to meet the market's increasing demand for higher performance and lower cost requirements. We have assembled a team of highly skilled engineers whose activities are focused on developing higher density, higher bandwidth, higher speed and lower cost next generation IC products. Development of our IC products requires specialized chip design and product engineers, as well as significant fabrication and testing costs, including mask costs, as we bring these products to market. We expect our significant future research and development activities to include:

designing next generation ICs with larger memory blocks and higher-speed SerDes;

developing versions of our Bandwidth Engine ICs with alternative features, such as lower-speed SerDes, increased chip-level intelligence or smaller memory blocks to allow us to serve a broader range of applications and systems;

developing derivative versions of our LineSpeed ICs to meet customer demands; and

developing new products that can leverage our proprietary IP portfolio and expand our market opportunity.

No development efforts are being dedicated to creating new or enhanced technology solely for use in licensing offerings.

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**Sales and Marketing**

We believe that networking and communications systems OEMs typically prefer to extend the use of traditional memory solutions and their parallel interfaces, despite performance and costs challenges and are reluctant to change their technology platforms and adopt new designs and technologies, such as serial interfaces, which are an integral part of our product solutions. Therefore, our principal selling and marketing activities to date have been focused on persuading these OEMs and key component suppliers that our solutions provide critical performance advantages, as well as on securing design wins with them.

Our sales and marketing personnel are located in the United States, Japan and China. In addition to our direct sales team, we sell through sales representatives and distributors in the United States and Asia. We also have eight applications engineers who support our customer engagements and work closely with our engineering team on product definition. For our products, our applications engineers must engage with the customers' system architects and designers to propose our IC and IP solutions such as the GCI Interface, to address their systems challenges.

In the markets we serve, the time from initial customer engagement to design win to production volume shipments can range from 18-36 months. Networking and communications systems can have a product life from a few years to over 10 years once a product like ours has been designed into the system.

Our revenue has been highly concentrated, with a few customers accounting for a significant percentage of our total revenue. For the year ended December 31, 2015, Alcatel-Lucent, Taiwan Semiconductor Manufacturing Co., Ltd., or TSMC and Kogent, Inc., our Japanese IC distributor, represented 34%, 31% and 12% of total revenue, respectively. For the year ended December 31, 2014, TSMC, Kogent, Inc. and Broadcom Ltd., represented 34%, 31% and 11% of total revenue, respectively. For the year ended December 31, 2013, TSMC and Broadcom Ltd., licensees of our memory IP, represented 41% and 13% of total revenue, respectively.

Customers in North America accounted for 51%, 28% and 30% of our revenues for the years ended December 31, 2015, 2014 and 2013, respectively. Customers in Japan accounted for 15%, 36% and 27% of our revenues for the years ended December 31, 2015, 2014 and 2013, respectively. Customers in Taiwan accounted for 32%, 35% and 42% of our revenues for the years ended December 31, 2015, 2014 and 2013, respectively. Our remaining revenues were primarily from customers in the rest of Asia and in Europe.

**Intellectual Property**

We regard our patents, copyrights, trademarks, trade secrets and similar intellectual property as critical to our success, and rely on a combination of patent, trademark, copyright, and trade secret laws to protect our proprietary rights.

As of December 31, 2015, we held approximately 67 U.S. and 30 foreign patents on various aspects of our technology, with expiration dates ranging from 2016 to 2035. We currently have approximately 29 pending patent applications in the U.S. and abroad. There can be no assurance that others will not independently develop or patent similar or competing technology or design around any patents that may be issued to us, or that we will be able to successfully enforce our patents against infringement by others.

In December 2011, we sold 43 United States and 30 related foreign memory technology patents for \$35 million in cash pursuant to a patent purchase agreement. Under the agreement, we retained a license to all of the sold patents that is unlimited with respect to our development, manufacturing and distribution of our Bandwidth Engine IC product line and any other proprietary products that we develop as long as they are not DRAM ICs. We also retained the rights necessary to renew existing

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1T-SRAM licenses and to grant licenses similar in scope to identified foundries. We also retained rights to grant licenses for our second source purposes, to enable certain kinds of technology development and, to a limited extent, for certain ASIC products that incorporate one of our technology macros. However, the patent purchase agreement limits our rights to grant licenses under the sold patents outside the scope of our retained license and, in particular, limits the number of future licenses of 1T-SRAM memory technology that we can grant to developers of SoCs, which used to be the principal focus of our 1T-SRAM licensing activities.

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. Our licensees or we might, from time to time, receive notice of claims that we have infringed patents or other intellectual property rights owned by others. Our successful protection of our patents and other intellectual property rights and our ability to make, use, import, offer to sell, and sell products free from the intellectual property rights of others are subject to a number of factors, particularly those described in Part I, Item 1A, "Risk Factors."

**Competition**

The markets for our products are highly competitive. We believe that the principal competitive factors are:

processing speed and performance;

density and cost;

power consumption;

reliability;

interface requirements;

ease with which technology can be customized for and incorporated into customers' products; and

level of technical support provided.

We believe that we can compete favorably with respect to each of these criteria. Our proprietary 1T-SRAM embedded memory and high-speed serial I/O IP can provide our Bandwidth Engine ICs with a competitive advantage over alternative devices. Alternative solutions are either DRAM or SRAM-based and can support either the memory size or speed requirements of high-performance networking systems, but generally not both. DRAM solutions provide a significant amount of memory at competitive cost, but DRAM solutions do not have the required fast access and cycle times to enable high-performance. The DRAM solutions currently used in networking systems include RLD RAM from Micron Technology, Inc., or Micron, and Integrated Silicon Solutions, Inc., LLDRAM from Renesas and DDR from Samsung Electronics Co., Ltd., Micron and others. In addition, Micron has a hybrid memory cube DRAM product, which consists of multiple DRAMs connected with a serial interface. SRAM solutions can meet high-speed performance requirements, but often lack adequate memory size. The SRAM solutions currently used in networking systems primarily include QDR or similar SRAM products from Cypress Semiconductor Corporation and GSI Technology, Inc. The majority of the currently available SRAM and DRAM solutions use a parallel, rather than a serial I/O. To offset these drawbacks, system designers generally must use more discrete memory ICs, resulting in higher power consumption and greater utilization of space on the line card.

Our competitors include established semiconductor companies with significantly longer operating histories, greater name recognition and reputation, large customer bases, dedicated manufacturing facilities and greater financial, technical, sales and marketing resources. This may allow them to respond more quickly than us to new or emerging technologies or changes in customer requirements.

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Many of our competitors also have significant influence in the semiconductor industry. They may be able to introduce new technologies or devote greater resources to the development, marketing and sales of their products than we can. Furthermore, in the event of a manufacturing capacity shortage, these competitors may be able to manufacture products when we are unable to do so.

Our Bandwidth Engine ICs compete with embedded memory solutions, stand-alone memory ICs, including both DRAM and SRAM ICs, and ASICs designed by customers in-house to meet their system requirements. Our prospective customers may be unwilling to adopt and design-in our ICs due to the uncertainties and risks surrounding designing a new IC into their systems and relying on a supplier that has limited history of manufacturing such ICs. In addition, Bandwidth Engine ICs require the customer and its other IC suppliers to implement our chip-to-chip communication protocol, the GCI interface. These parties may be unwilling to do this if they believe it could adversely impact their own future product developments or competitive advantages, or, if they believe it might complicate their development process or increase the cost of their products. In order to remain competitive, we believe we must provide unparalleled memory IC solutions with the highest bandwidth capability for our target markets, which solutions are engineered and built for high-reliability carrier and enterprise applications.

Our LineSpeed ICs compete with solutions offered by Broadcom Ltd., Inphi Corporation, M/A-COM Technology Solutions Holdings, Inc. and Semtech Corp., as well as other smaller analog signal processing companies. We also may compete with ASICs designed by customers in-house to meet their system requirements, as well as by optical module OEMs. The market for our LineSpeed products is highly competitive, and customers have a number of suppliers they can choose from. We must provide differentiated features with a reasonable IC power budget, while offering competitive pricing.

**Manufacturing**

We depend on third-party vendors to manufacture, package, assemble and test our IC products, as we do not own or operate a semiconductor fabrication, packaging or production testing facility for boards and system assembly. By outsourcing manufacturing, we are able to avoid the high cost associated with owning and operating our own facilities, allowing us to focus our efforts on the design and marketing of our products.

We perform an ongoing review of product manufacturing and testing processes. Our IC products are subjected to extensive testing to assess whether their performance meets design specifications. Our test vendors provide us with immediate test data and the ability to generate characterization reports that are made available to our customers. We have achieved ISO 9001:2008 certification, and all of our manufacturing vendors have also achieved ISO 9001 certification.

**Employees**

As of December 31, 2015, we had 104 employees, consisting of 75 in research and development, 8 in sales and marketing, 11 in manufacturing operations and 10 in finance and administration. By location, we had 81 employees in the United States, 21 in our development center in India and 2 sales and marketing employees in Asia. In January 2016, we committed to effect a reduction in our workforce and associated operating expenses, net loss and cash burn and to realign resources, as we have substantially concluded development of new products, including our third generation Bandwidth Engine IC product family, and expect to bring these products to market in 2016. We have reduced United States headcount by approximately 13 people and will cease operations at our subsidiary in Hyderabad, India in the first half of 2016.



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We were founded in 1991 and reincorporated in Delaware in September 2000. Our website address is [www.mosys.com](http://www.mosys.com). The information in our website is not incorporated by reference into this report. Through a link on the Investor section of our website, we make available our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after they are filed with, or furnished to, the Securities and Exchange Commission, or SEC. You can also read and obtain copies of any materials we file with the SEC, at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, DC 20549. You can obtain additional information about the operation of the Public Reference Room by calling the SEC at 1.800.SEC.0330. In addition, the SEC maintains a website ([www.sec.gov](http://www.sec.gov)) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us.

**Executive Officers**

The names of our executive officers and certain information about them are set forth below:

Name	Age	Position(s) with the Company
Leonard Perham	72	President and Chief Executive Officer
James W. Sullivan	47	Vice President of Finance and Chief Financial Officer
Thomas Riordan	59	Chief Operating Officer and Executive Vice President
John Monson	53	Vice President of Marketing and Sales

*Leonard Perham.* Mr. Perham was appointed President and Chief Executive Officer in November 2007. Mr. Perham was one of the original investors in MoSys and served on our Board of Directors from 1991 to 1997. In 2000, Mr. Perham retired from Integrated Device Technology, Inc., or IDT, where he served as Chief Executive Officer from 1991 and President and board member from 1986. From March 2000 to February 2012, Mr. Perham served as a member of or chairman of the board of directors of NetLogic Microsystems, a fabless semiconductor company. Prior to joining IDT, Mr. Perham was President and CEO of Optical Information Systems, Inc., a division of Exxon Enterprises. He was also a member of the founding team at Zilog, Inc. and held management positions at Advanced Micro Devices and Western Digital. Mr. Perham received a Bachelor of Science degree in Electrical Engineering from Northeastern University.

*James W. Sullivan.* Mr. Sullivan became our Vice President of Finance and Chief Financial Officer in January 2008. From July 2006 until January 2008, Mr. Sullivan served as Vice President of Finance and Chief Financial Officer at Aaptera, Inc., a venture-backed company providing software for mobile advertising, search and commerce. From July 2002 until June 2006, Mr. Sullivan was the Chief Financial Officer at 8x8, Inc., a provider of voice over internet protocol communication services. Mr. Sullivan's prior experience includes various positions at 8x8, Inc. and PricewaterhouseCoopers LLP. He received a Bachelor of Science degree in Accounting from New York University and is a Certified Public Accountant.

*Thomas Riordan.* Mr. Riordan became our Chief Operating Officer and Executive Vice President in May 2011. Prior to joining the Company, Mr. Riordan was President and Chief Executive Officer of Exclara, a fabless semiconductor supplier of ICs for solid-state lighting from 2006 until 2010. From 2000 to 2004, Mr. Riordan served as Vice President of PMC-Sierra's microprocessor division. Mr. Riordan joined PMC-Sierra in August 2000 when it purchased Quantum Effects Devices, which he had co founded and served as President and Chief Executive Officer. Mr. Riordan serves on the board of directors of Mellanox Technologies. Mr. Riordan holds Bachelor of Science and Master of Science degrees in Electrical Engineering as well as a Bachelor of Arts degree in Government from the

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University of Central Florida and has done post-graduate work in Electrical Engineering at Stanford University.

*John Monson.* Mr. Monson became our Vice President of Marketing in February 2012. In early 2014, he assumed, on a permanent basis, additional responsibilities for our sales and business development activities and became our Vice President of Marketing and Sales. Prior to joining the Company, Mr. Monson was Vice President of Marketing for Mellanox Technologies, a supplier of interconnect solutions and services, from 2009 to 2012. From 2007 to 2008, Mr. Monson was Vice President of the EDC/PhyOptik business line at Inphi Corporation. He joined Inphi Corporation through a business unit acquisition of Scintera Networks, where he was Vice President of Sales and Marketing from 2005 to 2007. Previously, he held various management positions at PMC-Sierra, Inc., Lucent Technologies and AT&T Microelectronics. Mr. Monson received a Bachelor of Science degree in Electrical Engineering from the University of Minnesota.

**Item 1A. Risk Factors**

*If any of the following risks actually occur, our business, results of operations and financial condition could suffer significantly.*

***We have a history of losses and are uncertain as to our future profitability.***

We recorded an operating loss of \$31.5 million for the year ended December 31, 2015 and ended the period with an accumulated deficit of \$182.0 million. We recorded an operating loss of \$32.7 million for the year ended December 31, 2014 and ended the period with an accumulated deficit of \$150.5 million. We recorded an operating loss of \$25.6 million, excluding the one-time gain on sale of assets of \$0.6 million, for the year ended December 31, 2013. These and prior year losses have resulted in significant negative cash flows for more than a decade and have required us to raise substantial amounts of additional capital during this period. We expect to continue to incur operating losses for the foreseeable future as we secure customers for and continue to invest in the commercialization of our IC products. Due to the strong commitment of our resources to research and development and expansion of our product offerings to customers, we will need to increase revenues substantially beyond levels that we have attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time. Given our history of fluctuating revenues and operating losses, the expected reduction in royalty and licensing revenues and challenges we face in securing customers for our IC products, we cannot be certain that we will be able to achieve profitability on either a quarterly or annual basis in the future.

