RAMBUS INC
Form 10-K
February 19, 2016
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

þ	ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
	For the fiscal year ended December 31, 2015
	or
o	TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
	For the transition period from to

Commission file number: 000-22339

RAMBUS INC.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	94-3112828 (I.R.S. Employer Identification Number)
1050 Enterprise Way, Suite 700 Sunnyvale, California (Address of principal executive offices)	94089 (Zip Code)

Registrant's telephone number, including area code:
(408) 462-8000

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $.001 Par Value	The NASDAQ Stock Market LLC (The NASDAQ Global Select Market)

Securities registered pursuant to Section 12(g) of the Act:
None

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

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 o No þ

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 þ No o

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 þ No o

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 the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. þ

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

Large accelerated filer þ	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 o No þ

The aggregate market value of the Registrant's Common Stock held by non-affiliates of the Registrant as of June 30, 2015 was approximately $1.5 billion based upon the closing price reported for such date on The NASDAQ Global Select Market. For purposes of this disclosure, shares of Common Stock held by officers and directors of the Registrant and persons that may be deemed to be affiliates under the Act have been excluded. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of outstanding shares of the Registrant's Common Stock, $.001 par value, was 109,514,426 as of January 29, 2016.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information is incorporated into Part III of this report by reference to the Proxy Statement for the Registrant's annual meeting of stockholders to be held on or about April 21, 2016 to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Form 10-K.

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NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (“Annual Report”) contains 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. These forward-looking statements include, without limitation, predictions regarding the following aspects of our future:

- Success in the markets of our products and services or our customers’ products;
- Sources of competition;
- Research and development costs and improvements in technology;
- Sources, amounts and concentration of revenue, including royalties;
- Success in signing and renewing license agreements;
- Terms of our licenses and amounts owed under license agreements;
- Technology product development;
- Dispositions, acquisitions, mergers or strategic transactions and our related integration efforts, including our recent acquisition of Smart Card Software Ltd.;
- Impairment of goodwill and long-lived assets;
- Pricing policies of our customers;
- Changes in our strategy and business model, including the expansion of our portfolio of inventions, products and solutions to address additional markets in lighting, chip and system security;
- Deterioration of financial health of commercial counterparties and their ability to meet their obligations to us;
- Effects of security breaches or failures in our or our customers’ products and services on our business;
- Engineering, sales and general and administration expenses;
- Contract revenue;
- Operating results;
- International licenses and operations;
- Effects of changes in the economy and credit market on our industry and business;
- Ability to identify, attract, motivate and retain qualified personnel;
- Effects of government regulations on our industry and business;
- Manufacturing and supply partners and/or sale and distribution channels;
- Growth in our business;
- Methods, estimates and judgments in accounting policies;
- Adoption of new accounting pronouncements;
- Effective tax rates;
- Restructurings and plans of termination;
- Realization of deferred tax assets/release of deferred tax valuation allowance;
- Trading price of our common stock;
- Internal control environment;
- The level and terms of our outstanding debt and the repayment or financing of such debt;
- Litigation expenses;
- Protection of intellectual property;
- Any changes in laws, agency actions and judicial rulings that may impact the ability to enforce intellectual property rights;
- Indemnification and technical support obligations;
- Equity repurchase plans;
- Issuances of debt or equity securities, which could involve restrictive covenants or be dilutive to our existing stockholders;

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- Outcome and effect of potential future intellectual property litigation and other significant litigation; and
- Likelihood of paying dividends.

You can identify these and other forward-looking statements by the use of words such as “may,” “future,” “shall,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “intends,” “potential,” “continue,” “projecting” or the neg terms, or other comparable terminology. Forward-looking statements also include the assumptions underlying or relating to any of the foregoing statements.

Actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under Item 1A, “Risk Factors.” All forward-looking statements included in this document are based on our assessment of information available to us at this time. We assume no obligation to update any forward-looking statements.

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PART I

Rambus, RDRAM™, XDR™, FlexIO™, FlexPhase™, R+™, CryptoFirewall™, and MicroLens® are trademarks, registered trademarks or copyrights of Rambus Inc. Other trademarks or copyrights that may be mentioned in this annual report on Form 10-K are the property of their respective owners.

Industry terminology, used widely throughout this annual report, has been abbreviated and, as such, these abbreviations are defined below for your convenience:

Differential Power Analysis	DPA
Double Data Rate	DDR
Dynamic Random Access Memory	DRAM
Field Programmable Gate Arrays	FPGA
Light Emitting Diodes	LED
Rambus Dynamic Random Access Memory	RDRAM™
Simple Power Analysis	SPA
eXtreme Data Rate	XDR™

On occasion we will refer to the abbreviated names of certain entities and, as such, have provided a chart to indicate the full names of those entities for your convenience.

Advanced Micro Devices Inc.	AMD
Broadcom Corporation	Broadcom
Cryptography Research Division	CRD
Eaton Corporation plc	Eaton
Elpida Memory, Inc.	Elpida
Emerging Solutions Division	ESD
Freescale Semiconductor Inc.	Freescale
Fujitsu Limited	Fujitsu
General Electric Company	GE
Intel Corporation	Intel
International Business Machines Corporation	IBM
Lighting and Display Technology	LDT
LSI Corporation (now a division of Avago Technologies Limited)	LSI
Memory and Interfaces Division	MID
Micron Technology, Inc.	Micron
Mobile Technology Division	MTD
Nanya Technology Corporation	Nanya
NVIDIA Corporation	NVIDIA
Qualcomm Incorporated	Qualcomm
Panasonic Corporation	Panasonic
Renesas Electronics	Renesas
Samsung Electronics Co., Ltd.	Samsung
SK hynix, Inc.	SK hynix
Sony Computer Electronics	Sony
ST Microelectronics N.V.	STMicroelectronics
Toshiba Corporation	Toshiba

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Item 1. Business

Rambus Inc., referred to as we, us or Rambus, was founded in 1990 and reincorporated in Delaware in March 1997. Our principal executive offices are located at 1050 Enterprise Way, Suite 700, Sunnyvale, California. Our website is www.rambus.com. You can obtain copies of our Forms 10-K, 10-Q, 8-K, and other filings with the SEC, and all amendments to these filings, free of charge, from our website as soon as reasonably practicable following our filing of any of these reports with the SEC. In addition, you may read and copy any material we file with the SEC at the SEC's Public Reference Room at 100 F Street NE, Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website that contains reports, proxy, and information statements, and other information regarding registrants that file electronically with the SEC at www.sec.gov.

Rambus creates cutting-edge semiconductor and IP products, spanning memory and interfaces to security, smart sensors and lighting. Our chips, customizable IP cores, architecture licenses, tools, services, software, training and innovations improve the competitive advantage of our customers. We collaborate with the industry, partnering with leading ASIC and SoC designers, foundries, IP developers, EDA companies and validation labs. Our products are integrated into tens of billions of devices and systems, powering and securing diverse applications, including Big Data, Internet of Things (IoT), mobile, consumer and media platforms. We generate revenue by licensing our inventions and solutions, selling our semiconductor products and providing services to market-leading companies.

While we have historically focused our efforts on the development of technologies for electronics memory and chip interfaces, we have expanded our portfolio of inventions and solutions to address additional markets in lighting, chip and system security, as well as new areas within the semiconductor industry, such as computational sensing and imaging. We intend to continue our growth into new technology fields, consistent with our mission to create great value through our innovations and to make those technologies available through both our licensing and non-licensing business models. Key to our efforts will be hiring and retaining world-class inventors, scientists, engineers, and product managers to lead the development of inventions and technology solutions for our fields of focus, and the management and business support personnel necessary to execute our plans and strategies.

We have four operational units: (1) Memory and Interfaces Division, or MID, which focuses on the design, development and licensing of technology that is related to memory and interfaces; (2) Cryptography Research Division, or CRD, which focuses on the design, development and licensing of technologies for chip and system security, anti-counterfeiting, smart ticketing and mobile payments; (3) Emerging Solutions Division, or ESD, which includes our computational sensing and imaging group along with our development efforts in the area of emerging technologies; and (4) Lighting and Display Technologies, or LDT, which focuses on the design, development and licensing of technologies for lighting.

Our inventions and technology solutions are offered to our customers through patent licenses, technology licenses, software licenses and the shipment of products. Royalties from patent licenses accounted for 84%, 88% and 92% of our consolidated revenue for the years ended December 31, 2015, 2014 and 2013, respectively. Royalties from technology licenses accounted for 5%, 4% and 5% of our consolidated revenue for the years ended December 31, 2015, 2014 and 2013, respectively. Today, a majority of our revenues are derived from patent licenses, through which we provide our customers a license to use a certain portion of our broad portfolio of patented inventions. The license provides our customers with a defined right to use our innovations in the customer's own digital electronics products, systems or services, as applicable. The licenses may also define the specific field of use where our customers may use or employ our inventions in their products. License agreements are structured with fixed, variable or a hybrid of fixed and variable royalty payments over certain defined periods ranging for periods of up to ten years. The majority of our intellectual property was developed in-house and we have expanded our business strategy of monetizing our intellectual property to include the sale of select intellectual property. As any sales executed under this expanded strategy represent a component of our ongoing major or central operations and activities, we will record the related proceeds as revenue.