***Our success depends upon the networking and communications systems markets' acceptance of our ICs.***

The future prospects of our business depend on the adoption and acceptance by our target markets, networking communications and data center equipment providers, of our Bandwidth Engine and LineSpeed ICs. In 2011, we began focusing our engineering, marketing and sales efforts on our IC products and de-emphasizing our technology licensing activities, which historically have been our primary revenue source. Our prospective customers may be unwilling to adopt and design-in our ICs due to the uncertainties and risks surrounding designing a new IC into their systems and relying on a supplier that has almost no history of manufacturing such ICs. In addition, our Bandwidth Engine IC products require our customers and their other IC suppliers to implement our new and proprietary chip-to-chip communication protocol, GCI, which they may be unwilling to do. We have determined and negotiated prices with a few customers for our ICs and have gained only limited experience with the cost of making and selling these products. Thus, currently, we do not know whether we will be able to profitably make and sell these products. We are investing significant resources to develop our next

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generation IC products, but may not introduce these new products successfully or obtain significant revenue from them.

An important part of our strategy to gain market acceptance is to penetrate new markets by targeting market leaders to accept our IC solutions. This strategy is designed to encourage other participants in those markets to follow these leaders in adopting our solutions. If a high-profile industry participant adopts our ICs for one or more of its products but fails to achieve success with those products, or is unable to successfully implement our ICs, other industry participants' perception of our solutions could be harmed. Any such event could reduce the amount of future sales of our IC products.

***Our future revenue depends on our winning designs with our customers, and those customers designing our solutions into their product offerings and successfully selling and marketing such products. If we do not continue to win designs in the short term, our product revenue in the following years will not grow.***

We sell our ICs to original equipment manufacturer (OEM) customers that include our ICs in their products. Our technology is generally incorporated into products at the design stage, which we refer to as a design win, and which we define as the point at which a customer has made a commitment to build a board against the fixed schematic for his system, and this board will utilize our ICs. As a result, our future revenue depends on our OEM customers designing our ICs into their products, and on those products being produced in volume and successfully commercialized. If we fail to convince our current or prospective customers to include our ICs in their products and fail to achieve a consistent number of design wins, our results of operations and business will be harmed. In addition, if a current or prospective customer designs a competitor's offering into its product, it becomes significantly more difficult for us to sell our IC solutions to that customer because changing suppliers involves significant cost, time, effort and risk for the OEM. Even if a customer designs one of our ICs into its product, we cannot be assured that the OEM's product will be commercially successful over time or at all or that we will receive or continue to receive any revenue from that customer. Furthermore, the customer product for which we obtain a design win may be canceled before the product enters production or is introduced into the market. Because of our extended sales cycle, our revenue in future years is highly dependent on design wins we are awarded today.

***The design win process is generally a lengthy, expensive and competitive process, with no guarantee of revenue, and if we fail to generate sufficient revenue to offset our expenses, our business and operating results would suffer.***

Achieving a design win is typically a lengthy, expensive and competitive process because our customers generally take a considerable amount of time to evaluate our ICs. In the markets we serve, the time from initial customer engagement to design win to production volume shipments can range from two to three years, though it may take longer for new customers or markets we intend to address. In order to win designs, we are required to both incur design and development costs and dedicate substantial engineering resources in pursuit of a single customer opportunity. Even though we incur these costs, we may not prevail in the competitive selection process and, even if we do achieve a design win, we may never generate sufficient, or any, revenue to offset our development expenditures. Our customers have the option to decide whether or not to put our solutions into production after initially designing our products in the specification. The customer can make changes to its product after a design win has been awarded to us, which can have the effect of canceling a previous design win. The delays inherent in our protracted sales cycle increase the risk that a customer will decide to cancel, curtail, reduce or delay its product plans, causing us to lose anticipated revenue. In addition, any change, delay or cancellation of a customer's plans could harm our financial results, as we may have incurred significant expense while generating no revenue.

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***If our foundries do not achieve satisfactory yields or quality, our cost of goods sold will increase, our operating margins will decline, and our reputation and customer relationships could be harmed.***

We depend not only on sufficient foundry manufacturing capacity and wafer prices, but also on good production yields (the number of good die per wafer) and timely wafer delivery to meet customer demand and maintain profit margins. The fabrication of our products is a complex and technically demanding process. Minor deviations in the manufacturing process can cause substantial decreases in yields, and in some cases, cause production to be suspended. Our foundry, Taiwan Semiconductor Manufacturing Company (TSMC), from time to time, experiences manufacturing defects and reduced manufacturing yields. Changes in manufacturing processes or the inadvertent use of defective or contaminated materials by our foundries could result in lower than anticipated manufacturing yields, which would harm our revenue or increase our costs. For example, recently, our foundry produced ICs and met its process specification range but did not meet our customer's specifications causing us to write off a portion of our production lot. Many of these problems are difficult to detect at an early stage of the manufacturing process and may be time consuming and expensive to correct. Poor yields from our foundry, or defects, integration issues or other performance problems in our ICs, could cause us significant customer relations and business reputation problems, harm our operating results and give rise to financial or other damages to our customers. Our customers might consequently seek damages from us for their losses. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly to defend.

***We may experience difficulties in transitioning to new wafer fabrication process technologies or in achieving higher levels of design integration, which may result in reduced manufacturing yields, delays in product deliveries and increased costs.***

We aim to use the most advanced manufacturing process technology appropriate for our solutions that is available from TSMC. As a result, we periodically evaluate the benefits of migrating our solutions to other technologies in order to improve performance and reduce costs. These ongoing efforts require us from time to time to modify the manufacturing processes for our products and to redesign some products, which in turn may result in delays in product deliveries. We are dependent on TSMC to support the production of wafers for future versions of our ICs, as TSMC is our sole foundry. Such production may require changes to TSMC's existing process technology. If TSMC elects to not alter their process technology to support future versions of our ICs, we would need to identify a new foundry.

In addition, to date, specifically with regard to our Bandwidth Engine products, TSMC has not provided us with a product roadmap for the 1T-SRAM technology at process nodes below 40 nanometers. If TSMC does not support our 1T-SRAM at process nodes below 40 nanometers, so, we have not developed any memory products below that process node yet. We would need to eventually identify a new foundry and/or no longer use our 1T-SRAM technology. We do not consider this to adversely affect our current product offerings but we may face difficulties, delays and increased expense as we transition our products to new processes, and potentially to new foundries for future products.

Because the manufacturing of integrated circuits is extremely complex, the process of qualifying a new foundry is a lengthy process and there can be no assurance that we will be able to find and qualify replacement suppliers without materially adversely affecting our business, financial condition, results of operations and prospects for future growth. We cannot assure you that we will be able to maintain our relationship with our foundries or develop relationships with new foundries. If we or TSMC experience significant delays in transitioning to smaller geometries or fail to efficiently implement transitions, we could experience reduced manufacturing yields, delays in product deliveries and increased costs, any of which could harm our relationships with our customers and our operating results.

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*We may not achieve the anticipated benefits of becoming a fabless semiconductor company by developing and bringing to market the Bandwidth Engine and LineSpeed IC product lines.*

In 2010, we expanded our business model to become a fabless semiconductor company through the development of a product line of memory ICs called the Bandwidth Engine. In March 2013, we announced a product line of SerDes ICs called LineSpeed. Our goal is to increase our total available market by creating high-performance ICs for networking communications and data center systems, using our proprietary technology and design expertise. This development effort has required that we add headcount and design resources, such as expensive software tools, which has increased our losses from and cash used in operations. We may not be successful in our development efforts to bring our ICs to market successfully nor be successful in selling ICs due to various risks and uncertainties, including, but not limited to:

customer acceptance;

adoption of the GCI protocol, without which our Bandwidth Engine products cannot function;

difficulties and delays in our product development, manufacturing, testing and marketing activities;

timeliness of new product introductions;

the anticipated costs and technological risks of developing and bringing ICs to market;

the willingness of our manufacturing partners to assist successfully with fabrication;

our ability to qualify our products for mass production and achieve wafer yield levels to be price competitive;

the availability of quantities of ICs supplied by our manufacturing partners at a competitive cost;

our ability to generate the desired gross margin percentages and return on our product development investment;

competition from established IC suppliers;

the adequacy of our intellectual property protection for our proprietary IC designs and technologies;

customer concerns over our financial condition and viability to be a long-term profitable supplier;

the vigor and growth of markets served by our current and prospective customers; and

our lack of recent experience as a fabless semiconductor company making and selling proprietary ICs.

If we experience significant delays in bringing our IC products to market or if customer adoption of our products is delayed, this could have a material adverse effect on our anticipated revenues in upcoming years due to the potential loss of design wins and future revenues. For example, we have experienced significant delays in bringing our third generation LineSpeed products to market, which has prevented us from achieving design wins and resulted in us introducing products after our competitors. We may continue to experience significant delays in the

future.

***Our main objective is the development and sale of our products to networking communications and data center systems providers and their subsystem and component vendors, and, if demand for these products does not grow, we may not achieve revenue growth and our strategic objectives.***

We market and sell our ICs to networking communications and data center equipment providers and their subsystem and component vendors. We believe our future business and financial success depends on market acceptance and increasing sales of these products. In order to meet our growth and strategic objectives, networking infrastructure OEMs must incorporate our products into their systems,

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and the demand for their systems must grow as well. We cannot provide assurance that sales of our products to these OEMs will increase substantially in the future or that the demand for our customers' systems will increase. Our future revenues from these products may not increase in accordance with our growth and strategic objectives if instead our OEM customers modify their product designs, select products sold by our competitors or develop their own proprietary ICs. Moreover, demand for their products that incorporate our ICs may not grow or result in significant sales of such products due to factors affecting the customers and their business, such as industry downturns, declines in capital spending in the enterprise and carrier markets and unfavorable macroeconomic conditions. Thus, the future success of our business depends in large part on factors outside our control, and sales of our products may not meet our revenue growth and strategic objectives.

***Our failure to continue to develop new products and enhance our products on a timely basis could diminish our ability to attract and retain customers.***

The existing and potential markets for our products are characterized by ever-increasing performance requirements, evolving industry standards, rapid technological change and product obsolescence. These characteristics lead to frequent new product introductions and enhancements, shorter product life cycles and changes in industry demands. In order to attain and maintain a significant position in the market, we will need to continue to enhance and evolve our products and the underlying proprietary technologies in anticipation of these market trends.

Our future performance depends on a number of factors, including our ability to:

identify target markets and relevant emerging technological trends;

develop and maintain competitive technology by improving performance and adding innovative features that differentiate our products from alternative technologies;

enable the incorporation of our products into the customers' products on a timely basis and at competitive prices;

develop our products to be manufactured at smaller process geometries; and

respond effectively to new technological developments or new product introductions by others.

We plan to continually introduce enhancements to our products to meet market requirements. However, we cannot be assured that these introductions will achieve market acceptance or that we will be able to sell the products on terms that are favorable to us. Our failure to develop future products that achieve market acceptance could harm our competitive position and impede our future growth.

***Our ICs have a lengthy sales cycle, which makes it difficult to predict success in this market and the timing of future revenue.***

Our ICs have a lengthy sales cycle, ranging from six to 24 months from the date of our initial proposal to a prospective customer until the date on which the customer confirms that it has designed our product into its system. As lengthy, or an even lengthier period, could ensue before we would know the volume of products that such customer will, or is likely to, order. A number of factors can contribute to the length of the sales cycle, including technical evaluations of our products by the customers, the design process required to integrate our products into the customers' products and the timing of the customers' new product announcements. In anticipation of product orders, we may incur substantial costs before the sales cycle is complete and before we receive any customer payments. As a result, in the event that a sale is not completed or is cancelled or delayed, we may have incurred substantial expenses, making it more difficult for us to become profitable or otherwise negatively impacting our financial results. Furthermore, because of this lengthy sales cycle, the recording of revenues from our selling efforts may be substantially delayed, our ability to forecast our future revenue may be more limited and our revenue may fluctuate significantly from quarter to quarter. We cannot provide any assurances that our efforts to build a strong and profitable business based on the

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sale of ICs will succeed. If these efforts are not successful, in light of the substantial resources that we have invested, our future operating results and cash flows could be materially and adversely affected.

***The semiconductor industry is cyclical in nature and subject to periodic downturns, which can negatively affect our revenue.***

The semiconductor industry is cyclical and has experienced pronounced downturns for sustained periods of up to several years. To respond to any downturn, many semiconductor manufacturers and their customers will slow their research and development activities, cancel or delay new product developments, reduce their workforces and inventories and take a cautious approach to acquiring new equipment and technologies. As a result, our business has been in the past and could be adversely affected in the future by an industry downturn, which could negatively impact our future revenue and profitability. Also, the cyclical nature of the semiconductor industry may cause our operating results to fluctuate significantly from year-to-year, which may tend to increase the volatility of the price of our common stock.

***We expect our licensing and royalty revenues to decrease compared with our historical results, and there is no guarantee revenues from our IC products will replace these lost revenues in the near future.***

In 2011, we began to place greater emphasis on our IC business and re-deploy engineering, marketing and sales resources from IP to IC activities. We are no longer actively pursuing new license arrangements, and, as a result, our license and royalty revenues in 2015 declined when compared with prior years. We do not expect to generate sufficient revenues from our IC business to allow us to achieve profitability in 2016, and we expect our royalty revenues to decline in 2016 compared with 2015. In addition, the production volumes of the current royalty-bearing products shipped by our licensees are expected to decrease; therefore we expect our royalty revenue to decrease in future periods. Historically, royalties have generated a 100% gross margin, and any decrease in royalties adversely affects our gross margin, operating results and cash flows.

***Our revenue has been highly concentrated among a small number of licensees and customers, and our results of operations could be harmed if we lose a key revenue source and fail to replace it.***

Our overall revenue has been highly concentrated, with a few customers accounting for a significant percentage of our total revenue. For the year ended December 31, 2015, our three largest customers represented 34%, 31% and 12% of total revenue, respectively. For the year ended December 31, 2014, our three largest customers represented 34%, 31% and 11% of total revenue, respectively. For the year ended December 31, 2013, our two largest customers represented 41%, and 13% of total revenue, respectively. We expect that a relatively small number of customers will continue to account for a substantial portion of our revenue for the foreseeable future.

As a result of this revenue concentration, our results of operations could be adversely affected by the decision of a single key licensee or customer to cease using our technology or products or by a decline in the number of products that incorporate our technology that are sold by a single licensee or customer or by a small group of licensees or customers.

***Our revenue concentration may also pose credit risks, which could negatively affect our cash flow and financial condition.***

We might also face credit risks associated with the concentration of our revenue among a small number of licensees and customers. As of December 31, 2015, three customers represented 94% of total trade receivables. Our failure to collect receivables from any customer that represents a large percentage of receivables on a timely basis, or at all, could adversely affect our cash flow or results of operations and might cause our stock price to fall.