Our Strategy

Our strategy is to evolve from providing primarily patent licenses to providing additional technology, products and services while creating and leveraging strategic synergies to increase revenue. One of our goals is to supplement our patent licensing business with additional licensing opportunities for our technologies, products and services to be incorporated into our customers' products and/or systems. Our technology licenses are designed to support the implementation and adoption of our technology into our customers' products or services. As part of these offerings, we can provide a range of services that can include access to technical experts, advanced system design and analysis, hardware and software to enhance design and validation, system IP and specifications, and process-specific hard and soft macros, along with other services. These technology license agreements may have both a fixed price (non-recurring) component and ongoing royalties. Further, under technology

licenses, our customers typically receive licenses to our patents necessary to implement these solutions in their products with specific rights and restrictions to the applicable patents elaborated in their individual contracts with us.
In 2015, we continued our focus on the development of innovative technology and furthering open and collaborative relationships with the broader industry. We signed or renewed license agreements with IBM, Renesas, SK hynix, and Toshiba. In addition, we announced our first physical product with the introduction of the R+ DDR4 server DIMM chip for RDIMMs and LRDIMMs and, in January 2016, acquired an advanced mobile payment platform and smart ticketing platform which we believe will complement our existing CRD product offerings such as CryptoManager. We also unveiled a research program entitled the Smart Data Acceleration (SDA) platform.
We believe that the successful execution of our strategy requires an exceptional business model that relies on the skills and talent of our employees. Accordingly, we seek to hire and retain world-class scientific and engineering expertise in all of our fields of technological focus, as well as the executive management and operating personnel required to successfully execute our business strategy. In order to attract the quality of employees required for this business model, we have created an environment and culture that encourages, fosters and supports research, development and innovation in breakthrough technologies with significant opportunities for broad industry adoption. We believe we have created a compelling company for inventors and innovators who are able to work within a business model and platform that focuses on technology development and execution to drive strong future growth.
Design and Manufacturing
Our technology solutions are developed with high-volume commercial manufacturing processes in mind. Our solutions can be delivered in a number of ways, from reference designs to full turnkey custom development deliverables to physical products through our manufacturing partners. A reference design engagement might include an architectural specification, data sheet, theory of operation and implementation guides. A custom development project would entail a specific design implementation optimized for the customer's manufacturing process. In some cases, we may provide supply chain enablement services where we assist our customers in designing and establishing certain manufacturing processes to implement our technologies in their product offerings. We often develop test-chips of our designs and have begun the process to deliver our solutions to the market through physical product.
Background
The demand for increased performance and improved power efficiency in computers, tablets, smartphones, consumer electronics and other electronic systems rises dramatically with each passing year. Semiconductor and system designers face key challenges in sustaining the pace of innovation. We strive to offer compelling technologies that provide value to our customers.
Memory and Interfaces
There are four main areas of focus in our Memory and Interface Division: mobile memory, server-based memory, serial link designs, and custom solutions. The primary markets for these technologies include: (1) DRAM devices; (2) NAND devices; (3) System-on-Chip (SoC) devices; (4) silicon physical IP; and (5) memory buffer chips. In these markets, memory technology transitions, serial link transitions and SoC microarchitecture transitions or overall process technology node transitions provide opportunities. Since battery technology improves modestly over time, mobile device designers face challenges in adding increased functionality and higher performance with only small increases in power budget. For plug-in systems, there is a strong desire to reduce power consumption for both economic and environmental reasons while still providing increased computing capability and more visually compelling displays. At the chip level, it becomes increasingly difficult to maintain signal integrity and power efficiency as data transfer speeds rise to support more powerful, multi-core processors.
To address these challenges and enable the continued improvement of electronics systems, ongoing innovation is required. The many contributions and patented innovations developed by Rambus scientists and engineers have been, and continue to be, critical in addressing some of the most difficult chip and system challenges. The foundations of MID are world-class memory architectures and high-performance serial link technologies that are brought to market through three main business initiatives: (1) patent licensing; (2) silicon IP core licensing; and (3) memory buffer chips.
We have developed technologies, advanced designs, and development tools for building high-performance and low-power memory and serial-link interface cores for semiconductor chips. We develop both proprietary and

industry-standard interfaces that we provide to our customers under technology license agreements. We also offer a range of services as part of our technology licenses which can include know-how and technology transfer, product design and development, system integration, and other services. We offer a set of solutions under the name R+™ enhanced standard solutions. Fully compatible with industry standards, R+ solutions offer compelling benefits that enable our customers to differentiate their products. We recently announced the R+ DDR4 Server DIMM chip, the RCD26, which is designed to enable top-of-the-line performance and capacity with optimized power efficiency to advance critical data center and enterprise server infrastructure. We focus our resources and effort to help bring products to market under technology license agreements with leading companies in the industry as well as our Rambus-branded buffer chip product that is currently under development and not yet commercially available.

Chip and System Security Technology

Security challenges are increasingly prevalent in a multitude of industries, including high-growth sectors such as mobile and content distribution, providing a variety of opportunities for our security technologies and services. This market trend provides us with the opportunity to provide critical technologies, and we are deploying and developing products to enable us to achieve this objective. Through our Cryptography Research Division, we own a portfolio of patented inventions and technology solutions that are needed for creating secure tamper-resistant electronic devices and systems. These patented DPA countermeasures are critical in protecting devices against side channel attacks such as differential power analysis, which involve monitoring the variations in power consumption or electromagnetic emissions of a device. In addition, our hardware-based cores provide a robust hardware-based solution to protect electronics systems from side-channel attacks, counterfeiting, piracy, and other forms of attack.

For DPA countermeasures, our business model is to provide a combination of patent licenses, technology, consulting services (training, evaluation, and design), and test equipment as well as DPA resistant cores and software libraries. We are recognized worldwide for our expertise in this area, and our strategy is to strengthen our offering beyond stand-alone patent licensing. We discovered the existence of SPA and DPA vulnerabilities in the 1990s, and patented the fundamental techniques for preventing against this method of attack. DPA protections are a critical security ingredient in tamper-resistant products, and are important or required for a broad range of applications and devices (including smart cards, mobile devices, FPGAs, government/defense applications, consumer set-top boxes, postage meters and security tokens).

In addition to the DPA countermeasures portfolio, we have developed technologies, expertise, advanced designs, and development tools for building highly secure cryptographic semiconductor cores. We have successfully deployed our semiconductor cores in two primary application areas where effective security is valued and paid for by customers: content protection and anti-counterfeiting. For our content protection cores, our most common business model is to partner with chip manufacturers to integrate our technology, and then license it to downstream customers.

Secure Foundation for Connected Devices

In 2014, we introduced the Rambus CryptoManager™ feature management platform from our Cryptography Research Division. As connected products, including mobile phones and Internet of Things (IoT) devices, have a critical need for security, a robust security system is critical. Robust security starts with the design of the SoC and continues with the manufacturing supply chain. The Rambus CryptoManager™ solution brings revolutionary security improvements to the semiconductor chips and supply chains that enable our mobile world.

The CryptoManager platform provides chip and device companies with an advanced hardware root-of-trust for their SoCs, as well as an Infrastructure Suite for end-to-end security throughout the SoC design and manufacturing process. The CryptoManager platform has been developed with a services-based architecture that enables a secure, two-way communication channel across the manufacturing stages. This fully integrated solution is built on a foundation that simplifies, automates, and reduces costs for global enterprise IT, manufacturing, and operations functions. The platform is designed to support the enablement of in-field provisioning and downstream services, such as media, ticketing and mobile payments.

In addition, as a result of the acquisition of Smart Card Software Ltd. (“Smart Card Software”) in January 2016, we will incorporate Smart Card Software’s advanced mobile payment platform and smart ticketing platform into CRD. Bell ID, one division of Smart Card Software, provides banks, governments and enterprises with the ability to issue and manage credentials on smartphones, smart cards and other connected devices. The Bell ID technology supports all of the leading mobile payment platforms via host card emulation technology. Ecebs, the second division of Smart Card Software, provides smart card solutions to national and local governments, transport operators, banks and system integrators. Ecebs is known for its smart ticketing solutions that is compliant with the ITSO standard in the United Kingdom and is working to expand in the broader European Union.

Lighting and Display Technology

The continued evolution of LED as a bright, reliable and energy-efficient light source creates significant market opportunities in consumer electronics and in general lighting. Harnessing the benefits of LEDs, however, presents a new set of challenges for companies that offer and provide electronics and lighting products and solutions. Our technology allows customers to efficiently and uniformly spread the point source of light emitted from an LED over a large area in a very cost effective way. Moreover, we can control and direct the emitted light to improve the overall product performance or application efficiency. This technology enables class-leading price/performance and freedom of design in the general lighting field. We believe our patented technology, software and know-how, which enables precise placement of MicroLens® optics on light guides, provides our customers with a fundamental competitive advantage over alternative products in the market. We continue to focus resources and effort to help our customers bring new products to market under technology license agreements. Our business model is a blend of patent and technology licensing, product sales and services to help bring innovative products to market.

Research and Development and Employees

Our ability to compete in the future will be substantially dependent on our ability to develop key innovations that meet the future needs of a dynamic market. To this end, we have assembled a team of highly skilled inventors, engineers and scientists whose activities are focused on continually developing new innovations within our chosen technology fields. Using this foundation of innovations, our technical teams develop new solutions that enable increased performance, greater power efficiency, increased levels of security, as well as other improvements and benefits. Our solution design and development process is a multi-disciplinary effort requiring expertise in multiple fields across all of our operational units.

As of December 31, 2015, we had approximately 330 employees in our engineering departments, representing 67% of our total number of approximately 495 employees. None of our employees are covered by collective bargaining agreements. As noted, we believe our future success is dependent on our continued ability to identify, attract, motivate and retain qualified personnel. To date, we believe that we have been successful in recruiting qualified employees and that our relationship with our employees is good.

A significant number of our scientists and engineers spend all or a portion of their time on research and development. For the years ended December 31, 2015, 2014 and 2013, research and development expenses were $111.1 million, $110.0 million and $118.0 million, respectively, including stock-based compensation of approximately $6.8 million, $7.2 million and $6.6 million, respectively. For the years ended December 31, 2014 and 2013, research and development expenses also included $1.5 million and $8.6 million, respectively, for the accrual of retention bonuses for engineers. There was no accrual for retention bonuses for engineers as of December 31, 2015. Since innovation is critical to our future success, we expect to continue to invest substantial funds in research and development activities. In addition, because our customer agreements often call for us to provide engineering support, a portion of our total engineering costs are allocated to the cost of contract revenue.

Competition

Our selected industries are intensely competitive and have been impacted by price erosion, rapid technological change, short product life cycles, cyclical market patterns and increasing foreign and domestic competition. We face competition from semiconductor and digital electronics products and systems companies, other semiconductor intellectual property companies that provide security cores and non-edge lit LED lighting options that are available to the market.

We believe the principal competition for our technologies may come from our prospective customers, some of whom are evaluating and developing products based on technologies that they contend or may contend will not require a license from us. Some of our competitors use a system-level design approach similar to ours, including activities such as board and package design, power and signal integrity analysis, and thermal management. Many of these companies are larger and may have better access to financial, technical and other resources than we possess.

To the extent that alternatives might provide comparable system performance at lower or similar cost to our technologies, or are perceived to require the payment of no or lower royalties, or to the extent other factors influence the industry, our customers and prospective customers may adopt and promote alternative technologies. Even to the extent we determine that such alternative technologies infringe our patents, there can be no assurance that we would be able to negotiate agreements that would result in royalties being paid to us without litigation, which could be costly and the results of which would be uncertain. In the past, litigation has been and in the future may be required to enforce and protect our intellectual property rights, as well as the substantial investments undertaken to research and develop our innovations and technologies.

Patents and Intellectual Property Protection

We maintain and support an active program to protect our intellectual property, primarily through the filing of patent applications and the defense of issued patents against infringement. As of December 31, 2015, our semiconductor, lighting, security and other technologies are covered by 1,832 U.S. and foreign patents, having expiration dates ranging from 2016 to 2038. Additionally, we have 681 patent applications pending. Some of the patents and pending patent applications are derived from a common parent patent application or are foreign counterpart patent applications. We believe our patented innovations provide our customers with the ability to achieve improved performance, lower risk, greater cost-effectiveness and other benefits in their products and services.

We have a program to file applications for and obtain patents in the United States and in selected foreign countries where we believe filing for such protection is appropriate and would further our overall business strategy and objectives. In some instances, obtaining appropriate levels of protection may involve prosecuting continuation and counterpart patent applications based on a common parent application. In addition, we attempt to protect our trade secrets and other proprietary information through agreements with current and prospective customers, and confidentiality agreements with employees and consultants and other security measures. We also rely on copyright, trademarks and trade secret laws to protect our intellectual property.

Information concerning revenue, results of operations and revenue by geographic area is set forth in Item 6, “Selected Financial Data,” in Item 7, “Management's Discussion and Analysis of Financial Condition and Results of Operations,” and in Note 6, “Segments and Major Customers,” of Notes to Consolidated Financial Statements of this Form 10-K, all of which are incorporated herein by reference. Information concerning identifiable assets and segment reporting is also set forth in Note 6, “Segments and Major Customers,” of Notes to Consolidated Financial Statements of this Form 10-K. Information on customers that comprise 10% or more of our consolidated revenue and risks attendant to our foreign operations is set forth below in Item 1A, “Risk Factors.”

Item 1A. Risk Factors

RISK FACTORS

Because of the following factors, as well as other variables affecting our operating results, past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. See also “Note Regarding Forward-Looking Statements” at the beginning of this report.

Risks Associated With Our Business, Industry and Market Conditions

The success of our business depends on sustaining or growing our licensing revenue and the failure to achieve such revenue would lead to a material decline in our results of operations.

Our revenue consists mainly of patent and technology license fees paid for access to our patents, developed technology and development and support services provided to our customers. Our ability to secure and renew the licenses from which our revenues are derived depends on our customers adopting our technology and using it in the products they sell. Once secured, license revenue may be negatively affected by factors within and outside our control, including reductions in our customers’ sales prices, sales volumes, our failure to timely complete engineering deliverables, and the terms of such licenses. In addition, we cannot provide any assurance that we will be successful in renewing existing license agreements on equal or favorable terms or at all. As an example, for the year ended December 31, 2015, our revenue attributable to royalties declined 3.4% from the year ended December 31, 2014. If we do not achieve our revenue goals, our results of operations could decline.

We have traditionally operated in, and may enter other, industries that are highly cyclical and competitive.

Our target customers are companies that develop and market high volume business and consumer products in semiconductors, computing, tablets, handheld devices, mobile applications, gaming and graphics, high-definition televisions and displays, general lighting, cryptography and data security. The electronics industry is intensely competitive and has been impacted by price erosion, rapid technological change, short product life cycles, cyclical market patterns and increasing foreign and domestic competition. We are subject to many risks beyond our control that influence whether or not we are successful in winning target customers or retaining existing customers, including, primarily, competition in a particular industry, market acceptance of such customers' products and the financial resources of such customers. In particular, DRAM manufacturers, which make up a significant part of our revenue, have suffered material losses and other adverse effects to their businesses, leading to industry consolidation from time-to-time that may result in loss of revenues under our existing license agreements or loss of target customers. As a result of ongoing competition in the industries in which we operate and volatility in various economies around the world, we may achieve a reduced number of licenses or may experience tightening of customers' operating budgets, difficulty or inability of our customers to pay our licensing fees, lengthening of the approval process for new licenses and consolidation among our customers. All of these factors may adversely affect the demand for our technology and may cause us to experience substantial fluctuations in our operating results.

We face competition from semiconductor and digital electronics products and systems companies, other semiconductor intellectual property companies that provide security cores and non-edge lit LED lighting options that are available to the market. We believe the principal competition for our technologies may come from our prospective customers, some of whom are evaluating and developing products based on technologies that they contend or may contend will not require a license from us. Some of our competitors use a system-level design approach similar to ours, including activities such as board and package design, power and signal integrity analysis, and thermal management. Many of these companies are larger and may have better access to financial, technical and other resources than we possess.

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To the extent that alternatives might provide comparable system performance at lower or similar cost to our technologies, or are perceived to require the payment of no or lower royalties, or to the extent other factors influence the industry, our customers and prospective customers may adopt and promote alternative technologies. Even to the extent we determine that such alternative technologies infringe our patents, there can be no assurance that we would be able to negotiate agreements that would result in royalties being paid to us without litigation, which could be costly and the results of which would be uncertain.

In addition, our expansion into new markets subjects us to additional risks. We may have limited or no experience in new products and markets, including our recently announced buffer chip set, our CryptoManager platform and new offerings that will result from our acquisition of Smart Card Software in the mobile credential and smart card solution spaces, and our customers may not adopt our new offerings. These and other new offerings may present new and difficult challenges, which could negatively affect our operating results.

We may have to invest more resources in research and development than anticipated, which could increase our operating expenses and negatively impact our operating results.

If new competitors, technological advances by existing competitors, and/or development of new technologies or other competitive factors require us to invest significantly greater resources than anticipated in our research and development efforts, our operating expenses could increase. If we are required to invest significantly greater resources than anticipated in research and development efforts without an increase in revenue, our operating results would decline. We expect these expenses to increase in the foreseeable future as our technology development efforts continue.

Our revenue is concentrated in a few customers, and if we lose any of these customers through contract terminations or acquisitions, our revenue may decrease substantially.

We have a high degree of revenue concentration. Our top five customers represented approximately 65% and 62% of our revenues for the years ended December 31, 2015 and 2014, respectively. For both of the years ended December 31, 2015 and 2014, revenues from Micron, Samsung and SK hynix each accounted for 10% or more of our total revenue in each year. We extended our license agreement with Samsung in December 2013, and we expect Samsung to continue to account for a significant portion of our licensing revenue. We also entered into settlement agreements with each of SK hynix and Micron (which included Elpida, which Micron had acquired in July 2013) in June 2013 and December 2013, respectively. In June 2015, we also extended our license agreement with SK hynix. As a result of the renewal and such settlements, we expect each of Samsung, SK hynix and Micron to account for a significant portion of our licensing revenue in the future. We expect to continue to experience significant revenue concentration for the foreseeable future.

In addition, our license agreements are complex and some contain terms that require us to provide certain customers with the lowest royalty rate that we provide to other customers for similar technologies, volumes and schedules. These clauses may limit our ability to effectively price differently among our customers, to respond quickly to market forces, or otherwise to compete on the basis of price. These clauses may also require us to reduce royalties payable by existing customers when we enter into or amend agreements with other customers. Any adjustment that reduces royalties from current customers or licensees may have a material adverse effect on our operating results and financial condition.

We continue to negotiate with customers and prospective customers to enter into license agreements. Any future agreement may trigger our obligation to offer comparable terms or modifications to agreements with our existing customers, which may be less favorable to us than the existing license terms. We expect licensing fees will continue to vary based on our success in renewing existing license agreements and adding new customers, as well as the level of variation in our customers' reported shipment volumes, sales price and mix, offset in part by the proportion of customer payments that are fixed. In particular, under our license agreement with Samsung, the license fees payable by Samsung are subject to certain adjustments and conditions, and we therefore cannot provide assurances that the revenues generated by this license will not decline in the future. In addition, some of our material license agreements may contain rights by the customer to terminate for convenience, or upon certain other events, such as change of control, material breach, insolvency or bankruptcy proceedings. If we are unsuccessful in entering into license agreements with new customers or renewing license agreements with existing customers, on favorable terms or at all, or if they are terminated, our results of operations may decline significantly.

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

Attempts by others to gain unauthorized access to our information technology systems are becoming more sophisticated. These attempts, which might be related to industrial or other espionage, include covertly introducing malware to our computers and networks and impersonating authorized users, among others. We seek to detect and investigate all security incidents and to prevent their recurrence, but in some cases, we might be unaware of an incident or its magnitude and effects. While we have not identified any material incidents of unauthorized access to date, the theft, unauthorized use or publication of our intellectual

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property and/or confidential business information could harm our competitive position and reputation, reduce the value of our investment in research and development and other strategic initiatives or otherwise adversely affect our business. To the extent that any future security breach results in inappropriate disclosure of our customers' confidential information, we may incur liability.

Failures in our products and services or in the products of our customers, including those resulting from security vulnerabilities, defects, bugs or errors, could harm our business.