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***Our products must meet exact specifications, and defects and failures may occur, which may cause customers to return or stop buying our products.***

Our customers generally establish demanding specifications for quality, performance and reliability that our products must meet. However, our products are highly complex and may contain defects and failures when they are first introduced or as new versions are released. If defects and failures occur in our products during the design phase or after, we could experience lost revenues, increased costs, including warranty and customer support expenses and penalties for non-performance stipulated in customer purchase agreements, delays in or cancellations or rescheduling of orders or shipments, product returns or discounts, diversion of management resources or damage to our reputation and brand equity, and in some cases consequential damages, any of which would harm our operating results. In addition, delays in our ability to fill product orders as a result of quality control issues may negatively impact our relationship with our customers. We cannot assure you that we will have sufficient resources to satisfy any asserted claims. Furthermore, any such defects, failures or delays may be particularly damaging to us as we attempt to establish our reputation as a reliable provider of IC products.

***Because we sell our products on a purchase order basis and rely on estimated forecasts of our customers' needs, inaccurate forecasts could adversely affect our business.***

We expect to sell our IC products pursuant to individual purchase orders, rather than long-term purchase commitments. Therefore, we will rely on estimated demand forecasts, based upon input from our customers, to determine how much product to manufacture. Because our sales will be based primarily on purchase orders, our customers may cancel, delay or otherwise modify their purchase commitments with little or no notice to us. For these reasons, we will generally have limited visibility regarding our customers' product needs. In addition, the product design cycle for networking OEMs is lengthy, and it may be difficult for us to accurately anticipate when they will commence commercial shipments of products that include our ICs.

Furthermore, if we experience substantial warranty claims, our customers may cancel existing orders or cease to place future orders. Any cancellation, delay or other modification in our customers' orders could significantly reduce our revenue, cause our operating results to fluctuate from period to period and make it more difficult for us to predict our revenue. In the event of a cancellation or reduction of an order, we may not have enough time to reduce operating expenses to mitigate the effect of the lost revenue on our business.

If we overestimate customer demand for our products, we may purchase products from our manufacturers that we cannot sell. Conversely, if we underestimate customer demand or if sufficient manufacturing and testing capacity were unavailable, we would forego revenue opportunities and could lose market share in the markets served by our products and could incur penalty payments under our customer purchase agreements. In addition, our inability to meet customer requirements for our products could lead to delays in product shipments, force customers to identify alternative sources and otherwise adversely affect our ongoing relationships with our customers.

***We depend on contract manufacturers for a significant portion of our revenue from the sale of our IC products.***

Many of our current and prospective OEM customers use third party contract manufacturers to manufacture their systems, and these contract manufacturers purchase our products directly from us on behalf of the OEMs. Although we expect to work with our OEM customers in the design and development phases of their systems, these OEMs often give contract manufacturers some authority in product purchasing decisions. If we cannot compete effectively for the business of these contract manufacturers, or, if any of the contract manufacturers that work with our OEM customers experience financial or other difficulties in their businesses, our revenue and our business could be adversely affected. For example, if a contract manufacturer becomes subject to bankruptcy proceedings, we may

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not be able to obtain our products held by the contract manufacturer or recover payments owed to us by the contract manufacturer for products already delivered to the contract manufacturer. If we are unable to persuade contract manufacturers to purchase our products, or if the contract manufacturers are unable to deliver systems with our products to OEMs on a timely basis, our business would be adversely affected.

***We rely on independent foundries and contractors for the manufacture, assembly, testing and packaging of our integrated circuits, and the failure of any of these third parties to deliver products or otherwise perform as requested could damage our relationships with our customers and harm our sales and financial results.***

As a fabless semiconductor company, we rely on third parties for substantially all of our manufacturing operations. We depend on these parties to supply us with material in a timely manner that meets our standards for yield, cost and quality. We do not have long-term supply contracts with any of our suppliers or manufacturing service providers, and therefore they are not obligated to manufacture products for us for any specific period, in any specific quantity or at any specified price, except as may be provided in a particular purchase order. Any problems with our manufacturing supply chain could adversely impact our ability to ship our products to our customers on time and in the quantity required, which in turn could damage our customer relationships and impede market acceptance of our IC solutions.

***Our third party wafer foundries, testing and assembly vendors and sales offices are located in regions at high risk for earthquakes and other natural disasters. Any disruption to the operations of these foundries, vendors and offices resulting from earthquakes or other natural disasters could cause significant delays in the development, production, shipment and sales of our IC products.***

TSMC, which manufactures our products, is located in Asia, as are other foundries we may use in the future. EAG, which handles the testing of our products, is headquartered in California. Our primary engineering design center is located in Santa Clara, California, and we have sales offices in Japan and China. The risk of an earthquake in the Pacific Rim region is significant due to the proximity of major earthquake fault lines. In September 1999, a major earthquake in Taiwan affected the facilities of several major foundries and other vendors. As a result of this earthquake, these vendors suffered power outages and disruptions that impaired their production capacity. In February 2016 and September 2003, additional disruptive earthquakes occurred in Taiwan. The occurrence of additional earthquakes or other natural disasters could result in the disruption of the wafer foundry or assembly and test capacity of the third parties that supply these services to us and may impede our research and development efforts, as well as our ability to market and sell our products. We may not be able to obtain alternate capacity on favorable terms, if at all.

***Any claim that our products or technology infringe third party intellectual property rights could increase our costs of operation and distract management and could result in expensive settlement costs or the discontinuance of our technology licensing or product offerings. In addition, we may incur substantial litigation expense, which would adversely affect our profitability.***

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights or positions, which has resulted in often protracted and expensive litigation. We are not aware of any third party intellectual property that our products or technology would infringe. However, like many companies of our size with limited resources, we have not searched for all potentially applicable intellectual property in the public databases. It is possible that a third party now has, or may in the future obtain, patents or other intellectual property rights that our products or technology may now, or in the future, infringe. Our licensees and IC customers, or we, might, from time to time, receive notice of claims that we have infringed patents or other intellectual property rights of others. Litigation against us can result in significant expense and divert the efforts of our technical and

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management personnel, whether or not the litigation has merit or results in a determination adverse to us.

***Royalty amounts owed to us might be difficult to verify, and we might find it difficult, expensive and time-consuming to enforce our license agreements.***

The standard terms of our 1T-SRAM license agreements require our licensees to document the manufacture and sale of products that incorporate our technology and generally report this data to us after the end of each quarter. We have the right to audit these royalty reports periodically, although we have not conducted any such audits since 2010. These audits can be expensive, time-consuming and potentially detrimental to our business relationships. A failure to fully enforce the royalty provisions of our license agreements could cause our revenue to decrease and impede our ability to achieve and maintain profitability.

***We might not be able to protect and enforce our intellectual property rights, which could impair our ability to compete and reduce the value of our technology.***

Our technology is complex and is intended for use in complex SoCs and networking systems. Our licensees' products utilize our embedded memory and/or I/O technology, and a large number of companies manufacture and market these products. Because of these factors, policing the unauthorized use of our intellectual property is difficult and expensive. We cannot be certain that we will be able to detect unauthorized use of our technology or prevent other parties from designing and marketing unauthorized products based on our technology. In the event we identify any past or present infringement of our patents, copyrights or trademarks, or any violation of our trade secrets, confidentiality procedures or licensing agreements, we cannot assure you that the steps taken by us to protect our proprietary information will be adequate to prevent misappropriation of our technology. Our inability to adequately protect our intellectual property would reduce significantly the barriers of entry for directly competing technologies and could reduce the value of our technology. Furthermore, we might initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Litigation by us could result in significant expense and divert the efforts of our technical and management personnel, whether or not such litigation results in a determination favorable to us.

***Our existing patents might not provide us with sufficient protection of our intellectual property, and our patent applications might not result in the issuance of patents, either of which could reduce the value of our core technology and harm our business.***

We rely on a combination of patents, trademarks, copyrights, trade secret laws and confidentiality procedures to protect our intellectual property rights. As of December 31, 2015, we held approximately 67 patents in the United States, and approximately 30 foreign patents, which expire at various times from 2016 to 2035. In addition, as of December 31, 2015, we had approximately 29 pending patent applications worldwide. We cannot be sure that any patents will be issued from any of our pending applications or that any claims allowed from pending applications will be of sufficient scope or strength, or issued in all countries where our products can be sold, to provide meaningful protection or any commercial advantage to us. In December 2011, we sold 43 United States and 30 related foreign patents, which reduced the size of our patent portfolio and diminishes our ability to assert counterclaims in the defense of actions against us that may arise. Also, competitors might be able to design around our patents. Failure of our patents or patent applications to provide meaningful protection might allow others to utilize our technology without any compensation to us.

***The discovery of defects in our technology and products could expose us to liability for damages.***

The discovery of a defect in our technologies and products could lead our customers to seek damages from us. Many of our agreements with customers include provisions waiving implied

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warranties regarding our technology and products and limiting our liability to our customers. We cannot be certain, however, that the waivers or limitations of liability contained in our agreements with customers will be enforceable.

***If we fail to retain key personnel, our business and growth could be negatively affected.***

Our business has been dependent to a significant degree upon the services of a small number of executive officers and technical employees. The loss of any key personnel could negatively impact our technology development efforts, our ability to deliver under our existing agreements, maintain strategic relationships with our partners, and obtain new customers. We generally have not entered into employment or non-competition agreements with any of our employees and do not maintain key-man life insurance on the lives of any of our key personnel.

***Our failure to raise additional capital or generate the significant capital necessary to expand our operations and invest in new products could reduce our ability to compete and could harm our business.***

We intend to continue spending substantial amounts to grow our business. In March 2016, we issued \$8 million aggregate principal amount of 10% Subordinate Senior Secured Convertible Notes due August 15, 2018 (the "Notes"). The Note principal is convertible into our common stock, as well as the interest on the Notes, as we have the option of paying the interest in-kind by converting such interest into additional note principal. In addition, the Notes also include limited anti-dilution protection, such that the conversion price will be reset to a lower conversion price in some situations. As a result, our stockholders may experience significant dilution if these Notes and any additional paid-in-kind principal are converted into our common stock and the conversion price is reset. Although we believe that with the proceeds of this debt we will have capital sufficient to satisfy our working capital requirements for at least the next 12 months, we will still need to obtain additional financing to pursue our business strategy, develop new products, respond to competition and market opportunities and acquire complementary businesses or technologies. We may not be able to obtain such financing on favorable terms or at all.

If we were to raise additional capital through sales of our equity securities, our stockholders would suffer dilution of their equity ownership. If we engage in a subsequent debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, prohibit us from paying dividends, repurchasing our stock or making investments, and force us to maintain specified liquidity or other ratios, any of which could harm our business, operating results and financial condition. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things:

develop or enhance our products;

continue to expand our product development and sales and marketing organizations;

acquire complementary technologies, products or businesses;

expand operations, in the United States or internationally;

hire, train and retain employees; or

respond to competitive pressures or unanticipated working capital requirements.

Our failure to do any of these things could seriously harm our ability to execute our business strategy and may force us to curtail our research and development plans or existing operations.

***Our indebtedness could impair our financial condition, harm our ability to operate our business, limit our ability to borrow additional funds or capitalize on acquisition or other business opportunities.***

We have indebtedness outstanding under the Notes. Pursuant to the terms of the Notes, we cannot engage in certain transactions, including disposing of certain assets, or incurring additional indebtedness, with limited exception, unless we receive prior approval from the Note holders. In the



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absence of such consent, we could be prohibited from engaging in transactions that could be beneficial to our business and our stockholders. In addition, the Notes are secured by a security interest in substantially all of our personal assets, and, in the event of a default by us, the Note holders would have a right to seize our assets. The Notes are payable in full on August 15, 2018 and holders of the Notes that do not elect to convert their Notes must be paid in cash. The holders of the Notes also have the right to require us to redeem the Notes for 120% of the Note principal in the event we are acquired or a majority of our board of directors is replaced within 12 months other than by reason of voluntary resignation or death. In the event of a required redemption, we must obtain the necessary funds if we do not have them at the time, or we will be in default under the Notes, which could have a material adverse effect on our financial condition and the price of our common stock.

***We may incur additional debt in the future, subject to certain limitations contained in our senior secured convertible notes.***

The degree to which we are leveraged and the restrictions governing our indebtedness could have important consequences including, but not limited to:

limiting our ability to service all of our debt obligations;

impacting our ability to incur additional indebtedness or obtain additional financing in the future for working capital, capital expenditures, acquisitions or general corporate or other purposes;

increasing our vulnerability to general economic downturns and adverse industry conditions;

limiting our flexibility in planning for, or reacting to, changes in our business and our industry; and

limiting our ability to engage in certain transactions or capitalize on acquisition or other business opportunities.

If we are in violation of the terms of the Notes in the future and do not receive a waiver, the note holders could choose to accelerate payment on all outstanding loan balances. If we needed to obtain replacement financing, we may not be able to quickly obtain equivalent or suitable replacement financing. If we are unable to secure alternative sources of funding, such acceleration would have a material adverse impact on our financial condition.

***Our failure to successfully address the potential difficulties associated with our international operations could increase our costs of operation and negatively impact our revenue.***

We are subject to many difficulties posed by doing business internationally, including:

foreign currency exchange fluctuations;

unanticipated changes in local regulation;

potentially adverse tax consequences, such as withholding taxes and transfer pricing issues;

political and economic instability; and

reduced or limited protection of our intellectual property.

Because we anticipate that integrated circuit sales to companies that operate primarily outside the United States may account for a substantial portion of our revenue in future periods, the occurrence of any of these circumstances could significantly increase our costs of

operation, delay the timing of our revenue and harm our profitability.

*Any acquisitions we make could disrupt our business and harm our financial condition.*

In the future, we may consider opportunities to acquire other businesses or technologies that would complement our current offerings, expand the breadth of our markets or enhance our technical capabilities. Acquisitions that we may do in the future will present a number of potential challenges

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that could, if not overcome, disrupt our business operations, substantially increase our operating expenses, negatively affect our operating results and cash flows and reduce the value to us of the acquired company or assets purchased, including:

uncertainty related to future revenues;

increased operating expenses and cost structure;

integration of the acquired employees, operations, technologies and products with our existing business and products;

focusing management's time and attention on our core business;

retention of business relationships with suppliers and customers of the acquired business;

entering markets in which we lack prior experience;

retention of key employees of the acquired business;

difficulties and delays in the further development, production, testing and marketing of the acquired technologies; and

amortization of intangible assets, write-offs, stock-based compensation and other charges relating to the acquired business and our acquisition costs.

***Provisions of our certificate of incorporation and bylaws or Delaware law might delay or prevent a change of control transaction and depress the market price of our stock.***

Various provisions of our certificate of incorporation and bylaws might have the effect of making it more difficult for a third party to acquire, or discouraging a third party from attempting to acquire, control of our company. These provisions could limit the price that certain investors might be willing to pay in the future for shares of our common stock. Certain of these provisions eliminate cumulative voting in the election of directors, limit the right of stockholders to call special meetings and establish specific procedures for director nominations by stockholders and the submission of other proposals for consideration at stockholder meetings.