Our products and services are highly technical and complex, and among our various businesses our products and services are crucial to providing security, payment and other critical functions for our customers' operations. Our products and services have from time to time contained and may in the future contain undetected errors, bugs defects or other security vulnerabilities. Some errors in our products and services may only be discovered after a product or service has been deployed and used by customers, and may in some cases only be detected under certain circumstances or after extended use. In addition, because the techniques used by hackers to access or sabotage our products and services and other technologies change and evolve frequently and generally are not recognized until launched against a target, we may be unable to anticipate, detect or prevent these techniques and may not address them in our data security technologies. Any errors, bugs, defects or security vulnerabilities discovered in our solutions after commercial release could adversely affect our revenue, our customer relationships and the market's perception of our products and services. We may not be able to correct any errors, bugs, defects, security flaws or vulnerabilities promptly, or at all. Any breaches, defects, errors or vulnerabilities in our products and services could result in:

- expenditure of significant financial and research and development resources in efforts to analyze, correct, eliminate or work around breaches, errors, bugs or defects or to address and eliminate vulnerabilities;
- financial liability to customers for breach of certain contract provisions, including indemnification obligations;
- loss of existing or potential customers;
- delayed or lost revenue;
- delay or failure to attain market acceptance;
- negative publicity, which would harm our reputation; and
- litigation, regulatory inquiries or investigations that would be costly and harm our reputation.

Some of our revenue is subject to the pricing policies of our customers over whom we have no control.

We have no control over our customers' pricing of their products and there can be no assurance that licensed products will be competitively priced or will sell in significant volumes. Any premium charged by our customers in the price of memory and controller chips or other products over alternatives must be reasonable. If the benefits of our technology do not match the price premium charged by our customers, the resulting decline in sales of products incorporating our technology could harm our operating results.

Our licensing cycle is lengthy and costly, and our marketing and licensing efforts may be unsuccessful.

The process of persuading customers to adopt and license our chip interface, lighting, data security, and other technologies can be lengthy. Even if successful, there can be no assurance that our technologies will be used in a product that is ultimately brought to market, achieves commercial acceptance or results in significant royalties to us. We generally incur significant marketing and sales expenses prior to entering into our license agreements, generating a license fee and establishing a royalty stream from each customer. The length of time it takes to establish a new licensing relationship can take many months or even years. We may incur costs in any particular period before any associated revenue stream begins, if at all. If our marketing and sales efforts are very lengthy or unsuccessful, then we may face a material adverse effect on our business and results of operations as a result of failure to obtain or an undue delay in obtaining royalties.

Future revenue is difficult to predict for several reasons, and our failure to predict revenue accurately may result in our stock price declining.

Our lengthy license negotiation cycles could make our future revenue difficult to predict because we may not be successful in entering into licenses with our customers on our anticipated timelines.

In addition, while some of our license agreements provide for fixed, quarterly royalty payments, many of our license agreements provide for volume-based royalties, and may also be subject to caps on royalties in a given period. The sales volume and prices of our customers' products in any given period can be difficult to predict. As a result, our actual results may differ substantially from analyst estimates or our forecasts in any given quarter.

Furthermore, a portion of our revenue comes from development and support services provided to our customers. Depending upon the nature of the services, a portion of the related revenue may be recognized ratably over the support period, or may be

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recognized according to contract revenue accounting. Contract revenue accounting may result in deferral of the service fees to the completion of the contract, or may result in the recognition of service fees over the period in which services are performed on a percentage-of-completion basis.

We may not be successful in entering into new markets, and our new product offerings, such as our recently announced buffer chip set, our CryptoManager platform and new offerings in the mobile credential and smart card solution spaces, may not be adopted. In addition, once we commercially launch our products, the sales volume of such products in any given period will be difficult to predict.

We may fail to meet our publicly announced guidance or other expectations about our business, which would likely cause our stock price to decline.

We provide guidance regarding our expected financial and business performance including our anticipated future revenues and operating expenses. Correctly identifying the key factors affecting business conditions and predicting future events is inherently an uncertain process.

Such guidance may not always be accurate or may vary from actual results due to our inability to meet our assumptions and the impact on our financial performance that could occur as a result of the various risks and uncertainties to our business as set forth in these risk factors. We offer no assurance that such guidance will ultimately be accurate, and investors should treat any such guidance with appropriate caution. If we fail to meet our guidance or if we find it necessary to revise such guidance, even if such failure or revision is seemingly insignificant, investors and analysts may lose confidence in us and the market value of our common stock could be materially adversely affected.

We have in the past made and may in the future make acquisitions or enter into mergers, strategic investments, sales of assets or other arrangements that may not produce expected operating and financial results.

From time to time, we engage in acquisitions, strategic transactions and strategic investments, such as our acquisition of Smart Card Software in January 2016. Many of our acquisitions or strategic investments entail a high degree of risk, including those involving new areas of technology and such investments may not become liquid for several years after the date of the investment, if at all. Our acquisitions or strategic investments may not provide the advantages that we anticipated or generate the financial returns we expect, we may discover unidentified issues not discovered in due diligence, and we may be subject to liabilities that either are not covered by indemnification protection we may obtain or become subject to litigation. Achieving the anticipated benefits of business acquisitions depends in part upon our ability to integrate the acquired businesses in an efficient and effective manner. The integration of companies that have previously operated independently may result in significant challenges, including, among others: retaining key employees; successfully integrating new employees, business systems and technology; retaining customers of the acquired business; minimizing the diversion of management's and other employees' attention from ongoing business matters; coordinating geographically separate organizations; consolidating research and development operations; and consolidating corporate and administrative infrastructures.

Our strategic investments in new areas of technology may involve significant risks and uncertainties, including distraction of management from current operations, greater than expected liabilities and expenses, inadequate return of capital, and unidentified issues not discovered in due diligence. These investments are inherently risky and may not be successful.

In addition, we may record impairment charges related to our acquisitions or strategic investments. Any losses or impairment charges that we incur related to acquisitions, strategic investments or sales of assets will have a negative impact on our financial results, and we may continue to incur new or additional losses related to acquisitions or strategic investments.

We may have to incur debt or issue equity securities to pay for any future acquisition, which debt could involve restrictive covenants or which equity security issuance could be dilutive to our existing stockholders.

From time to time, we may also divest certain assets, where we may be required to provide certain representations, warranties and covenants to their buyers. While we would seek to ensure the accuracy of such representations and warranties and fulfillment of any ongoing obligations, we may not be completely successful and consequently may be subject to claims by a purchaser of such assets.

A substantial portion of our revenue is derived from sources outside of the United States and this revenue and our business generally are subject to risks related to international operations that are often beyond our control.

For the years ended December 31, 2015 and 2014, revenues received from our international customers constituted approximately 60% and 63%, respectively, of our total revenue. We expect that future revenue derived from international sources will continue to represent a significant portion of our total revenue.

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To the extent that customer sales are not denominated in U.S. dollars, any royalties which are based on a percentage of the customers' sales that we receive as a result of such sales could be subject to fluctuations in currency exchange rates. In addition, if the effective price of licensed products sold by our foreign customers were to increase as a result of fluctuations in the exchange rate of the relevant currencies, demand for licensed products could fall, which in turn would reduce our royalties. We do not use financial instruments to hedge foreign exchange rate risk.

We currently have international business operations in the United Kingdom and the Netherlands, international design operations in Canada, India, Finland and France, and business development operations in Japan, Korea, Singapore and Taiwan. Our international operations and revenue are subject to a variety of risks which are beyond our control, including:

- hiring, maintaining and managing a workforce and facilities remotely and under various legal systems, including compliance with local labor and employment laws;
- non-compliance with our code of conduct or other corporate policies;
- natural disasters, acts of war, terrorism, widespread illness or security breaches;
- export controls, tariffs, import and licensing restrictions and other trade barriers;
- profits, if any, earned abroad being subject to local tax laws and not being repatriated to the United States or, if repatriation is possible, limited in amount;
- adverse tax treatment of revenue from international sources and changes to tax codes, including being subject to foreign tax laws and being liable for paying withholding, income or other taxes in foreign jurisdictions;
- unanticipated changes in foreign government laws and regulations;
- increased financial accounting and reporting burdens and complexities;
- lack of protection of our intellectual property and other contract rights by jurisdictions in which we may do business to the same extent as the laws of the United States;
- potential vulnerability to computer system, internet or other systemic attacks, such as denial of service, viruses or other malware which may be caused by criminals, terrorists or other sophisticated organizations;
- social, political and economic instability;
- geopolitical issues, including changes in diplomatic and trade relationships; and
- cultural differences in the conduct of business both with customers and in conducting business in our international facilities and international sales offices.

We and our customers are subject to many of the risks described above with respect to companies which are located in different countries. There can be no assurance that one or more of the risks associated with our international operations will not result in a material adverse effect on our business, financial condition or results of operations.

Weak global economic conditions may adversely affect demand for the products and services of our customers.

Our operations and performance depend significantly on worldwide economic conditions. Uncertainty about global or regional economic conditions poses a risk as consumers and businesses may postpone spending in response to tighter credit, negative financial news and declines in income or asset values, which could have a material negative effect on the demand for the products of our customers in the foreseeable future. If our customers experience reduced demand for their products as a result of global or regional economic conditions or otherwise, this could result in reduced royalty revenue and our business and results of operations could be harmed.

If our counterparties are unable to fulfill their financial and other obligations to us, our business and results of operations may be affected adversely.

Any downturn in economic conditions or other business factors could threaten the financial health of our counterparties, including companies with whom we have entered into licensing and/or settlement agreements, and their ability to fulfill their financial and other obligations to us. Such financial pressures on our counterparties may eventually lead to bankruptcy proceedings or other attempts to avoid financial obligations that are due to us. Because bankruptcy courts have the power to modify or cancel contracts of the petitioner which remain subject to future performance and alter or discharge payment obligations related to pre-petition debts, we may receive less than all of the payments that we would otherwise be entitled to receive from any such counterparty as a result of bankruptcy proceedings.

If we are unable to attract and retain qualified personnel, our business and operations could suffer.

Our success is dependent upon our ability to identify, attract, compensate, motivate and retain qualified personnel, especially engineers, senior management and other key personnel. We recently have faced retention issues, such as when our employee turnover accelerated after our reduction-in-force efforts in 2012 and 2013 and subsequent voluntary and involuntary separations. We may experience a similar acceleration in employee turnover due to the restructuring and plan of termination instituted in the fourth quarter of 2015. The loss of the services of any key employees could be disruptive to our development

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efforts or business relationships and could cause our business and operations to suffer.

We are subject to various government restrictions and regulations, including on the sale of products and services that use encryption technology and those related to privacy and other consumer protection matters.

Various countries have adopted controls, license requirements and restrictions on the export, import and use of products or services that contain encryption technology. In addition, governmental agencies have proposed additional requirements for encryption technology, such as requiring the escrow and governmental recovery of private encryption keys. Restrictions on the sale or distribution of products or services containing encryption technology may impact the ability of CRD to license its data security technologies to the manufacturers and providers of such products and services in certain markets or may require CRD or its customers to make changes to the licensed data security technology that is embedded in such products to comply with such restrictions. Government restrictions, or changes to the products or services of CRD's customers to comply with such restrictions, could delay or prevent the acceptance and use of such customers' products and services. In addition, the United States and other countries have imposed export controls that prohibit the export of encryption technology to certain countries, entities and individuals. Our failure to comply with export and use regulations concerning encryption technology of CRD could subject us to sanctions and penalties, including fines, and suspension or revocation of export or import privileges.

We are subject to a variety of laws and regulations in the United States, the European Union and other countries that involve, for example, user privacy, data protection and security, content and consumer protection. A number of proposals are pending before federal, state, and foreign legislative and regulatory bodies that could significantly affect our business. Existing and proposed laws and regulations can be costly to comply with and can delay or impede the development of new products, result in negative publicity, increase our operating costs and subject us to claims or other remedies.

In accordance with the Dodd-Frank Wall Street Reform and Consumer Protection Act, the SEC established new disclosure and reporting requirements for those companies who use "conflict" minerals mined from the Democratic Republic of Congo and adjoining countries in their products, whether or not these products are manufactured by third parties. These requirements could affect the sourcing and availability of minerals that are used in the manufacture of our products. We have to date incurred costs and expect to incur significant additional costs associated with complying with the disclosure requirements, including for example, due diligence in regard to the sources of any conflict minerals used in our products, in addition to the cost of remediation and other changes to products, processes, or sources of supply as a consequence of such verification activities. Additionally, we may face reputational challenges with our customers and other stakeholders if we are unable to sufficiently verify the origins of all minerals used in our products through the due diligence procedures that we implement. We may also face challenges with government regulators and our customers and suppliers if we are unable to sufficiently verify that the metals used in our products are conflict free.

Our operations are subject to risks of natural disasters, acts of war, terrorism, widespread illness or security breach at our domestic and international locations, any one of which could result in a business stoppage and negatively affect our operating results.

Our business operations depend on our ability to maintain and protect our facilities, computer systems and personnel, which are primarily located in the San Francisco Bay Area and Bangalore, India. The San Francisco Bay Area is in close proximity to known earthquake fault zones. Our facilities and transportation for our employees are susceptible to damage from earthquakes and other natural disasters such as fires, floods and similar events. Should a catastrophe disable our facilities, we do not have readily available alternative facilities from which we could conduct our business, so any resultant work stoppage could have a negative effect on our operating results. We also rely on our network infrastructure and technology systems for operational support and business activities which are subject to physical and cyber damage, and also susceptible to other related vulnerabilities common to networks and computer systems. Acts of terrorism, widespread illness, war and any event that causes failures or interruption in our network infrastructure and technology systems could have a negative effect at our international and domestic facilities and could harm our business, financial condition, and operating results.

We do not have extensive experience in manufacturing and marketing products and, as a result, may be unable to sustain and grow a profitable commercial market for new and existing products.

We do not have extensive experience in creating, manufacturing and marketing products, including our recently announced buffer chip set, our CryptoManager platform and new offerings that will result from our acquisition of Smart Card Software in the mobile credential and smart card solution spaces. These and other new offerings may present new and difficult challenges, and we may be subject to claims if customers of these offerings experience failures or other quality issues. In particular, we may experience difficulties with product design, qualification, manufacturing, marketing or certification that could delay or prevent our development, introduction or marketing of new products. Although we intend to design our products to be fully compliant with applicable industry standards, proprietary enhancements may not in the future result in full conformance with existing industry standards under all circumstances.

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If we fail to introduce products that meet the demand of our customers or penetrate new markets in which we expend significant resources, our revenues will decrease over time and our financial condition could suffer. Additionally, if we concentrate resources on a new market that does not prove profitable or sustainable, it could damage our reputation and limit our growth, and our financial condition could decline.

We rely on a number of third-party providers for data center hosting facilities, equipment, maintenance and other services, and the loss of, or problems with, one or more of these providers may impede our growth or cause us to lose customers.

We rely on third-party providers to supply data center hosting facilities, equipment, maintenance and other services in order to provide some of our services, including in our offerings of our advanced mobile payment platform and smart ticketing platform, and have entered into various agreements for such services. The continuous availability of our service depends on the operations of those facilities, on a variety of network service providers and on third-party vendors. In addition, we depend on our third-party facility providers' ability to protect these facilities against damage or interruption from natural disasters, power or telecommunications failures, criminal acts, cyber-attacks and similar events. If there are any lapses of service or damage to a facility, we could experience lengthy interruptions in our service as well as delays and additional expenses in arranging new facilities and services. Even with current and planned disaster recovery arrangements, our business could be harmed. Any interruptions or delays in our service, whether as a result of third-party error, our own error, natural disasters, criminal acts, security breaches or other causes, whether accidental or willful, could harm our relationships with customers, harm our reputation and cause our revenue to decrease and/or our expenses to increase. Also, in the event of damage or interruption, our insurance policies may not adequately compensate us for any losses that we may incur. These factors in turn could further reduce our revenue, subject us to liability and cause us to issue credits or cause us to lose customers, any of which could materially adversely affect our business.

We rely on third parties for a variety of services, including manufacturing, and these third parties' failure to perform these services adequately could materially and adversely affect our business.

We rely on third parties for a variety of services, including our manufacturing supply chain partners and third parties within our sales and distribution channels. Certain of these third parties are, and may be, our sole manufacturer or sole source of production materials. If we fail to manage our relationship with these manufacturers and suppliers effectively, or if they experience delays, disruptions, capacity constraints or quality control problems in their operations, our ability to ship products to our customers could be impaired and our competitive position and reputation could be harmed. In addition, any adverse change in any of our manufacturers and suppliers' financial or business condition could disrupt our ability to supply quality products to our customers. If we are required to change our manufacturers, we may lose revenue, incur increased costs and damage our end-customer relationships. In addition, qualifying a new manufacturer and commencing production can be an expensive and lengthy process. If our third party manufacturers or suppliers are unable to provide us with adequate supplies of high-quality products for any other reason, we could experience a delay in our order fulfillment, and our business, operating results and financial condition would be adversely affected. In the event these and other third parties we rely on fail to provide their services adequately, including as a result of errors in their systems or events beyond their control, or refuse to provide these services on terms acceptable to us or at all, and we are not able to find suitable alternatives, our business may be materially and adversely affected. In addition, our orders may represent a relatively small percentage of the overall orders received by our manufacturers from their customers. As a result, fulfilling our orders may not be considered a priority in the event our manufacturers are constrained in their ability to fulfill all of their customer obligations in a timely manner. If our manufacturers are unable to provide us with adequate supplies of high-quality products, or if we or our manufacturers are unable to obtain adequate quantities of components, it could cause a delay in our order fulfillment, in which case our business, operating results and financial condition could be adversely affected.

Warranty and product liability claims brought against us could cause us to incur significant costs and adversely affect our operating results as well as our reputation and relationships with customers.

We may from time to time be subject to warranty and product liability claims with regard to product performance and our services. We could incur losses as a result of warranty, support, repair or replacement costs in response to customer complaints or in connection with the resolution of contemplated or actual legal proceedings relating to such claims. In addition to potential losses arising from claims and related legal proceedings, warranty and product liability claims could affect our reputation and our relationship with customers.

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Any failure in our delivery of high-quality technical support services may adversely affect our relationships with our customers and our financial results.

Our customers depend on our support organization to resolve technical issues and provide ongoing maintenance relating to our products and services. We may be unable to respond quickly enough to accommodate short-term increases in customer demand for support services. Increased customer demand for these services, without corresponding revenues, could increase costs and adversely affect our operating results. In addition, our sales process is highly dependent on our offerings and business reputation and on positive recommendations from our existing customers. Any failure to maintain high-quality technical support, or a market perception that we do not maintain high-quality support, could adversely affect our reputation, our ability to sell our solutions to existing and prospective customers, and our business, operating results and financial position.

Certain software that we use in certain of our products is licensed from third parties and, for that reason, may not be available to us in the future, which has the potential to delay product development and production or cause us to incur additional expense, which could materially adversely affect our business, financial condition, operating results and cash flow.

Some of our products and services contain software licensed from third parties. Some of these licenses may not be available to us in the future on terms that are acceptable to us or allow our products to remain competitive. The loss of these licenses or the inability to maintain any of them on commercially acceptable terms could delay development of future offerings or the enhancement of existing products and services. We may also choose to pay a premium price for such a license in certain circumstances where continuity of the licensed product would outweigh the premium cost of the license. The unavailability of these licenses or the necessity of agreeing to commercially unreasonable terms for such licenses could materially adversely affect our business, financial condition, operating results and cash flow.

Certain software we use is from open source code sources, which, under certain circumstances, may lead to unintended consequences and, therefore, could materially adversely affect our business, financial condition, operating results and cash flow.

We use open source software in our services, including our advanced mobile payment platform and smart ticketing platform, and we intend to continue to use open source software in the future. From time to time, there have been claims challenging the ownership of open source software against companies that incorporate open source software into their products or alleging that these companies have violated the terms of an open source license. As a result, we could be subject to lawsuits by parties claiming ownership of what we believe to be open source software or alleging that we have violated the terms of an open source license. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition or require us to devote additional research and development resources to change our solutions. In addition, if we were to combine our proprietary software solutions with open source software in certain manners, we could, under certain open source licenses, be required to publicly release the source code of our proprietary software solutions. If we inappropriately use open source software, we may be required to re-engineer our solutions, discontinue the sale of our solutions, release the source code of our proprietary software to the public at no cost or take other remedial actions. There is a risk that open source licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our solutions, which could adversely affect our business, operating results and financial condition.