We are also subject to provisions of Delaware law which could delay or make more difficult a merger, tender offer or proxy contest involving our company. In particular, Section 203 of the Delaware General Corporation Law prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years unless specific conditions are met. Any of these provisions could have the effect of delaying, deferring or preventing a change in control, including without limitation, discouraging a proxy contest or making more difficult the acquisition of a substantial block of our common stock.

Under our certificate of incorporation, our board of directors may issue up to 20,000,000 shares of preferred stock without stockholder approval on such terms as the board might determine. The rights of the holders of common stock will be subject to, and might be adversely affected by, the rights of the holders of any preferred stock that might be issued in the future.

***Our stockholder rights plan could prevent stockholders from receiving a premium over the market price for their shares from a potential acquirer.***

We adopted a stockholder rights plan that generally entitles our stockholders to rights to acquire additional shares of our common stock when a third party acquires 15% of our common stock or commences or announces its intent to commence a tender offer for at least 15% of our common stock, other than for one group of related stockholders, as to whom this threshold is 20%. The plan also includes an exception to permit the acquisition of shares representing more than 15% of our common stock by a brokerage firm that manages independent customer accounts



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and generally does not have any discretionary voting power with respect to such shares. This plan could delay, deter or prevent an investor from acquiring us in a transaction that could otherwise result in stockholders receiving a

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premium over the market price for their shares of common stock. Our intention is to maintain and enforce the terms of this plan, which could delay, deter or prevent an investor from acquiring us in a transaction that could otherwise result in stockholders receiving a premium over the market price for their shares of common stock.

***Potential volatility of the price of our common stock could negatively affect your investment.***

We cannot assure you that there will continue to be an active trading market for our common stock. Historically, the stock market, as well as our common stock, has experienced significant price and volume fluctuations. Market prices of securities of technology companies have been highly volatile and frequently reach levels that bear no relationship to the operating performance of such companies. These market prices generally are not sustainable and are subject to wide variations. If our common stock trades to unsustainably high levels, it is likely that the market price of our common stock will thereafter experience a material decline. In the past, our board of directors approved stock repurchase programs, and any future program could impact the price of our common stock and increase volatility.

In the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. We could be the target of similar litigation in the future. Securities litigation could cause us to incur substantial costs, divert management's attention and resources, harm our reputation in the industry and the securities markets and negatively impact our operating results.

***Our stock price could drop, and there could be significantly less trading activity in our stock, if securities or industry analysts downgrade our stock or do not publish research or reports about our business.***

Our stock price and the trading market for our stock are likely to be affected significantly by the research and reports concerning our company and our business which are published by industry and securities analysts. We do not have any influence or control over these analysts, their reports or their recommendations. Our stock price and the trading market for our stock could be negatively affected if any analyst downgrades our stock, publishes a report which is critical of our business, or discontinues coverage of us.

***If we fail to maintain compliance with the continued listing requirements of The NASDAQ Global Select Market, our common stock may be delisted and the price of our common stock and our ability to access the capital markets could be negatively impacted.***

Our common stock currently trades on The NASDAQ Global Select Market under the symbol "MOSY." This market has continued listing standards that we must comply with in order to maintain the listing of our common stock. The continued listing standards include, among others, a minimum bid price requirement of \$1.00 per share and any of: (i) a minimum stockholders' equity of \$2.5 million; (ii) a market value of listed securities of at least \$35.0 million; or (iii) net income from continuing operations of \$500,000 in the most recently completed fiscal year or in the two of the last three fiscal years. Our results of operations and fluctuating stock price directly impact our ability to satisfy these continued listing standards. In the event we are unable to maintain these continued listing standards, our common stock may be subject to delisting from The NASDAQ Global Select Market.

In March 2016, we were notified by the Nasdaq staff that the bid price for our common stock must close at \$1.00 per share or more for a minimum of ten consecutive trading days during the 180 calendar day period ending September 6, 2016 or we might be delisted. As mentioned above, the price of our common stock can be volatile, and there can be no assurance that we will be able to meet the minimum \$1.00 bid price requirement or the other NASDAQ continued listing requirements in the future, and we may be subject to delisting as a result. If we are delisted, we would expect our common

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stock to be traded in the over-the-counter market, which could adversely affect the liquidity of our common stock. Additionally, we could face significant material adverse consequences, including:

a limited availability of market quotations for our common stock;

a reduced amount of analyst coverage;

a decreased ability to issue additional securities or obtain additional financing in the future;

reduced liquidity for our stockholders;

potential loss of confidence by customers, collaboration partners and employees; and

loss of institutional investor interest.

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

Our principal administrative, sales, marketing, support and research and development functions are located in a leased facility in Santa Clara, California. We currently occupy approximately 47,000 square feet of space in the Santa Clara facility, the lease for which extends through August 2020. We have leased office space in Hyderabad, India for an engineering design center, which we expect to close by June 30, 2016, and in Tokyo, Japan, and Shanghai, China for our sales and support offices. We believe that our existing facilities are adequate to meet our current needs.

**Item 3. Legal Proceedings**

We are not a party to any material legal proceeding which could have a material adverse effect on our consolidated financial position or results of operations. From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. These claims, even if not meritorious, could result in the expenditure of significant financial resources and diversion of management efforts.

**Item 4. Mine Safety Disclosures**

Not applicable.

Table of Contents**Part II****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

Our common stock is currently listed on the Global Select Market of the NASDAQ Stock Market under the symbol MOSY. The following table sets forth the range of high and low sales prices of our common stock for each period indicated.

<b>Quarter ended</b>	<b>High</b>	<b>Low</b>
December 31, 2015	\$ 1.62	\$ 1.08
September 30, 2015	\$ 2.03	\$ 1.38
June 30, 2015	\$ 2.37	\$ 1.83
March 31, 2015	\$ 2.37	\$ 1.68
December 31, 2014	\$ 2.77	\$ 1.53
September 30, 2014	\$ 3.42	\$ 2.33
June 30, 2014	\$ 4.68	\$ 2.86
March 31, 2014	\$ 5.90	\$ 4.39
December 31, 2013	\$ 5.64	\$ 4.01
September 30, 2013	\$ 4.36	\$ 3.50
June 30, 2013	\$ 4.80	\$ 3.98
March 31, 2013	\$ 4.85	\$ 3.36

We had 16 stockholders of record as of March 1, 2016.

*Dividend Policy*

We have not declared or paid any cash dividends on our common stock and presently intend to retain future earnings, if any, to fund the development and growth of our business and, therefore, do not anticipate paying any cash dividends in the foreseeable future.

*Stock Performance Graph*

The following graph compares cumulative total stockholder return on our common stock with that of the S&P 500 Index and the S&P Technology Sector Index from 2010 through 2015. The comparison assumes that \$100 was invested on December 31, 2010 in our common stock, the stocks included in the S&P 500 Index and the stocks included in the S&P Technology Sector Index. We have never paid any cash dividends to holders of our common stock.

The comparisons shown in the graph below are based upon historical data, and we caution that the stock price performance shown in the graph below is not indicative of, nor intended to forecast, the potential future performance of our common stock. Information used in the graph was obtained from Standard and Poor's website, a source believed to be reliable, but we are not responsible for any errors or omissions in such information.

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Comparison of Five-Year Cumulative Return

	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
MOSYS, INC.	\$ 100.00	\$ 73.81	\$ 61.16	\$ 97.01	\$ 32.86	\$ 19.16
S & P 500	100.00	101.94	116.29	86.92	98.21	96.50
S & P TECHNOLOGY SECTOR	100.00	100.99	111.82	143.10	172.41	177.70

*Securities Authorized for Issuance under Equity Compensation Plan*

For information regarding securities authorized for issuance under equity compensation plans, please refer to Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

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**Item 6. Selected Financial Data**

The selected financial data presented below is derived from our consolidated financial statements that are included under Item 15. The selected financial data should be read in conjunction with our consolidated financial statements and notes related to those statements and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included herein.

	Year Ended December 31,				
	2015(1)	2014(2)	2013(3)	2012(4)	2011(5)
(In thousands, except per share data)					
<b>Statement of Operations Data:</b>					
Total net revenue	\$ 4,390	\$ 5,380	\$ 4,398	\$ 6,082	\$ 14,107
Cost of net revenue	2,474	2,318	474	334	3,295
Gross profit	1,916	3,062	3,924	5,748	10,812
Operating expenses	33,407	35,780	28,856	33,407	(526)
Income (loss) from operations	(31,491)	(32,718)	(24,932)	(27,659)	11,338
Other income, net	94	143	209	155	206
Income (loss) before income taxes	(31,397)	(32,575)	(24,723)	(27,504)	11,544
Income tax provision	86	107	71	110	288
Net income (loss)	\$ (31,483)	\$ (32,682)	\$ (24,794)	\$ (27,614)	\$ 11,256
Net income (loss) per share:					
Basic	\$ (0.50)	\$ (0.66)	\$ (0.55)	\$ (0.70)	\$ 0.30
Diluted	\$ (0.50)	\$ (0.66)	\$ (0.55)	\$ (0.70)	\$ 0.28
Shares used in computing net income (loss) per share:					
Basic	62,497	49,528	45,246	39,176	37,861
Diluted	62,497	49,528	45,246	39,176	40,377
Allocation of stock-based compensation to cost of net revenue and operating expenses:					
Cost of net revenue	\$	\$	\$ 7	\$ 53	\$ 407
Research and development	2,733	3,419	2,565	2,694	1,961
Selling, general and administrative	917	1,172	1,126	1,064	1,398
	\$ 3,650	\$ 4,591	\$ 3,698	\$ 3,811	\$ 3,766

	Year Ended December 31,				
	2015	2014	2013	2012	2011
(In thousands)					
<b>Balance Sheet Data:</b>					
Cash, cash equivalents and investments	\$ 20,238	\$ 25,794	\$ 50,482	\$ 40,710	\$ 57,975
Working capital	19,661	22,649	36,020	30,155	47,968
Total assets	48,692	52,626	77,989	69,534	89,637
Current liabilities	3,604	2,845	2,355	4,821	4,035
Long-term liabilities	247	241	216	171	109
Stockholders' equity	44,841	49,540	75,418	64,542	85,493

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- (1) Operating expenses include \$0.3 million of amortization of acquired intangible assets.
  - (2) Operating expenses include \$1.0 million of amortization of acquired intangible assets.
  - (3) Operating expenses include a gain on the sale of patents of \$0.6 million and \$1.0 million of amortization of acquired intangible assets.
  - (4) Operating expenses include a gain on the sale of assets of \$3.3 million and \$1.7 million of amortization of acquired intangible assets.
  - (5) Operating expenses include a gain on the sale of patents of \$35.6 million and \$2.6 million of amortization of acquired intangible assets.
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**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

*This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the accompanying consolidated financial statements and notes included in this report.*

**Overview**

Our strategy and primary business objective is to become a fabless semiconductor company focused on the development and sale of integrated circuits, or ICs, for the high-speed networking, communications, storage and data center markets. Our solutions deliver time-to-market, performance, power, area and economic benefits for system original equipment manufacturers, or OEMs. We have developed two families of ICs under the Bandwidth Engine® and LineSpeed product names. Bandwidth Engine ICs combine our proprietary 1T-SRAM® high-density embedded memory, integrated macro functions and high-speed serial interface, or SerDes, I/O, with our intelligent access technology and a highly efficient interface protocol. The LineSpeed IC product line, which was announced in March 2013, is comprised of non-memory, high-speed SerDes I/O devices with clock data recovery, gearbox and retimer functionality, which convert lanes of data received on line cards or by optical modules into different configurations and/or ensure signal integrity.

Certain SerDes products have been developed under a strategic development and marketing agreement with Credo Semiconductor Ltd., or Credo. As of December 31, 2015, the Company had paid Credo \$4.8 million cumulatively for achievement of development milestones, as well as for mask costs and wafer purchases from third-party vendors. All amounts incurred have been recorded as research and development expenses. Currently, under the strategic development and marketing agreement, the Company is entitled to a remaining reimbursement amount of \$3.6 million of development costs based on payments made to Credo to date. This amount is subject to increase as additional payments are made to Credo. The reimbursement will be funded by the gross profits earned by the Company from the sale of the relevant SerDes products, with the initial gross profits being primarily applied to reimbursing the Company for these development payments and a portion paid to Credo. Once the full amount has been reimbursed, the gross profits from these products will be shared equally by the Company and Credo.

Historically, our primary business was the design, development, marketing, sale and support of differentiated intellectual property, or IP, including embedded memory and high-speed parallel and SerDes I/O used in advanced systems-on-chips, or SoCs. Currently, we are focused on developing differentiated IP-rich IC products and are dedicating all our research and development, marketing and sales budget to these IC products.

Our future success and ability to achieve and maintain profitability are dependent on the marketing and sales of our IC products into networking, communications and other markets requiring high-bandwidth memory access.

In January 2016, we committed to effect a reduction in our workforce and associated operating expenses, net loss and cash burn and to realign resources, as we have substantially concluded development of new products, including our third generation Bandwidth Engine IC product family, and expect to bring these products to market in 2016. We reduced United States headcount by approximately 16% and will cease operations at our subsidiary in Hyderabad, India, which has 18 employees. We anticipate that we will fully implement the planned reductions by the end of the second quarter of 2016, and expect to realize approximately \$3.2 million of savings on an annual basis from the reductions. We expect operating expenses to decrease in 2016 as a result of the workforce reductions and subsequent reduction in computer-aided design software expenses.



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We expect product revenue to increase in 2016 primarily driven by increased Bandwidth Engine 2 IC revenues, as our existing customers commence full production of systems utilizing our ICs. Furthermore, we expect to expand our customer base and increase our cumulative design win count in 2016.

*Critical Accounting Policies and Use of Estimates*

Our consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America. Note 1 to the consolidated financial statements in Item 15 of this report describes the significant accounting policies and methods used in the preparation of our consolidated financial statements.

We have identified the accounting policies below as some of the more critical to our business and the understanding of our results of operations. These policies may involve estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. Although we believe our judgments and estimates are appropriate, actual future results may differ from our estimates, and if different assumptions or conditions were to prevail, the results could be materially different from our reported results.

*Revenue Recognition*

*General*

We generate revenue from the sales of IC products and licensing of our IP. We recognize revenue when persuasive evidence of an arrangement exists, delivery or performance has occurred, the sales price is fixed or determinable, and collectibility is reasonably assured. Evidence of an arrangement generally consists of signed agreements or customer purchase orders.