Our business and operating results could be harmed if we undertake any restructuring activities.
From time to time, we may undertake restructurings of our business, such as the restructuring and plan of termination that we undertook in the fourth quarter of 2015. There are several factors that could cause restructurings to have adverse effects on our business, financial condition and results of operations. These include potential disruption of our operations, the development of our technology, the deliveries to our customers and other aspects of our business. Loss

of sales, service and engineering talent, in particular, could damage our business. Any restructuring would require substantial management time and attention and may divert management from other important work. Employee reductions or other restructuring activities also would cause us to incur restructuring and related expenses such as severance expenses. Moreover, we could encounter delays in executing any restructuring plans, which could cause further disruption and additional unanticipated expense.

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Risks Related to Capitalization Matters and Corporate Governance

The price of our common stock may continue to fluctuate.

Our common stock is listed on The NASDAQ Global Select Market under the symbol "RMBS." The trading price of our common stock has at times experienced price volatility and may continue to fluctuate significantly in response to various factors, some of which are beyond our control. Some of these factors include:

- any progress, or lack of progress, real or perceived, in the development of products that incorporate our innovations and technology companies' acceptance of our products, including the results of our efforts to expand into new target markets;
- our signing or not signing new licenses and the loss of strategic relationships with any customer;
- announcements of technological innovations or new products by us, our customers or our competitors;
- changes in our strategies, including changes in our licensing focus and/or acquisitions of companies with business models or target markets different from our own;
- positive or negative reports by securities analysts as to our expected financial results and business developments;
- developments with respect to patents or proprietary rights and other events or factors;
- new litigation and the unpredictability of litigation results or settlements; and
- issuance of additional securities by us, including in acquisitions.

In addition, the stock market in general, and prices for companies in our industry in particular, have experienced extreme volatility that often has been unrelated to the operating performance of such companies. These broad market and industry fluctuations may adversely affect the price of our common stock, regardless of our operating performance.

We have outstanding senior convertible notes in an aggregate principal amount totaling $138.0 million. Because these notes are convertible into shares of our common stock, volatility or depressed prices of our common stock could have a similar effect on the trading price of such notes. In addition, the existence of these notes may encourage short selling in our common stock by market participants because the conversion of the notes could depress the price of our common stock.

We have been party to, and may in the future be subject to, lawsuits relating to securities law matters which may result in unfavorable outcomes and significant judgments, settlements and legal expenses which could cause our business, financial condition and results of operations to suffer.

We and certain of our current and former officers and directors, as well as our current auditors, were subject from 2006 to 2011 to several stockholder derivative actions, securities fraud class actions and/or individual lawsuits filed in federal court against us and certain of our current and former officers and directors. The complaints generally alleged that the defendants violated the federal and state securities laws and stated state law claims for fraud and breach of fiduciary duty. Although to date these complaints have either been settled or dismissed, the amount of time to resolve any future lawsuits is uncertain, and these matters could require significant management and financial resources. Unfavorable outcomes and significant judgments, settlements and legal expenses in litigation related to any future securities law claims could have material adverse impacts on our business, financial condition, results of operations, cash flows and the trading price of our common stock.

We are leveraged financially, which could adversely affect our ability to adjust our business to respond to competitive pressures and to obtain sufficient funds to satisfy our future research and development needs, to protect and enforce our intellectual property, and to meet other needs.

We have material indebtedness. In August 2013, we issued $138.0 million aggregate principal amount of our 2018 Notes which remain outstanding. The degree to which we are leveraged could have negative consequences, including, but not limited to, the following:

- we may be more vulnerable to economic downturns, less able to withstand competitive pressures and less flexible in responding to changing business and economic conditions;
- our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions, litigation, general corporate or other purposes may be limited;
- a substantial portion of our cash flows from operations in the future may be required for the payment of the principal amount of our existing indebtedness when it becomes due at maturity in August 2018; and

- we may be required to make cash payments upon any conversion of the 2018 Notes, which would reduce our cash on hand.

A failure to comply with the covenants and other provisions of our debt instruments could result in events of default under such instruments, which could permit acceleration of all of our outstanding 2018 Notes. Any required repurchase of the 2018 Notes as a result of a fundamental change or acceleration of the 2018 Notes would reduce our cash on hand such that we would not have those funds available for use in our business.

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If we are at any time unable to generate sufficient cash flows from operations to service our indebtedness when payment is due, we may be required to attempt to renegotiate the terms of the instruments relating to the indebtedness, seek to refinance all or a portion of the indebtedness or obtain additional financing. There can be no assurance that we will be able to successfully renegotiate such terms, that any such refinancing would be possible or that any additional financing could be obtained on terms that are favorable or acceptable to us.

Compliance with changing regulation of corporate governance and public disclosure may result in additional expenses.

Changing laws, regulations and standards relating to corporate governance and public disclosure have historically created uncertainty for companies such as ours. Any new or changed laws, regulations and standards are subject to varying interpretations due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Our certificate of incorporation and bylaws, Delaware law and our outstanding convertible notes contain provisions that could discourage transactions resulting in a change in control, which may negatively affect the market price of our common stock.

Our certificate of incorporation, our bylaws and Delaware law contain provisions that might enable our management to discourage, delay or prevent a change in control. In addition, these provisions could limit the price that investors would be willing to pay in the future for shares of our common stock. Pursuant to such provisions:

- our board of directors is authorized, without prior stockholder approval, to create and issue preferred stock, commonly referred to as “blank check” preferred stock, with rights senior to those of common stock, which means that a stockholder rights plan could be implemented by our board;
- our board of directors is staggered into two classes, only one of which is elected at each annual meeting;
- stockholder action by written consent is prohibited;
- nominations for election to our board of directors and the submission of matters to be acted upon by stockholders at a meeting are subject to advance notice requirements;
- certain provisions in our bylaws and certificate of incorporation such as notice to stockholders, the ability to call a stockholder meeting, advance notice requirements and action of stockholders by written consent may only be amended with the approval of stockholders holding 66 2/3% of our outstanding voting stock;
- our stockholders have no authority to call special meetings of stockholders; and
- our board of directors is expressly authorized to make, alter or repeal our bylaws.

We are also subject to Section 203 of the Delaware General Corporation Law, which provides, subject to enumerated exceptions, that if a person acquires 15% or more of our outstanding voting stock, the person is an “interested stockholder” and may not engage in any “business combination” with us for a period of three years from the time the person acquired 15% or more of our outstanding voting stock.

Certain provisions of our outstanding 2018 Notes could make it more difficult or more expensive for a third party to acquire us. Upon the occurrence of certain transactions constituting a fundamental change, holders of such 2018 Notes will have the right, at their option, to require us to repurchase, at a cash repurchase price equal to 100% of the principal amount plus accrued and unpaid interest on such 2018 Notes, all or a portion of their 2018 Notes. We may also be required to increase the conversion rate of such 2018 Notes in the event of certain fundamental changes.

Unanticipated changes in our tax rates or in the tax laws and regulations could expose us to additional income tax liabilities which could affect our operating results and financial condition.

We are subject to income taxes in both the United States and various foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes and, in the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is uncertain. Our effective tax rate could be adversely affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in tax laws and regulations as well as other factors. Our tax determinations are regularly subject to audit by tax authorities and developments in those audits could adversely affect our income tax provision, and we are currently undergoing such audits of certain of our tax returns. Although we believe that our tax estimates are reasonable, the final determination of tax audits or tax disputes may be different from what is reflected in our historical income tax provisions which could affect our operating results.

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Litigation, Regulation and Business Risks Related to our Intellectual Property

We have in the past, and may in the future, become engaged in litigation stemming from our efforts to protect and enforce our patents and intellectual property and make other claims, which could adversely affect our intellectual property rights, distract our management and cause substantial expenses and declines in our revenue and stock price.

We seek to diligently protect our intellectual property rights and will continue to do so. While we are not currently involved in intellectual property litigation, any future litigation, whether or not determined in our favor or settled by us, would be expected to be costly, may cause delays applicable to our business (including delays in negotiating licenses with other actual or potential customers), would be expected to tend to discourage future design partners, would tend to impair adoption of our existing technologies and would divert the efforts and attention of our management and technical personnel from other business operations. In addition, we may be unsuccessful in any litigation if we have difficulty obtaining the cooperation of former employees and agents who were involved in our business during the relevant periods related to our litigation and are now needed to assist in cases or testify on our behalf. Furthermore, any adverse determination or other resolution in litigation could result in our losing certain rights beyond the rights at issue in a particular case, including, among other things: our being effectively barred from suing others for violating certain or all of our intellectual property rights; our patents being held invalid or unenforceable or not infringed; our being subjected to significant liabilities; our being required to seek licenses from third parties; our being prevented from licensing our patented technology; or our being required to renegotiate with current customers on a temporary or permanent basis.

From time to time, we are subject to proceedings by government agencies that may result in adverse determinations against us and could cause our revenue to decline substantially.

An adverse resolution by or with a governmental agency could result in severe limitations on our ability to protect and license our intellectual property, and could cause our revenue to decline substantially. Third parties have and may attempt to use adverse findings by a government agency to limit our ability to enforce or license our patents in private litigations, to challenge or otherwise act against us with respect to such government agency proceedings.

Further, third parties have sought and may seek review and reconsideration of the patentability of inventions claimed in certain of our patents by the U.S. Patent and Trademark Office (“PTO”) and/or the European Patent Office (the “EPO”). Any re-examination proceedings may be reviewed by the PTO's Patent Trial and Appeal Board (“PTAB”). The PTAB and the related former Board of Patent Appeals and Interferences ("BPAI") have previously issued decisions in a few cases, finding some challenged claims of Rambus' patents to be valid, and others to be invalid. Decisions of the PTAB are subject to further PTO proceedings and/or appeal to the Court of Appeals for the Federal Circuit. A final adverse decision, not subject to further review and/or appeal, could invalidate some or all of the challenged patent claims and could also result in additional adverse consequences affecting other related U.S. or European patents, including in any intellectual property litigation. If a sufficient number of such patents are impaired, our ability to enforce or license our intellectual property would be significantly weakened and could cause our revenue to decline substantially.