*IC products*

Products are sold both directly to customers, as well as through distributors. Revenue from sales directly to customers is generally recognized at the time of shipment. We may record an estimated allowance, at the time of shipment, for future returns and other charges against revenue consistent with the terms of sale. IC product revenue and costs relating to sales made through distributors with rights of return or stock rotation are generally deferred until the distributors sell the product to end customers due to our inability to estimate future returns and credits to be issued. Distributors are generally able to return up to 10% of their purchases of slow, non-moving or obsolete inventory for credit every six months. At the time of shipment to distributors, an accounts receivable for the selling price is recorded, as there is a legally enforceable right to receive payment, and inventory is relieved, as legal title to the inventory is transferred upon shipment. Revenues are recognized upon receiving notification from the distributors that products have been sold to end customers. Distributors provide information regarding products and quantity, end customer shipments and remaining inventory on hand. The associated deferred margin is included in the accrued expenses and other line item in the consolidated balance sheets.

*Royalty*

Royalty revenue represents amounts earned under provisions in our memory licensing agreements that require our licensees to report royalties and make payments at a stated rate based on actual units manufactured or sold by licensees for products that include our memory IP. Our license agreements require the licensee to report the manufacture or sale of products that include our technology after the end of the quarter in which the sale or manufacture occurs. We recognize royalties in the quarter in which we receive the licensee's report. The timing and level of royalties are difficult to predict, and depend on the licensee's ability to market, produce and sell products incorporating our technology.

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*Licensing*

Licensing revenue consists of fees earned from license agreements, development services and support and maintenance. For stand-alone license agreements or license deliverables in multi-deliverable arrangements that do not require significant development, modification or customization, revenue is recognized when all revenue recognition criteria have been met. Delivery of the licensed technology is typically the final revenue recognition criterion met, at which time revenue is recognized. If any of the criteria are not met, revenue recognition is deferred until such time as all criteria have been met. Support and maintenance revenue is recognized ratably over the period during which the obligation exists, typically 12 months.

*Fair Value Measurements of Financial Instruments*

We measure the fair value of financial instruments using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels, as follows:

Level 1 Inputs used to measure fair value are unadjusted quoted prices that are available in active markets for the identical assets or liabilities as of the reporting date.

Level 2 Pricing is provided by third party sources of market information obtained from investment advisors rather than models. We do not adjust for or apply any additional assumptions or estimates to the pricing information we receive from advisors. Our Level 2 securities include cash equivalents and available-for-sale securities, which consisted primarily of corporate debt, and government agency and municipal debt securities from issuers with high quality credit ratings. Our investment advisors obtain pricing data from independent sources, such as Standard & Poor's, Bloomberg and Interactive Data Corporation, and rely on comparable pricing of other securities because the Level 2 securities we hold are not actively traded and have fewer observable transactions. We consider this the most reliable information available for the valuation of the securities.

Level 3 Unobservable inputs that are supported by little or no market activity and reflect the use of significant management judgment are used to measure fair value. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions. The determination of fair value for Level 3 investments and other financial instruments involves the most management judgment and subjectivity.

*Valuation of long-lived Assets*

We evaluate our long-lived assets for impairment at least annually, or more frequently when a triggering event is deemed to have occurred. This assessment is subjective in nature and requires significant management judgment to forecast future operating results, projected cash flows and current period market capitalization levels. If our estimates and assumptions change in the future, it could result in a material write-down of long-lived assets. We amortize our finite-lived intangible assets, such as developed technology and patent license, on a straight-line basis over their estimated useful lives of three to seven years. We recognize an impairment charge as the difference between the net book value of such assets and the fair value of the assets on the measurement date.

*Goodwill*

We review goodwill for impairment on an annual basis or whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. We first assess qualitative factors to determine whether it is more-likely-than-not that the fair value of the reporting unit is less than the carrying amount as a basis for determining whether it is necessary to perform the two-step impairment test. If the qualitative assessment warrants further analysis, we compare the fair value of

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the reporting unit to its carrying value. The fair value of the reporting unit is determined using the market approach. If the fair value of the reporting unit exceeds the carrying value of net assets of the reporting unit, goodwill is not impaired, and no further testing is performed. If the carrying value of the reporting unit's goodwill exceeds its implied fair value, then we must record an impairment charge equal to the difference. We have determined that we have a single reporting unit for purposes of performing the goodwill impairment test. We use the market approach to assess impairment in the second step of the analysis. We performed the annual impairment test in September 2015, and the test did not indicate impairment of goodwill. As of December 31, 2015, we did not identify any factors to indicate there was an impairment of our goodwill and determined that no additional impairment analysis was required.

*Deferred tax valuation allowance*

When we prepare our consolidated financial statements, we estimate our income tax liability for each of the various jurisdictions where we conduct business. This requires us to estimate our actual current tax exposure and to assess temporary differences that result from differing treatment of certain items for tax and accounting purposes. These differences result in deferred tax assets, which we show on our consolidated balance sheet under the category of other current assets. The net deferred tax assets are reduced by a valuation allowance if, based upon weighted available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. We must make significant judgments to determine our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance to be recorded against our net deferred tax asset.

*Stock-based compensation*

We recognize stock-based compensation for equity awards on a straight-line basis over the requisite service period, usually the vesting period, based on the grant-date fair value. We estimate the value of employee stock options on the date of grant using the Black-Scholes model. The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The expected term of options granted is derived from historical data on employee exercises and post-vesting employment termination behavior. The expected volatility is based on the historical volatility of our stock price.

**Results of Operations***Net Revenue.*

	Year ended December 31,			Year-Over-Year Change			
	2015	2014	2013	2014 to 2015	2013 to 2014		
	(dollar amounts in thousands)						
Product	\$ 2,400	\$ 2,280	\$ 394	\$ 120	5%	\$ 1,886	479%
Percentage of total net revenue	55%	42%	9%				

Product revenue increased in 2015 and 2014 due to increased volume of shipments for our ICs, mainly Bandwidth Engine, as we gained more customers. In 2015, our Bandwidth Engine 2 IC products were the primary source of IC revenue, while in 2014, our Bandwidth Engine 1 IC products accounted for most of our IC revenue. In 2014, we recognized \$0.3 million of revenue from the reversal of sales return reserves recorded in prior periods following the completion of system-level tests in the field by

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customers, which reduced our expected risk of returns. We expect our product revenues to increase in the future in absolute dollars, as we expect our design wins to commence their production ramps.

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Royalty and other	\$ 1,990	\$ 3,100	\$ 4,004	\$ (1,110)	(36)% \$ (904) (23)%
Percentage of total net revenue	45%	58%	91%		

Royalty and other revenue is primarily comprised of revenue generated from licensing agreements. The sequential decreases were primarily due to a decrease in shipment volumes by licensees whose products incorporate our licensed IP and a decrease in revenue recognized from residual licensing agreements entered into in 2011 and prior years. We expect royalty and other revenue to decline in 2016, as we expect a decline in shipments of units incorporating our technology by licensees, as their products approach their end of life.

#### *Cost of Net Revenue and Gross Profit.*

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Cost of net revenue	\$ 2,474	\$ 2,318	\$ 474	\$ 156	7% \$ 1,844 389%
Percentage of total net revenue	56%	43%	11%		

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Gross profit	\$ 1,916	\$ 3,062	\$ 3,924	\$ (1,146)	(37)% \$ (862) (22)%
Gross margin	44%	57%	89%		

In each of 2015, 2014 and 2013, cost of net revenue primarily consisted of direct and indirect costs related to the sale of IC products.

Cost of net revenue increased in 2015 and 2014, primarily due to the increase in product material testing and other production costs related to our increased IC shipments. We expect the cost of net revenue to increase in the future in absolute dollars, because we anticipate an increase in sales of our IC products.

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Gross profit decreased in 2015 and 2014, primarily due to the decrease in our royalty revenue, which has no associated costs, coupled with the increase in IC shipments. The deferred margin recognized from the reversal of sales return reserves in 2014 and 2015 was not material. Gross margin percentage decreased in 2015 and 2014, primarily due to an increase in product revenue, which has associated costs, as compared with royalty revenue, which has no associated costs.

#### *Research and Development.*

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Research and development	\$ 27,108	\$ 29,261	\$ 23,325	\$ (2,153)	(7)%
Percentage of total net revenue	618%	544%	530%	5,936	25%

Our research and development expenses include costs related to the development of our IC products and amortization of intangible assets. We expense research and development costs as they are incurred.

The \$2.2 million decrease in 2015 over the prior year was primarily due to a decrease in consulting expenses, computer-aided software license fees, amortization of intangibles and stock-based compensation charges, partially offset by an increase in mask tooling costs.

The \$5.9 million increase in 2014 over the prior year was primarily due to increases in personnel-related costs, resulting from higher headcount, mask tooling costs, computer-aided software license fees and stock-based compensation charges.

Research and development expenses included stock-based compensation expense of \$2.7 million, \$3.4 million and \$2.6 million for the years ended December 31, 2015, 2014 and 2013, respectively. We expect that research and development expenses will decrease in absolute dollars due to the reduction in force initiated in the first quarter of 2016 and reductions in computer-aided software license fees.

#### *Selling, General and Administrative.*

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Selling, general and administrative	\$ 6,299	\$ 6,519	\$ 6,161	\$ (220)	(3)%
Percentage of total net revenue	144%	121%	140%	\$ 358	6%

Selling, general and administrative expenses consist primarily of personnel and related overhead costs for sales, marketing, finance, human resources and general management.

Selling, general and administrative expenses decreased \$0.2 million for 2015, compared with the prior year, primarily as a result of a decrease in stock-based compensation expense.

Selling, general and administrative expenses increased \$0.4 million for 2014, compared with the prior year, as a result of increases in personnel-related and consulting costs.

Selling, general and administrative expenses included stock-based compensation expense of \$0.9 million, \$1.2 million and \$1.1 million for the years ended December 31, 2015, 2014 and 2013, respectively.

We expect total selling, general and administrative expenses to decrease slightly in absolute dollars in 2016.

Table of Contents*Gain on Sale of Assets.*

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Gain on sale of assets			\$ 630	\$ (630)	(100)%
Percentage of total net revenue			14%		

In March 2012, we entered into an asset purchase agreement for an exclusive license of a portion of our intellectual property pertaining to our high-speed serial I/O technology for approximately \$4.3 million. As part of the agreement, we provided certain technology transfer support services, and 15 employees of our India subsidiary accepted employment with the purchaser. In March 2013, we received the final payment of \$0.6 million under the agreement.

*Other Income, net.*

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Other income, net	\$ 94	\$ 143	\$ 209	\$ (49)	(34)%
Percentage of total net revenue	2%	3%	5%		

Other income, net primarily consisted of interest income on our investments, which was \$0.1 million for the year ended December 31, 2015 and \$0.2 million for each of the years ended December 31, 2014 and 2013, partially offset by other non-operating items.

*Income Tax Provision.*

	Year ended December 31,			Year-Over-Year Change	
	2015	2014	2013	2014 to 2015	2013 to 2014
	(dollar amounts in thousands)				
Income tax provision	\$ 86	\$ 107	\$ 71	\$ (21)	(20)%
Percentage of total net revenue	2%	2%	2%		

Our income tax provisions were primarily attributable to taxes on earnings of our foreign subsidiaries and branches.

As of December 31, 2015, we had net operating loss carryforwards of approximately \$163 million for U.S. federal income tax purposes and approximately \$107 million for state income tax purposes that are available to reduce future income tax liabilities to the extent permitted under federal and state income tax laws. These net operating loss carryforwards expire from 2016 to 2035. In 2016, we anticipate that our effective income tax rate will continue to be less than the federal statutory tax rate because of expected losses.

As of December 31, 2015 and 2014, we had net deferred tax assets of approximately \$81 million and \$67 million, respectively. Because of uncertainties regarding the realization of these deferred tax assets, we had recorded a full valuation allowance as of December 31, 2015 and 2014.

**Liquidity and Capital Resources**

As of December 31, 2015, we had cash, cash equivalents and investments totaling \$20.2 million compared with a combined balance of \$25.8 million at December 31, 2014. On March 14, 2016, we issued \$7 million aggregate principal amount of Notes at par. The Notes bear interest at the annual

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rate of 10% and interest is payable semi-annually in cash or in kind through the issuance of identical new Notes, or with a combination of the two, at our option.

In 2015, we used \$27.5 million in operating activities, which primarily resulted from the net loss of \$31.5 million, adjusted for non-cash charges and gains, which included stock-based compensation expenses of \$3.7 million and depreciation and amortization expenses of \$0.9 million, and changes to operating assets and liabilities of \$0.6 million. The changes in assets and liabilities primarily related to the timing of the collection of receivables from customers and payments to vendors, including purchases of and increase in inventory.

In 2014, we used \$26.3 million in operating activities, which primarily resulted from the net loss of \$32.7 million, adjusted for non-cash charges and gains, which included stock-based compensation expenses of \$4.6 million and depreciation and amortization expenses of \$1.4 million, and changes to operating assets and liabilities of \$0.3 million. The changes in assets and liabilities primarily related to the payments to vendors, including purchases of inventory.

In 2013, we used \$22.6 million in operating activities, which primarily resulted from the net loss of \$24.8 million, and \$2.6 million used for operating assets and liabilities, adjusted for non-cash charges and gains, which included stock-based compensation expenses of \$3.7 million and depreciation and amortization expenses of \$1.7 million. The changes in assets and liabilities primarily related to the recognition of revenue related to deferred revenues and payments to vendors.

Our investing activities in 2015 primarily consisted of \$1.2 million expended for purchases of fixed assets. Remaining investing activities consisted of investing our cash in marketable securities, which did not affect our liquidity. Our investing activities in 2014 primarily consisted of \$0.6 million expended for purchases of fixed assets. Remaining investing activities consisted of investing our cash in marketable securities, which did not affect our liquidity. Our investing activities in 2013 primarily consisted of \$0.6 million received for the sale of assets and \$0.2 million expended for purchases of fixed assets. Remaining investing activities consisted of investing our cash in marketable securities, which did not affect our liquidity.

Our financing activities in 2015 primarily consisted of \$21.4 million in net proceeds received from the sale of common stock through a public offering and \$1.8 million in proceeds from the exercise of stock options and purchases of common stock under our employee stock purchase plan. Our financing activities in 2014 primarily consisted of proceeds from the exercise of stock options and sales under our employee stock purchase plan. Our financing activities in 2013 primarily consisted of \$27.7 million in net proceeds received from the sale of common stock through a public offering and \$4.2 million in proceeds from the exercise of stock options and purchases of common stock under our employee stock purchase plan.

Our future liquidity and capital requirements are expected to vary from quarter to quarter, depending on numerous factors, including:

level of revenue;

cost, timing and success of technology development efforts;

inventory levels, timing of product shipments and length of billing and collection cycles;

fabrication costs, including mask costs, of our ICs, currently under development;

variations in manufacturing yields, materials costs and other manufacturing risks;

costs of acquiring other businesses and integrating the acquired operations;

profitability of our business; and





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whether interest payments on the Notes are paid in cash or, at our election, in kind through the issuance of new Notes with identical terms for the accrued interest.

We expect our cash expenditures to continue to exceed receipts in 2016, as our revenues will not be sufficient to offset our operating expenses, which include significant research and development expenditures for the expansion and fabrication of our IC products. We believe our existing cash, cash equivalents and investments, along with our existing capital and cash generated from operations, if any, to be sufficient to meet our capital requirements for at least the next 12 months. However, there can be no assurance that our capital is sufficient to fund operations until such time as we begin to achieve positive cash flows. We have an effective shelf registration statement under which we could sell additional securities without advance notice. We might decide to raise additional capital, and there can be no assurance that such funding will be available to us on favorable terms, if at all. The failure to raise capital when needed could have a material adverse effect on our business and financial condition.

If we were to raise additional capital through sales of our equity securities, our stockholders would suffer dilution of their equity ownership. If we engage in debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, prohibit us from paying dividends, repurchasing our stock or making investments, and force us to maintain specified liquidity or other ratios, any of which could harm our business, operating results and financial condition. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things:

develop or enhance our products;

continue to expand our product development and sales and marketing organizations;

acquire complementary technologies, products or businesses;

expand operations, in the United States or internationally;

hire, train and retain employees; or

respond to competitive pressures or unanticipated working capital requirements.

Our failure to do any of these things could seriously harm our ability to execute our business strategy and may force us to curtail our research and development plans or existing operations.

### **Disclosures about Contractual Obligations and Commercial Commitments**

The impact that our contractual obligations as of December 31, 2015 are expected to have on our liquidity and cash flow in future periods is (in thousands):

	Total	Payment Due by Period			More than 5 years
		Less than 1 year	1-3 years	3-5 years	
Operating leases	\$ 3,553	\$ 796	\$ 2,244	\$ 513	\$
Software licenses	2,091	1,305	786		
	\$ 5,644	\$ 2,101	\$ 3,030	\$ 513	\$

As of December 31, 2015, our software licenses related to computer-aided design software.

**Off-Balance Sheet Arrangements**

We do not maintain any off-balance sheet arrangements or obligations that are reasonably likely to have a material current or future effect on our financial condition, results of operations, liquidity or capital resources.

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**Indemnifications**

In the ordinary course of business, we enter into contractual arrangements under which we may agree to indemnify the counter-party from losses relating to a breach of representations and warranties, a failure to perform certain covenants, or claims and losses arising from certain external events as outlined within the particular contract, which may include, for example, losses arising from litigation or claims relating to past performance. Such indemnification clauses may not be subject to maximum loss clauses. We have also entered into indemnification agreements with our officers and directors. No material amounts are reflected in our consolidated financial statements for the years ended December 31, 2015, 2014 or 2013 related to these indemnifications.

**Recent Accounting Pronouncements**

See Note 1 to the consolidated financial statements in Item 15 of this report for a full description of recent accounting pronouncements including the respective expected dates of adoption and effects on results of operations and financial condition.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

*Interest rate risk*

We have exposure to interest rate risk due to our investment portfolio. Our investments are made in accordance with an investment policy under the guidance of the audit committee of our board of directors. The primary objective of our investment activities is to preserve principal and meet liquidity needs. To achieve this objective, we maintain our portfolio of cash equivalents and short-term and long-term investments in a variety of securities, including money market accounts, certificates of deposit, corporate debt, government-sponsored enterprise bonds and municipal bonds. We place our investments with high-credit quality issuers and, by policy, limit the amount of credit exposure with any one issuer or fund. The investments, other than money market funds, are classified as available-for-sale and are recorded on the balance sheet at fair value with unrealized gains and losses reported as a separate component of accumulated other comprehensive income (loss). Securities with an original maturity of three months or less are considered cash equivalents. Securities with original maturities greater than three months and remaining maturities less than one year are classified as short-term investments. Securities with remaining maturities greater than one year are classified as long-term investments. All investments have a maturity of less than two years. No single security should exceed 5% of the portfolio or \$2.0 million at the time of purchase. The portfolio's dollar-weighted average maturity of investments is within 12 months. These securities, which approximated \$18.5 million as of December 31, 2015 and earned an average annual interest rate of approximately 0.3% in 2015, are subject to interest rate and credit risks. As of December 31, 2015, we performed a sensitivity analysis on our investment portfolio. According to our analysis, parallel shifts in the yield curve of both +/- 0.5% would result in changes in fair market values for these investments of less than \$25,000. We do not have any investments denominated in foreign currencies, and therefore are not subject to foreign currency risk on such investments.

*Foreign currency exchange rate risk*

Currently, all of our international sales are denominated in U.S. dollars and, as a result, we have not experienced significant foreign exchange gains or losses to date. However, the expenses of our foreign entities are primarily denominated in their local currencies, therefore we have risk of foreign exchange gains and losses through the funding of those expenditures. We do not currently enter into forward exchange contracts to hedge exposures denominated in foreign currencies or any other derivative financial instruments for trading or speculative purposes. However, in the event our exposure to foreign currency risk increases, we may choose to hedge those exposures. For most currencies, we are a net payer of foreign currencies and, therefore, benefit from a stronger U.S. dollar and are adversely affected by a weaker U.S. dollar relative to those foreign currencies.

Table of Contents**Item 8. Financial Statements and Supplementary Data**

Reference is made to the consolidated financial statements listed under the heading (a) (1) Financial Statements and Reports of Burr Pilger Mayer, Inc. of Item 15, which consolidated financial statements are incorporated by reference in response to this Item 8.

**Quarterly Results of Operations**

The following tables set forth unaudited results of operations data for each of the eight quarters in the two year period ended December 31, 2015. This unaudited information has been prepared on a basis consistent with our audited financial statements appearing elsewhere in this report and, in the opinion of our management, includes all adjustments, consisting only of normal recurring adjustments, except as disclosed below, necessary for a fair presentation of the information for the periods presented. The unaudited quarterly information should be read in conjunction with the financial statements and notes included elsewhere in this report.

	Dec. 31, 2015	Sep. 30, 2015	Jun. 30, 2015	Mar. 31, 2015	Dec. 31, 2014	Sep. 30, 2014	Jun. 30, 2014	Mar. 31, 2014
(In thousands, except per share data)								
(Unaudited All periods)								
<b>Net revenue:</b>								
Product	\$ 1,112	\$ 565	\$ 543	\$ 180	\$ 287	\$ 437	\$ 975	\$ 581
Royalty and other	486	457	451	596	859	716	774	751
<b>Total net revenue</b>	<b>1,598</b>	<b>1,022</b>	<b>994</b>	<b>776</b>	<b>1,146</b>	<b>1,153</b>	<b>1,749</b>	<b>1,332</b>
<b>Cost of net revenue</b>	<b>881</b>	<b>793</b>	<b>563</b>	<b>237</b>	<b>272</b>	<b>447</b>	<b>1,022</b>	<b>577</b>
<b>Gross profit</b>	<b>717</b>	<b>229</b>	<b>431</b>	<b>539</b>	<b>874</b>	<b>706</b>	<b>727</b>	<b>755</b>
<b>Operating expenses:</b>								
Research and development	5,633	8,793	5,789	6,893	8,268	7,507	6,432	7,054
Selling, general and administrative	1,588	1,547	1,550	1,614	1,543	1,689	1,490	1,797
<b>Total operating expenses</b>	<b>7,221</b>	<b>10,340</b>	<b>7,339</b>	<b>8,507</b>	<b>9,811</b>	<b>9,196</b>	<b>7,922</b>	<b>8,851</b>
<b>Operating loss</b>	<b>(6,504)</b>	<b>(10,111)</b>	<b>(6,908)</b>	<b>(7,968)</b>	<b>(8,937)</b>	<b>(8,490)</b>	<b>(7,195)</b>	<b>(8,096)</b>
Other income, net	23	19	29	23	28	30	55	30
<b>Loss before income taxes</b>	<b>(6,481)</b>	<b>(10,092)</b>	<b>(6,879)</b>	<b>(7,945)</b>	<b>(8,909)</b>	<b>(8,460)</b>	<b>(7,140)</b>	<b>(8,066)</b>
Income tax provision	26	13	27	20	42	23	21	21
<b>Net loss</b>	<b>\$ (6,507)</b>	<b>\$ (10,105)</b>	<b>\$ (6,906)</b>	<b>\$ (7,965)</b>	<b>\$ (8,951)</b>	<b>\$ (8,483)</b>	<b>\$ (7,161)</b>	<b>\$ (8,087)</b>
<b>Net loss per share:</b>								
Basic and diluted	\$ (0.10)	\$ (0.15)	\$ (0.11)	\$ (0.15)	\$ (0.18)	\$ (0.17)	\$ (0.14)	\$ (0.16)
<b>Shares used in computing net loss per share:</b>								
Basic and diluted	65,496	65,317	64,737	54,282	49,783	49,634	49,511	49,174

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

None.

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**Item 9A. Controls and Procedures**

*Evaluation of Disclosure Controls and Procedures*

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934. Based on this evaluation, our management concluded that as of December 31, 2015, our disclosure controls and procedures were effective.

*Management's Annual Report on Internal Control over Financial Reporting*

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control - Integrated Framework (2013 Framework)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2015.

Burr Pilger Mayer, Inc., an independent registered public accounting firm, has issued an attestation report on our internal control over financial reporting as of December 31, 2015, as stated in their report, which is included under Item 15 below.

*Changes in Internal Control over Financial Reporting*

There were no changes in our internal control over financial reporting during the fourth fiscal quarter of 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

None.

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**Part III**

**Item 10. Directors, Executive Officers and Corporate Governance**

Information regarding our directors and corporate governance will be presented in our definitive proxy statement for our 2016 Annual Meeting of Stockholders to be held on or about June 7, 2016, which information is incorporated into this report by reference. However, certain information regarding current executive officers found under the heading "Executive Officers" in Item 1 of Part I hereof is also incorporated by reference in response to this Item 10.

We have adopted a code of ethics that applies to all of our employees. The code of ethics is designed to deter wrongdoing and to promote, among other things, honest and ethical conduct, full, fair, accurate, timely, and understandable disclosures in reports and documents submitted to the SEC and other public communications, compliance with applicable governmental laws, rules and regulations, the prompt internal reporting of violations of the code to an appropriate person or persons identified in the code and accountability for adherence to such code.

The code of ethics is available on our website, [www.mosys.com](http://www.mosys.com). If we make any substantive amendments to the code of ethics or grant any waiver, including any implicit waiver, from a provision of the code to our Chief Executive Officer or Chief Financial Officer, or persons performing similar functions, where such amendment or waiver is required to be disclosed under applicable SEC rules, we intend to disclose the nature of such amendment or waiver on our website.

**Item 11. Executive Compensation**

Information required to be provided in response to this item will be presented in our definitive proxy statement for our 2016 Annual Meeting of Stockholders to be held on or about June 7, 2016, which information is incorporated into this report by reference.

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

Information required to be provided in response to this item, including information relating to securities authorized for issuance under equity compensation plans, will be presented in our definitive proxy statement for our 2016 Annual Meeting of Stockholders to be held on or about June 7, 2016, which information is incorporated into this report by reference.

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

Information required to be provided in response to this item will be presented in our definitive proxy statement for our 2016 Annual Meeting of Stockholders to be held on or about June 7, 2016, which information is incorporated into this report by reference.

**Item 14. Principal Accountant Fees and Services**

Information required to be provided in response to this item will be presented in our definitive proxy statement for our 2016 Annual Meeting of Stockholders to be held on or about June 7, 2016, which information is incorporated into this report by reference.

Table of Contents**Part IV****Item 15. Exhibits**

(a)

The following documents are filed as part of this report:

(1)

Consolidated Financial Statements and Reports of Independent Registered Public Accounting Firm, which are set forth in the Index to Consolidated Financial Statements on pages 50 through 77 of this report.

<u>Reports of Independent Registered Public Accounting Firm Burr Pilger Mayer, Inc.</u>	<u>51</u>
<u>Consolidated Balance Sheets</u>	<u>53</u>
<u>Consolidated Statements of Operations and Comprehensive Loss</u>	<u>54</u>
<u>Consolidated Statements of Stockholders' Equity</u>	<u>55</u>
<u>Consolidated Statements of Cash Flows</u>	<u>56</u>
<u>Notes to Consolidated Financial Statements</u>	<u>57</u>

(2)

Exhibits

3.1(1)	Restated Certificate of Incorporation of the Registrant
3.2(2)	Amended and Restated Bylaws of the Registrant
4.1(3)	Specimen common stock certificate
4.4(4)	Rights Agreement, dated November 10, 2010, by and between Registrant and Wells Fargo Bank, N.A., as Rights Agent
4.4.1(4)	Form of Right Certificate
4.4.2(4)	Summary of Rights to Purchase Preferred Shares
4.4.3(5)	Amendment No. 1 to Rights Agreement, dated July 22, 2011, by and between Registrant and Wells Fargo Bank, N.A., as Rights Agent
4.4.4(6)	Amendment No. 2 to Rights Agreement, dated May 18, 2012, by and between Registrant and Wells Fargo Bank, N.A., as Rights Agent
10.1(3)	Form of Indemnity Agreement between Registrant and each of its directors and executive officers
10.2	Reserved
10.3(7)*	2000 Stock Option Plan and form of Option Agreement thereunder
10.3.1(8)*	Amended and Restated 2000 Stock Option and Equity Incentive Plan
10.4(9)*	Form of Stock Option Agreement pursuant to Amended and Restated 2000 Stock Option and Equity Incentive Plan
10.5(10)*	Form of New Employee Inducement Grant Stock Option Agreement
10.6(11)*	Employment offer letter agreement and Mutual Agreement to Arbitrate between Registrant and Leonard Perham dated as of November 8, 2007
10.7	Reserved
10.8(12)*	Employment offer letter agreement between Registrant and James Sullivan dated December 21, 2007
10.9(13)*	Change-in-control Agreement between Registrant and James Sullivan dated January 18, 2008
10.10(14)*	Amended and Restated 2010 Equity Incentive Plan
10.11(15)*	Form of Option Agreement for Stock Option Grant pursuant to 2010 Equity Incentive Plan
10.12(16)*	2010 Employee Stock Purchase Plan
10.13	Reserved
10.14(17)*	Form of Notice of Restricted Stock Unit Award and Agreement
10.15(18)	Lease Agreement between Registrant and M West Propco XII, LLC. dated July 19, 2010