The pendency of any governmental agency acting as described above may impair our ability to enforce or license our patents or collect royalties from existing or potential customers, as any litigation opponents may attempt to use such proceedings to delay or otherwise impair any pending cases and our existing or potential customers may await the final outcome of any proceedings before agreeing to new licenses or to paying royalties.

Litigation or other third-party claims of intellectual property infringement could require us to expend substantial resources and could prevent us from developing or licensing our technology on a cost-effective basis.

Our research and development programs are in highly competitive fields in which numerous third parties have issued patents and patent applications with claims closely related to the subject matter of our programs. We have also been named in the past, and may in the future be named, as a defendant in lawsuits claiming that our technology infringes upon the intellectual property rights of third parties. As we develop additional products and technology, we may face claims of infringement of various patents and other intellectual property rights by third parties. In the event of a third-party claim or a successful infringement action against us, we may be required to pay substantial damages, to stop developing and licensing our infringing technology, to develop non-infringing technology, and to obtain licenses, which could result in our paying substantial royalties or our granting of cross licenses to our technologies. We may not be able to obtain licenses from other parties at a reasonable cost, or at all, which could cause us to expend substantial resources, or result in delays in, or the cancellation of, new products.

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If we are unable to protect our inventions successfully through the issuance and enforcement of patents, our operating results could be adversely affected.

We have an active program to protect our proprietary inventions through the filing of patents. There can be no assurance, however, that:

- any current or future U.S. or foreign patent applications will be approved and not be challenged by third parties;
- our issued patents will protect our intellectual property and not be challenged by third parties;
- the validity of our patents will be upheld;
- our patents will not be declared unenforceable;
- the patents of others will not have an adverse effect on our ability to do business;
- Congress or the U.S. courts or foreign countries will not change the nature or scope of rights afforded patents or patent owners or alter in an adverse way the process for seeking or enforcing patents;
- changes in law will not be implemented, or changes in interpretation of such laws will occur, that will affect our ability to protect and enforce our patents and other intellectual property;
- new legal theories and strategies utilized by our competitors will not be successful;
- others will not independently develop similar or competing chip interfaces or design around any patents that may be issued to us; or
- factors such as difficulty in obtaining cooperation from inventors, pre-existing challenges or litigation, or license or other contract issues will not present additional challenges in securing protection with respect to patents and other intellectual property that we acquire.

If any of the above were to occur, our operating results could be adversely affected.

Furthermore, recent patent reform legislation, such as the Leahy-Smith America Invents Act, could increase the uncertainties and costs surrounding the prosecution of any patent applications and the enforcement or defense of our licensed patents. The federal courts, the USPTO, the Federal Trade Commission, and the U.S. International Trade Commission have also recently taken certain actions and issued rulings that have been viewed as unfavorable to patentees. While we cannot predict what form any new patent reform laws or regulations may ultimately take, or what impact recent or future reforms may have on our business, any laws or regulations that restrict or negatively impact our ability to enforce our patent rights against third parties could have a material adverse effect on our business.

In addition, our patents will continue to expire according to their terms, with expiration dates ranging from 2016 to 2038. Our failure to continuously develop or acquire successful innovations and obtain patents on those innovations could significantly harm our business, financial condition, results of operations, or cash flows.

Our inability to protect and own the intellectual property we create would cause our business to suffer.

We rely primarily on a combination of license, development and nondisclosure agreements, trademark, trade secret and copyright law and contractual provisions to protect our non-patentable intellectual property rights. If we fail to protect these intellectual property rights, our customers and others may seek to use our technology without the payment of license fees and royalties, which could weaken our competitive position, reduce our operating results and increase the likelihood of costly litigation. The growth of our business depends in part on the use of our intellectual property in the products of third party manufacturers, and our ability to enforce intellectual property rights against them to obtain appropriate compensation. In addition, effective trade secret protection may be unavailable or limited in certain foreign countries. Although we intend to protect our rights vigorously, if we fail to do so, our business will suffer.

Effective protection of trademarks, copyrights, domain names, patent rights, and other intellectual property rights is expensive and difficult to maintain, both in terms of application and maintenance costs, as well as the costs of defending and enforcing those rights. The efforts we have taken to protect our intellectual property rights may not be sufficient or effective. Our intellectual property rights may be infringed, misappropriated, or challenged, which could result in them being narrowed in scope or declared invalid or unenforceable. In addition, the laws or practices of certain countries do not protect our proprietary rights to the same extent as do the laws of the United States. Significant impairments of our intellectual property rights, and limitations on our ability to assert our intellectual property rights against others, could have a material and adverse effect on our business.

Third parties may claim that our products or services infringe on their intellectual property rights, exposing us to litigation that, regardless of merit, may be costly to defend.

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Our success and ability to compete are also dependent upon our ability to operate without infringing upon the patent, trademark and other intellectual property rights of others. Third parties may claim that our current or future products or services infringe upon their intellectual property rights. Any such claim, with or without merit, could be time consuming, divert management’s attention from our business operations and result in significant expenses. We cannot assure you that we would be successful in defending against any such claims. In addition, parties making these claims may be able to obtain injunctive or other equitable relief affecting our ability to license the products that incorporate the challenged intellectual property. As a result of such claims, we may be required to obtain licenses from third parties, develop alternative technology or redesign our products. We cannot be sure that such licenses would be available on terms acceptable to us, if at all. If a successful claim is made against us and we are unable to develop or license alternative technology, our business, financial condition, operating results and cash flows could be materially adversely affected.

We rely upon the accuracy of our customers' recordkeeping, and any inaccuracies or payment disputes for amounts owed to us under our licensing agreements may harm our results of operations.

Many of our license agreements require our customers to document the manufacture and sale of products that incorporate our technology and report this data to us on a quarterly basis. While licenses with such terms give us the right to audit books and records of our customers to verify this information, audits rarely are undertaken because they can be expensive, time consuming, and potentially detrimental to our ongoing business relationship with our customers. Therefore, we typically rely on the accuracy of the reports from customers without independently verifying the information in them. Our failure to audit our customers' books and records may result in our receiving more or less royalty revenue than we are entitled to under the terms of our license agreements. If we conduct royalty audits in the future, such audits may trigger disagreements over contract terms with our customers and such disagreements could hamper customer relations, divert the efforts and attention of our management from normal operations and impact our business operations and financial condition.

Any dispute regarding our intellectual property may require us to indemnify certain customers, the cost of which could severely hamper our business operations and financial condition.

In any potential dispute involving our patents or other intellectual property, our customers could also become the target of litigation. While we generally do not indemnify our customers, some of our license agreements provide indemnities, and some require us to provide technical support and information to a customer that is involved in litigation involving use of our technology. In addition, we may be exposed to indemnification obligations, risks and liabilities that were unknown at the time of acquisitions, including with respect to our acquisition of Smart Card Software, and we may agree to indemnify others in the future. Any of these indemnification and support obligations could result in substantial expenses. In addition to the time and expense required for us to indemnify or supply such support to our customers, a customer's development, marketing and sales of licensed semiconductors, lighting, mobile communications and data security technologies could be severely disrupted or shut down as a result of litigation, which in turn could severely hamper our business operations and financial condition as a result of lower or no royalty payments.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2015, we occupied offices in the leased facilities described below:

Number of Offices Under Lease	Location	Primary Use
6	United States	
	Sunnyvale, CA (Corporate Headquarters)	Executive and administrative offices, research and development, sales and marketing and service functions
	Chapel Hill, NC	Research and development
	Brecksville, OH (2)	Research and development, prototyping and light manufacturing facility
	San Francisco, CA	Research and development
	Richardson, TX	Research and development
1	Bangalore, India	Administrative offices, research and development and service functions
1	Tokyo, Japan	Business development
1	Seoul, Korea	Business development
1	Taipei, Taiwan	Business development
1	Paris, France	Research and development
1	Newmarket, Canada	Research and development
1	Espoo, Finland	Research and development

Item 3. Legal Proceedings

We are not currently a party to any material pending legal proceeding; however, from time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. Although the results of litigation and claims cannot be predicted with certainty, we currently believe that the final outcome of these ordinary course matters will not have a material adverse effect on our business, operating results, financial position or cash flows. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Our Common Stock is listed on The NASDAQ Global Select Market under the symbol "RMBS." The following table sets forth for the periods indicated the high and low sales price per share of our common stock as reported on The NASDAQ Global Select Market.

	Year Ended December 31, 2015		Year Ended December 31, 2014	
	High	Low	High	Low
First Quarter	$12.88	$10.01	$11.00	$8.38
Second Quarter	$15.49	$12.44	$14.82	$10.74
Third Quarter	$14.80	$10.36	$14.77	$11.27
Fourth Quarter	$14.07	$9.86	$12.55	$9.87

The graph below compares the cumulative 5-year total return of holders of Rambus Inc.'s common stock with the cumulative total returns of the NASDAQ Composite index and the RDG Semiconductor Composite index. The graph tracks the performance of a $100 investment in our common stock and in each of the indexes (with the reinvestment of all dividends) from December 31, 2010 to December 31, 2015.