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10.16(19)*	Employment offer letter agreement between Registrant and Thomas Riordan dated May 6, 2011
10.17(19)*	New Employee Inducement Grant Stock Option Agreement between Registrant and Thomas Riordan dated May 10, 2011
10.18	Reserved
10.19(20)*	Form of New Employee Inducement Grant Stock Option Agreement (revised February 2012)
10.20(21)*	Stock Option Agreement between Registrant and Leonard Perham dated as of November 1, 2011
10.21(22)*	Stock Option Agreement between Registrant and Thomas Riordan dated as of December 21, 2011
10.22(23)	Form of Indemnification Agreement used from June 5, 2012
10.23	Reserved
10.24(24)*	Form of Notice of Grant of Restricted Stock Unit Award and Agreement under the Amended and Restated 2010 Equity Incentive Plan
10.25(25)*	Employment offer letter agreement between Registrant and John Monson dated February 21, 2012
21.1	List of subsidiaries
23.1	Consent of Independent Registered Public Accounting Firm Burr Pilger Mayer, Inc.
24.1	Power of Attorney (see signature page)
31.1	Rule 13a-14 certification
31.2	Rule 13a-14 certification
32	Section 1350 certification
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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- (1) Incorporated by reference to Exhibit 3.6 to Form 8-K filed by the Company on November 12, 2010 (Commission File No. 000-32929).
- (2) Incorporated by reference to Exhibit 3.4 to Form 8-K filed by the Company on October 29, 2008 (Commission File No. 000-32929).
- (3) Incorporated by reference to the same-numbered exhibit to the Company's Registration Statement on Form S-1, as amended, originally filed August 4, 2000, declared effective June 27, 2001 (Commission file No. 333-43122).
- (4) Incorporated by reference to the same-numbered exhibit to Form 8-K filed by the Company on November 12, 2010 (Commission File No. 000-32929).
- (5) Incorporated by reference to Exhibit 4.2.3 to the Current Report on Form 8-K, filed on July 27, 2011 (Commission File No. 000-32929).
- (6) Incorporated by reference to Exhibit 4.2.4 to Current Report on Form 8-K filed by the Company on May 24, 2012 (Commission File No. 000-32929).
- (7) Incorporated by reference to Exhibit 10.5 to the Company's Registration Statement on Form S-1, as amended, originally filed August 4, 2000, declared effective June 17, 2001 (Commission File No. 333-43122).



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- (8) Incorporated by reference to Appendix B to the Company's proxy statement on Schedule 14A filed by the Company on October 7, 2004 (Commission File No. 000-32929).
- (9) Incorporated by reference to Exhibit 10.15 to Form 10-Q filed by the Company on August 9, 2005 (Commission File No. 000-32929).
- (10) Incorporated by reference to Exhibit 10.25 to Form 10-K filed by the Company on March 17, 2008 (Commission File No. 000-32929).
- (11) Incorporated by reference to Exhibit 10.24 to Form 10-K filed by the Company on March 17, 2008 (Commission File No. 000-32929).
- (12) Incorporated by reference to Exhibit 10.26 to Form 10-K filed by the Company on March 17, 2008 (Commission File No. 000-32929).
- (13) Incorporated by reference to Exhibit 10.27 to Form 10-K filed by the Company on March 17, 2008 (Commission File No. 000-32929).
- (14) Incorporated by reference to Exhibit 4.8 to Form S-8 filed by the Company on August 8, 2014 (Commission File No. 000-197989).
- (15) Incorporated by reference to Exhibit 4.10 to Form S-8 filed by the Company on July 28, 2010 (Commission File No. 333-168358).
- (16) Incorporated by reference to Appendix B to the proxy statement on Schedule 14A filed by the Company on May 26, 2010 (Commission File No. 000-32929).
- (17) Incorporated by reference to Exhibit 4.8 to Form S-8 filed by the Company on June 5, 2009 (Commission File No. 333-159753).
- (18) Incorporated by reference to Exhibit 10.35 to Form 8-K filed by the Company on July 22, 2010 (Commission File No. 000-32929).
- (19) Incorporated by reference to the same-numbered exhibit to Form 10-Q filed by the Company on August 8, 2011 (Commission File No. 000-32929).
- (20) Incorporated by reference to Exhibit 10.19 to Form 10-K filed by the Company on March 15, 2012 (Commission File No. 000-32929).
- (21) Incorporated by reference to Exhibit 10.20 to Form 10-Q filed by the Company on May 9, 2012 (Commission File No. 000-32929).
- (22) Incorporated by reference to Exhibit 10.21 to Form 10-Q filed by the Company on May 9, 2012 (Commission File No. 000-32929).
- (23) Incorporated by reference to Exhibit 10.22 to Form 10-Q filed by the Company on August 9, 2012 (Commission File No. 000-32929).
- (24) Incorporated by reference to Exhibit 10.24 to Form 10-K filed by the Company on March 14, 2014 (Commission File No. 000-32929).
- (25) Incorporated by reference to Exhibit 10.25 to Form 10-K filed by the Company on March 14, 2014 (Commission File No. 000-32929).
- \*  
Management contract, compensatory plan or arrangement.



Table of Contents**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on the 15<sup>th</sup> day of March 2016.

MOSYS, INC.

By: /s/ LEONARD PERHAM

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Leonard Perham

*President and Chief Executive Officer*

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Leonard Perham and James W. Sullivan as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ LEONARD PERHAM</u> Leonard Perham	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 15, 2016
<u>/s/ JAMES W. SULLIVAN</u> James W. Sullivan	Vice President of Finance and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 15, 2016
<u>/s/ STEPHEN L. DOMENIK</u> Stephen L. Domenik	Director	March 15, 2016
<u>/s/ TOMMY ENG</u> Tommy Eng	Director	March 15, 2016
<u>/s/ CHI-PING HSU</u> Chi-Ping Hsu	Director	March 15, 2016
<u>/s/ VICTOR K. LEE</u> Victor K. Lee	Director	March 15, 2016

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**MOSYS, INC.**  
**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders  
of MoSys, Inc.

We have audited the accompanying consolidated balance sheets of MoSys, Inc. and its subsidiaries (the "Company") as of December 31, 2015 and 2014, and the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2015. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of MoSys, Inc. and its subsidiaries as of December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control Integrated Framework (2013 Framework)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 15, 2016 expressed an unqualified opinion thereon.

/s/ Burr Pilger Mayer, Inc.

San Jose, California  
March 15, 2015

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**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders  
of MoSys, Inc.

We have audited the internal control over financial reporting of MoSys, Inc. and its subsidiaries (the "Company") as of December 31, 2015, based on criteria established in *Internal Control Integrated Framework (2013 Framework)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying *Management's Annual Report on Internal Control over Financial Reporting*, appearing in Item 9A. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, MoSys, Inc. and its subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control Integrated Framework (2013 Framework)* by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of MoSys, Inc. and its subsidiaries as of December 31, 2014 and 2013, and the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2015 and our report dated March 15, 2016 expressed an unqualified opinion on those consolidated financial statements.

/s/ Burr Pilger Mayer, Inc.

San Jose, California  
March 15, 2015

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## MOSYS, INC.

## CONSOLIDATED BALANCE SHEETS

(In thousands, except par value data)

	December 31,	
	2015	2014
<b>ASSETS</b>		
Current assets		
Cash and cash equivalents	\$ 5,640	\$ 3,110
Short-term investments	14,598	20,439
Accounts receivable, net	729	177
Inventories, net	1,597	881
Prepaid expenses and other	701	887
Total current assets	23,265	25,494
Long-term investments		2,245
Property and equipment, net	1,630	854
Goodwill	23,134	23,134
Intangible assets, net	334	655
Other	329	244
Total assets	\$ 48,692	\$ 52,626
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities		
Accounts payable	\$ 940	\$ 495
Accrued expenses and other	2,664	2,350
Total current liabilities	3,604	2,845
Long-term liabilities	247	241
Commitments and contingencies (Note 10)		
Stockholders' equity		
Preferred stock, \$0.01 par value; 20,000 shares authorized; none issued and outstanding		
Common stock, \$0.01 par value; 120,000 shares authorized; 65,496 shares and 49,793 shares issued and outstanding at December 31, 2015 and 2014, respectively	655	498
Additional paid-in capital	226,174	199,541
Accumulated other comprehensive loss	(16)	(10)
Accumulated deficit	(181,972)	(150,489)
Total stockholders' equity	44,841	49,540
	\$ 48,692	\$ 52,626

Total liabilities and stockholders'  
equity

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



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## MOSYS, INC.

## CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(In thousands, except per share data)

	Year Ended December 31,		
	2015	2014	2013
Net revenue			
Product	\$ 2,400	\$ 2,280	\$ 394
Royalty and other	1,990	3,100	4,004
Total net revenue	4,390	5,380	4,398
Cost of net revenue	2,474	2,318	474
Gross profit	1,916	3,062	3,924
Operating expenses			
Research and development	27,108	29,261	23,325
Selling, general and administrative	6,299	6,519	6,161
Gain on sale of assets			(630)
Total operating expenses	33,407	35,780	28,856
Loss from operations	(31,491)	(32,718)	(24,932)
Other income, net	94	143	209
Loss before income taxes	(31,397)	(32,575)	(24,723)
Income tax provision	86	107	71
Net loss	\$ (31,483)	\$ (32,682)	\$ (24,794)
Other comprehensive loss, net of tax:			
Net unrealized gains (losses) on available-for-sale securities	(6)	(23)	2
Comprehensive loss	\$ (31,489)	\$ (32,705)	\$ (24,792)
Net loss per share			
Basic and diluted	\$ (0.50)	\$ (0.66)	\$ (0.55)
Shares used in computing net loss per share			
Basic and diluted	62,497	49,528	45,246

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

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## MOSYS, INC.

## CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Shares	Amount				
Balance at January 1, 2013	40,054	\$ 401	\$ 157,143	\$ 11	\$ (93,013)	\$ 64,542
Issuance of common stock for exercise of options, employee stock purchase plan and release of awards	1,365	13	4,211			4,224
Issuance of common stock, net of costs of \$2,154	7,475	75	27,671			27,746
Stock-based compensation			3,698			3,698
Change in unrealized gain on available-for-sale investments				2		2
Net loss					(24,794)	(24,794)
Balance at December 31, 2013	48,894	489	192,723	13	(117,807)	75,418
Issuance of common stock for exercise of options, employee stock purchase plan and release of awards	899	9	2,227			2,236
Stock-based compensation			4,591			4,591
Change in unrealized loss on available-for-sale investments				(23)		(23)
Net loss					(32,682)	(32,682)
Balance at December 31, 2014	49,793	498	199,541	(10)	(150,489)	49,540
Issuance of common stock for exercise of options, employee stock purchase plan and release of awards	1,328	13	1,759			1,772
Issuance of common stock, net of costs of \$1,632	14,375	144	21,224			21,368
Stock-based compensation			3,650			3,650
Change in unrealized loss on available-for-sale investments				(6)		(6)
Net loss					(31,483)	(31,483)
Balance at December 31, 2015	65,496	\$ 655	\$ 226,174	\$ (16)	\$ (181,972)	\$ 44,841

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

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## MOSYS, INC.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,		
	2015	2014	2013
<b>Cash flows from operating activities:</b>			
Net loss	\$ (31,483)	\$ (32,682)	\$ (24,794)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	607	449	679
Amortization of intangible assets	321	1,000	999
Stock-based compensation	3,650	4,591	3,698
Gain on sale of assets			(630)
Other non-cash items			7
Changes in assets and liabilities:			
Accounts receivable	(552)	(29)	139
Inventories	(716)	(314)	(315)
Prepaid expenses and other assets	104	405	1
Accounts payable	261	(23)	(125)
Accrued expenses and other liabilities	334	296	(2,304)
Net cash used in operating activities	(27,474)	(26,307)	(22,645)
<b>Cash flows from investing activities:</b>			
Purchases of property and equipment	(1,202)	(596)	(154)
Net proceeds from sale of assets			630
Proceeds from sales and maturities of marketable securities	44,953	39,270	49,267
Purchases of marketable securities	(36,873)	(15,859)	(57,202)
Net cash provided by (used in) investing activities	6,878	22,815	(7,459)
<b>Cash flows from financing activities:</b>			
Proceeds from the sale of common stock, net of issuance costs	21,368		27,746
Net proceeds from issuance of common stock	1,772	2,238	4,193
Payments on capital lease obligations	(14)		
Net cash provided by financing activities	23,126	2,238	31,939
Net increase (decrease) in cash and cash equivalents	2,530	(1,254)	1,835
Cash and cash equivalents at beginning of year	3,110	4,364	2,529
Cash and cash equivalents at end of year	\$ 5,640	\$ 3,110	\$ 4,364
<b>Supplemental disclosure:</b>			
Cash paid for income taxes	\$ 56	\$ 111	\$ 92

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

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**MOSYS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1: The Company and Summary of Significant Accounting Policies**

***The Company***

MoSys, Inc. (the Company) was incorporated in California in September 1991, and reincorporated in September 2000 in Delaware. The Company's strategy and primary business objective is to be an IP-rich fabless semiconductor company focused on the development and sale of integrated circuit (IC) products. Prior to 2011, the Company's primary business activities were designing, developing, marketing and licensing high-performance semiconductor memory and high-speed parallel and serial interface, or SerDes, intellectual property (IP) used by the semiconductor industry and communications, networking and storage equipment manufacturers. Since 2011, the Company has developed two IC product lines under the "Bandwidth Engine" and "LineSpeed" product names. Bandwidth Engine ICs combine the Company's proprietary high-density embedded memory with its high-speed 10 gigabits per second and higher interface technology. The LineSpeed IC product line is comprised of non-memory based, high-speed SerDes devices with gearbox or retimer functionality that convert lanes of data received on line cards or by optical modules into different configurations and/or ensure signal integrity. Both product lines are being marketed to networking and communications systems companies. The Company's future success and ability to achieve and maintain profitability depends on its success in developing a market for its ICs.

***Basis of Presentation***

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation. The Company's fiscal year ends on December 31 of each calendar year.

***Use of Estimates***

The preparation of financial statements in accordance with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses recognized during the reported period. Actual results could differ from those estimates.

***Reclassification***

Certain prior year amounts have been reclassified to conform to the current year presentation. Revenue line items have been reclassified to create a separate line item for product revenue and to include licensing revenue in the royalty and other line item. The amounts for the prior periods have been reclassified to be consistent with the current year presentation and have no impact on previously reported total assets, total stockholders' equity or net loss.

***Foreign Currency***

The functional currency of the Company's foreign entities is the U.S. dollar. The financial statements of these entities are translated into U.S. dollars and the resulting gains or losses are included in other income, net in the consolidated statements of operations and comprehensive loss. Such gains and losses were not material for any period presented.

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***Cash Equivalents and Investments***

The Company has invested its excess cash in money market accounts, certificates of deposit, corporate debt, government-sponsored enterprise bonds and municipal bonds and considers all highly liquid debt instruments purchased with an original maturity of three months or less to be cash equivalents. Investments with original maturities greater than three months and remaining maturities less than one year are classified as short-term investments. Investments with remaining maturities greater than one year are classified as long-term investments. Management generally determines the appropriate classification of securities at the time of purchase. All securities are classified as available-for-sale. The Company's available-for-sale short-term and long-term investments are carried at fair value, with the unrealized holding gains and losses reported in accumulated other comprehensive income (loss). Realized gains and losses and declines in the value judged to be other-than-temporary are included in the other income, net line item in the consolidated statements of operations and comprehensive loss. The cost of securities sold is based on the specific identification method.

***Fair Value Measurements***

The Company measures the fair value of financial instruments using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

Level 1 Inputs used to measure fair value are unadjusted quoted prices that are available in active markets for the identical assets or liabilities as of the reporting date.

Level 2 Pricing is provided by third party sources of market information obtained through the Company's investment advisors, rather than models. The Company does not adjust for, or apply, any additional assumptions or estimates to the pricing information it receives from advisors. The Company's Level 2 securities include cash equivalents and available-for-sale securities, which consisted primarily of certificates of deposit, corporate debt, and government agency and municipal debt securities from issuers with high-quality credit ratings. The Company's investment advisors obtain pricing data from independent sources, such as Standard & Poor's, Bloomberg and Interactive Data Corporation, and rely on comparable pricing of other securities because the Level 2 securities are not actively traded and have fewer observable transactions. The Company considers this the most reliable information available for the valuation of the securities.

Level 3 Unobservable inputs that are supported by little or no market activity and reflect the use of significant management judgment are used to measure fair value. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions. The determination of fair value for Level 3 investments and other financial instruments involves the most management judgment and subjectivity.

***Allowance for Doubtful Accounts***

The Company establishes an allowance for doubtful accounts to ensure that its trade receivables balances are not overstated due to uncollectibility. The Company performs ongoing customer credit evaluations within the context of the industry in which it operates and generally does not require collateral from its customers. A specific allowance of up to 100% of the invoice value is provided for any problematic customer balances. Delinquent account balances are written off after management has determined that the likelihood of collection is remote. The Company grants credit only to customers deemed creditworthy in the judgment of management. There was no allowance for doubtful accounts receivable at December 31, 2015 or December 31, 2014.

***Inventory***

The Company values its inventories at the lower of cost, which approximates actual cost on a first-in, first-out basis, or market value. The Company records inventory reserves for estimated

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obsolescence or unmarketable inventories based upon assumptions about future demand and market conditions. Once a reserve is established, it is maintained until the product to which it relates is sold or otherwise disposed of. If actual market conditions are less favorable than those expected by management, additional adjustment to inventory valuation may be required. Charges for obsolete and slow moving inventories are recorded based upon an analysis of specific identification of obsolete inventory items and quantification of slow moving inventory items. The Company recorded inventory reserves of \$0.3 million during the year ended December 31, 2015.

***Property and Equipment***

Property and equipment are originally recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally three to five years. Depreciation is recorded in operating expenses in the consolidated statements of operations and comprehensive loss. Leasehold improvements and assets acquired through capital leases are amortized over the shorter of their estimated useful life or the lease term and are recorded with depreciation expense in the consolidated statements of operations and comprehensive loss.

***Valuation of Long-lived Assets***

The Company evaluates the recoverability of long-lived assets with finite lives whenever events or changes in circumstances occur that indicate that the carrying value of the asset or asset group may not be recoverable. Finite-lived intangible assets are being amortized on a straight-line basis over their estimated useful lives of three to seven years. An impairment charge is recognized as the difference between the net book value of such assets and the fair value of such assets at the date of measurement. The measurement of impairment requires management to estimate future cash flows and the fair value of long-lived assets.

***Intangible Assets***

Intangible assets acquired in business combinations, referred to as purchased intangible assets, are accounted for based on the fair value of assets purchased and are amortized over the period in which economic benefit is estimated to be received.

***Goodwill***

The Company reviews goodwill for impairment on an annual basis or whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. The Company first assesses qualitative factors to determine whether it is more-likely-than-not that the fair value of the reporting unit is less than the carrying amount as a basis for determining whether it is necessary to perform the two-step impairment test. If the qualitative assessment warrants further analysis, the Company compares the fair value of the reporting unit to its carrying value. The fair value of the reporting unit is determined using the market approach. If the fair value of the reporting unit exceeds the carrying value of net assets of the reporting unit, goodwill is not impaired, and the Company is not required to perform further testing. If the carrying value of the reporting unit's goodwill exceeds its implied fair value, then the Company must record an impairment charge equal to the difference. The Company has determined that it has a single reporting unit for purposes of performing its goodwill impairment test. As the Company uses the market approach to assess impairment in the second step of the analysis, the price of its common stock is an important component of the fair value calculation. If the Company's stock price continues to experience significant price and volume fluctuations, this will impact the fair value of the reporting unit, which can lead to potential impairment in future periods. The Company performed step one of the annual impairment test in September 2015, and concluded no factors indicated impairment of goodwill. As of December 31, 2015, the Company had not identified

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any factors to indicate there was an impairment of its goodwill and determined that no additional impairment analysis was required.

**Revenue Recognition**

*General*

The Company generates revenue from the sales of IC products and licensing of its IP. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery or performance has occurred, the sales price is fixed or determinable, and collectibility is reasonably assured. Evidence of an arrangement generally consists of signed agreements or customer purchase orders.

*IC products*

The Company sells products both directly to customers, as well as through distributors. Revenue from sales directly to customers is generally recognized at the time of shipment. The Company may record an estimated allowance, at the time of shipment, for future returns and other charges against revenue consistent with the terms of sale. IC product revenue and costs relating to sales made through distributors with rights of return or stock rotation are generally deferred until the distributors sell the product to end customers due to the Company's inability to estimate future returns and credits to be issued. Distributors are generally able to return up to 10% of their purchases for slow, non-moving or obsolete inventory for credit every six months. At the time of shipment to distributors, an accounts receivable for the selling price is recorded, as there is a legally enforceable right to receive payment, and inventory is relieved, as legal title to the inventory is transferred upon shipment. Revenues are recognized upon receiving notification from the distributors that products have been sold to end customers. Distributors provide information regarding products and quantity, end customer shipments and remaining inventory on hand. The associated deferred margin is included in the accrued expenses and other line item in the consolidated balance sheets.

*Royalty*

The Company's licensing contracts typically also provide for royalties based on the licensee's use of the Company's memory technology in their currently shipping commercial products. The Company recognizes royalties in the quarter in which it receives the licensee's report.

*Licensing*

Licensing revenue consists of fees earned from license agreements, development services and support and maintenance. For stand-alone license agreements or license deliverables in multi-deliverable arrangements that do not require significant development, modification or customization, revenues are recognized when all revenue recognition criteria have been met. Delivery of the licensed technology is typically the final revenue recognition criterion met, at which time revenue is recognized. If any of the criteria are not met, revenue recognition is deferred until such time as all criteria have been met. Support and maintenance revenue is recognized ratably over the period during which the obligation exists, typically 12 months. Licensing revenue was zero for the year ended December 31, 2015 and was \$155,000 and \$387,000 for the years ended December 31, 2014 and 2013, respectively.

**Cost of Net Revenue**

Cost of net revenue consists primarily of direct and indirect costs of IC product sales and engineering personnel costs directly related to maintenance and support services specified in licensing agreements. Maintenance and support typically includes engineering support to assist in the commencement of production of a licensee's products.

Table of Contents**Advertising Costs**

Advertising costs are expensed as incurred. Advertising costs were not significant in the years ended December 31, 2015, 2014 and 2013.

**Research and Development**

Engineering costs are recorded as research and development expense in the period incurred.

**Stock-Based Compensation**

The Company recognizes stock-based compensation for awards on a straight-line basis over the requisite service period, usually the vesting period, based on the grant-date fair value.

The Company records stock-based compensation expense for stock options granted to non-employees, excluding non-employee directors, based upon the estimated then-current fair value of the equity instrument using the Black-Scholes pricing model. Assumptions used to value the equity instruments are consistent with equity instruments issued to employees. The Company charges the value of the equity instrument to earnings over the term of the service agreement and the unvested shares underlying the option are subject to periodic revaluation over the remaining vesting period.

**Per Share Amounts**

Basic net loss per share is computed by dividing net loss for the period by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share gives effect to all potentially dilutive common shares outstanding during the period. Potentially dilutive common shares consist of incremental shares of common stock issuable upon the exercise of stock options, vesting of stock awards and purchases under the employee stock purchase plan. As of December 31, 2015, 2014 and 2013, stock awards to purchase approximately 9,076,000, 8,817,000 and 10,072,000 shares, respectively, were excluded from the computation of diluted net loss per share as their inclusion would be anti-dilutive. The following table sets forth the computation of basic and diluted net loss per share for the periods indicated (in thousands, except per share amounts):

	Year Ended December 31,		
	2015	2014	2013
<b>Numerator:</b>			
Net loss	\$ (31,483)	\$ (32,682)	\$ (24,794)
<b>Denominator:</b>			
Shares used in computing net loss per share:			
Basic and diluted	62,497	49,528	45,246
Net loss per share:			
Basic and diluted	\$ (0.50)	\$ (0.66)	\$ (0.55)

**Income Taxes**

The Company determines deferred tax assets and liabilities based upon the differences between the financial statement and tax bases of the Company's assets and liabilities using tax rates in effect for the year in which the Company expects the differences to affect taxable income. A valuation allowance is established for any deferred tax assets for which it is more likely than not that all or a portion of the deferred tax assets will not be realized.

The Company files U.S. federal and state and foreign income tax returns in jurisdictions with varying statutes of limitations. The 2005 through 2015 tax years generally remain subject to examination by federal, state and foreign tax authorities.



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As of December 31, 2015, the Company did not have any unrecognized tax benefits nor expect its unrecognized tax benefits to change significantly over the next 12 months. The Company recognizes interest related to unrecognized tax benefits in its income tax expense and penalties related to unrecognized tax benefits as other income and expenses. During the years ended December 31, 2015, 2014 and 2013, the Company did not recognize any interest or penalties related to unrecognized tax benefits.

***Comprehensive Loss***

Comprehensive loss includes unrealized gains and losses on available-for-sale securities. Realized gains and losses on available-for-sale securities are reclassified from accumulated other comprehensive loss and included in other income, net in the consolidated statements of operations and comprehensive loss. All amounts recorded were not significant in the years ended December 31, 2015, 2014 and 2013.

***Recent Accounting Pronouncements***

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standard Update (ASU) No. 2014-09 (ASU 2014-09), *Revenue from Contracts with Customers*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods and services to customers. ASU 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard will be effective for the Company on January 1, 2018. Early application is not permitted. ASU 2014-09 permits the use of either the retrospective or cumulative effect transition methods. The Company has not yet selected a transition method nor has it determined the potential effect that ASU 2014-09 will have on its consolidated financial statements and related disclosures.

In August 2014, the FASB issued ASU No. 2014-15 (ASU 2014-15), *Presentation of Financial Statements-Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. ASU 2014-15 requires management to evaluate, at each annual and interim reporting period, whether there are conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date the financial statements are issued and provide related disclosures. ASU 2014-15 is effective for annual and interim reporting periods ending after December 15, 2016, with early adoption permitted. The Company is currently evaluating the impact of its pending adoption of ASU 2014-15 on its consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU No. 2016-02 (ASU 2016-02), *Leases*. ASU 2016-02 requires lessees to recognize a right-of-use asset and a lease liability equal to the present value of the lease payments for virtually all leases not classified as short term. Consistent with current U.S. GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily depend on its classification as a finance or operating lease. The ASU also will require disclosures to provide additional qualitative and quantitative information about the amounts recorded in the financial statements. ASU 2016-02 is effective for annual and interim reporting periods beginning after December 15, 2018, with early adoption permitted. The new standard requires a modified retrospective transition for application at the beginning of the earliest comparative period presented. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements and related disclosures.

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	December 31,	
	2015	2014
	(in thousands)	
<b>Inventories, net:</b>		
Work-in-process	\$ 1,478	\$ 651
Finished goods	119	230
	\$ 1,597	\$ 881

<b>Prepaid expenses and other:</b>		
Interest receivable	\$ 48	\$ 160
Prepaid insurance	134	143
Prepaid expenses and other	519	584
	\$ 701	\$ 887

<b>Property and equipment, net:</b>		
Equipment, furniture and fixtures and leasehold improvements	\$ 5,646	\$ 4,255
Acquired software	334	750
	5,980	5,005
Less: Accumulated depreciation and amortization	(4,350)	(4,151)
	\$ 1,630	\$ 854

**Intangible assets, net:**

Identifiable intangible assets relating to business combinations and a patent license were (dollar amounts in thousands):

	December 31, 2015			
	Life (years)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Developed technology	3-5	\$ 9,240	\$ 9,240	\$
Patent license	7	780	446	334
Total		\$ 10,020	\$ 9,686	\$ 334

	December 31, 2014			
	Life (years)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount

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Developed technology	3-5	\$	9,240	\$	9,031	\$	209
Patent license	7		780		334		446
<b>Total</b>		<b>\$</b>	<b>10,020</b>	<b>\$</b>	<b>9,365</b>	<b>\$</b>	<b>655</b>

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Amortization expense has been included in research and development expense in the consolidated statements of operations and comprehensive loss. The estimated aggregate amortization expense to be recognized in future years is approximately \$0.1 million annually for 2016 through 2018.

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
	<b>(in thousands)</b>	
<b>Accrued expenses and other:</b>		
Accrued wages and employee benefits	\$ 1,076	\$ 1,026
IC development and wafer costs	921	203
Employee stock purchase plan withholdings	323	357
Professional fees	158	123
Capital lease obligation	138	
Deferred revenue	31	4
Other	17	637
	<b>\$ 2,664</b>	<b>\$ 2,350</b>

As of December 31, 2015 and 2014, the amounts in long-term liabilities included deferred rent.

### **Other income, net:**

	<b>2015</b>	<b>2014</b>	<b>2013</b>
	<b>(in thousands)</b>		
Interest income	\$ 114	\$ 155	\$ 174
Other income (expense), net	(20)	(12)	35
	<b>\$ 94</b>	<b>\$ 143</b>	<b>\$ 209</b>

### **Note 3: Fair Value of Financial Instruments**

The estimated fair values of financial instruments outstanding were (in thousands):