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Fiscal years ending:

	12/10	12/11	12/12	12/13	12/14	12/15
Rambus Inc.	100.00	36.87	23.78	46.24	54.15	56.59
NASDAQ Composite	100.00	100.53	116.92	166.19	188.78	199.95
RDG Semiconductor Composite	100.00	97.51	99.00	132.42	166.28	151.75

The stock price performance included in this graph is not necessarily indicative of future stock price performance.
Information regarding our securities authorized for issuance under equity compensation plans will be included in Item 12, “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters,” of this report on Form 10-K.
As of January 29, 2016, there were 534 holders of record of our common stock. Since many of the shares of our common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial stockholders represented by these record holders.
We have never paid or declared any cash dividends on our common stock or other securities.
Share Repurchase Program
On January 21, 2015, our Board approved a share repurchase program authorizing the repurchase of up to an aggregate of 20.0 million shares. Share repurchases under the plan may be made through the open market, established plans or privately negotiated transactions in accordance with all applicable securities laws, rules, and regulations. There is no expiration date applicable to the plan. After giving effect to the accelerated share repurchase program detailed in the table below, we had remaining authorization to repurchase approximately 12.2 million shares.
We record stock repurchases as a reduction to stockholders’ equity. We record a portion of the purchase price of the repurchased shares as an increase to accumulated deficit when the price of the shares repurchased exceeds the average original proceeds per share received from the issuance of common stock.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs	Total Paid (1)
10/1/2015 - 10/31/15	7,812,500	$10.24	7,812,500	12,187,500	$100,000,000
Total	7,812,500		7,812,500		$100,000,000

(1) In the fourth quarter of 2015, we entered into an accelerated share repurchase program to repurchase an aggregate of $100.0 million of our common stock and received an initial delivery of 7.8 million shares which were retired and recorded as a $80.0 million reduction to stockholders' equity. The remaining $20.0 million of the initial payment was recorded as a reduction to stockholders’ equity as an unsettled forward contract indexed to our stock. The number of shares to be ultimately purchased by us will be determined based on the volume weighted average price of the common stock during the terms of the transaction, minus an agreed upon discount between the parties. The program is expected to be completed by June 2016. See Note 13, “Stockholders' Equity,” of Notes to Consolidated Financial Statements of this Form 10-K for further discussion.

Item 6. Selected Financial Data

The following selected consolidated financial data for and as of the years ended December 31, 2015, 2014, 2013, 2012 and 2011 was derived from our consolidated financial statements. The following selected consolidated financial data should be read in conjunction with Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and

Item 8, "Financial Statements and Supplementary Data," and other financial data included elsewhere in this report. Our historical results of operations are not necessarily indicative of results of operations to be expected for any future period.

	Years Ended December 31,				
	2015 (2) (3) (4)	2014 (2)	2013 (1) (2)	2012 (1)	2011 (2)
	(In thousands, except per share amounts)				
Total revenue	$296,278	$296,558	$271,501	$234,051	$312,363
Net income (loss)	$211,388	$26,201	$(33,748)	$(134,336)	$(43,053)
Net income (loss) per share:					
Basic	$1.84	$0.23	$(0.30)	$(1.21)	$(0.39)
Diluted	$1.80	$0.22	$(0.30)	$(1.21)	$(0.39)
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$287,706	$300,109	$387,662	$203,330	$289,456
Total assets	$719,504	$588,279	$713,379	$587,812	$693,654
Convertible notes	$120,901	$115,089	$273,676	$147,556	$133,493
Stockholders' equity	$526,533	$391,622	$340,229	$321,594	$429,794

(1) The net loss for the years ended December 31, 2013 and 2012 included $17.8 million and $35.5 million, respectively, of impairment of goodwill and long-lived assets.

(2) The net income (loss) for the years ended December 31, 2015, 2014, 2013 and 2011 included $2.0 million, $2.0 million, $0.5 million and $6.2 million, respectively, of gain from settlement which was reflected as a reduction of operating costs and expenses.

(3) The net income for the year ended December 31, 2015 included $174.5 million related to the reversal of the deferred tax asset valuation allowance.

(4) Stockholders' equity includes $100.0 million paid under the accelerated share repurchase program as well as the $174.5 million net impact of the reversal of the deferred tax asset valuation allowance.

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

The following discussion contains forward-looking statements, including, without limitation, our expectations and statements regarding our outlook and future revenues, expenses, results of operations, liquidity, plans, strategies and objectives of management and any assumptions underlying any of the foregoing. Our actual results may differ significantly from those projected in the forward-looking statements. Our forward-looking statements and factors that might cause future actual results to differ materially from our recent results or those projected in the forward-looking statements include, but are not limited to, those discussed in the section titled "Note Regarding Forward-Looking Statements" and "Risk Factors" of this Annual Report on Form 10-K. Except as required by law, we assume no obligation to update the forward-looking statements or our risk factors for any reason.

Business Overview

Rambus creates cutting-edge semiconductor and IP products, spanning memory and interfaces to security, smart sensors and lighting. Our chips, customizable IP cores, architecture licenses, tools, services, software, training and innovations improve the competitive advantage of our customers. We collaborate with the industry, partnering with leading ASIC and SoC designers, foundries, IP developers, EDA companies and validation labs. Our products are integrated into tens of billions of devices and systems, powering and securing diverse applications, including Big Data, Internet of Things (IoT), mobile, consumer and media platforms. We generate revenue by licensing our inventions and solutions, selling our semiconductor products and providing services to market-leading companies.

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While we have historically focused our efforts on the development of technologies for electronics memory and chip interfaces, we have expanded our portfolio of inventions and solutions to address additional markets in lighting, chip and system security, as well as new areas within the semiconductor industry, such as computational sensing and imaging. We intend to continue our growth into new technology fields, consistent with our mission to create great value through our innovations and to make those technologies available through both our licensing and non-licensing business models. Key to our efforts will be hiring and retaining world-class inventors, scientists and engineers to lead the development of inventions and technology solutions for our fields of focus, and the management and business support personnel necessary to execute our plans and strategies.

We have four operational units: (1) Memory and Interfaces Division, or MID, which focuses on the design, development and licensing of technology that is related to memory and interfaces; (2) Cryptography Research Division, or CRD, which focuses on the design, development and licensing of technologies for chip and system security, anti-counterfeiting, smart ticketing and mobile payments; (3) ESD, which includes our computational sensing and imaging group along with our development efforts in the area of emerging technologies; and (4) Lighting and Display Technologies, or LDT, which focuses on the design, development and licensing of technologies for lighting. As of December 31, 2015, MID and CRD were considered reportable segments as they met the quantitative thresholds for disclosure as a reportable segment. The results of the remaining operating segments were shown under “Other.” For additional information concerning segment reporting, see Note 6, “Segments and Major Customers,” of Notes to Consolidated Financial Statements of this Form 10-K.

Our strategy is to evolve from providing primarily patent licenses to providing additional technology, products and services while creating and leveraging strategic synergies to increase revenue. One of our goals is to supplement our patent licensing business with additional licensing opportunities for our technologies, products and services to be incorporated into our customers’ products and/or systems. Our technology licenses are designed to support the implementation and adoption of our technology into our customers’ products or services. As part of these offerings, we can provide a range of services that can include access to technical experts, advanced system design and analysis, hardware and software to enhance design and validation, system IP and specifications, and process-specific hard and soft macros, along with other services. These technology license agreements may have both a fixed price (non-recurring) component and ongoing royalties. Further, under technology licenses, our customers typically receive licenses to our patents necessary to implement these solutions in their products with specific rights and restrictions to the applicable patents elaborated in their individual contracts with us.

As of December 31, 2015, our semiconductor, lighting, security and other technologies are covered by 1,832 U.S. and foreign patents. Additionally, we have 681 patent applications pending. Some of the patents and pending patent applications are derived from a common parent patent application or are foreign counterpart patent applications. We have a program to file applications for and obtain patents in the United States and in selected foreign countries where we believe filing for such protection is appropriate and would further our overall business strategy and objectives. In some instances, obtaining appropriate levels of protection may involve prosecuting continuation and counterpart patent applications based on a common parent application. We believe our patented innovations provide our customers with the ability to achieve improved performance, lower risk, greater cost-effectiveness and other benefits in their products and services.

Our inventions and technology solutions are offered to our customers through either a patent license, a technology license or a software license. Today, a majority of our revenues are derived from patent licenses, through which we provide our customers a license to use a certain portion of our broad portfolio of patented inventions. The license provides our customers with a defined right to use our innovations in the customer's own digital electronics products, systems or services, as applicable. The licenses may also define the specific field of use where our customers may use or employ our inventions in their products. License agreements are structured with fixed, variable or a hybrid of fixed and variable royalty payments over certain defined periods ranging for periods of up to ten years. Leading consumer product, semiconductor and system companies such as AMD, Broadcom, Cisco, Freescale, Fujitsu, GE, IBM, Intel, LSI, Micron, Nanya, Panasonic, Qualcomm, Renesas, Samsung, SK hynix, STMicroelectronics and Toshiba have licensed our patents for use in their own products. The majority of our intellectual property in MID was developed in-house and we have expanded our business strategy of monetizing our MID intellectual property to include the sale of select intellectual property. As any sales executed under this expanded strategy represent a component of our ongoing major or central operations and activities, we will record the related proceeds as revenue.

We also offer our customers technology licenses to support the implementation and adoption of our technology in their products or services. Our customers include leading companies such as Eaton, GE, IBM, Panasonic, Qualcomm, Samsung, Sony and Toshiba. Our technology license offerings include a range of technologies for incorporation into our customers' products and systems. We also offer a range of services as part of our technology licenses which can include know-how and technology transfer, product design and development, system integration, and other services. These technology license agreements may have both a fixed price (non-recurring) component and ongoing royalties. Further, under technology licenses, our customers typically receive licenses to our patents necessary to implement these solutions in their products with specific rights and restrictions to the applicable patents elaborated in their individual contracts with us.

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The remainder of our revenue is contract services revenue which includes license fees and engineering services fees, although we expect the acquisition of Smart Card Software to be accretive to revenue within the first twelve months. The timing and amounts invoiced to customers can vary significantly depending on specific contract terms and can therefore have a significant impact on deferred revenue or account receivables in any given period.

We intend to continue making significant expenditures associated with engineering, sales, general and administration and expect that these costs and expenses will continue to be a significant percentage of revenue in future periods. Whether such expenses increase or decrease as a percentage of revenue will be substantially dependent upon the rate at which our revenue or expenses change.

Executive Summary

During 2015, we signed and renewed key license agreements with IBM, Renesas, SK hynix and Toshiba. We also revealed our Smart Data Acceleration research program which improves data center performance. Additionally, we initiated a $100 million accelerated share repurchase program. Furthermore, we introduced the R+ DDR4 server memory chipset, RCD26, for RDIMMs and LRDIMMs.

Engineering expenses continues to play a key role in our efforts to maintain product innovations. Our engineering expenses for the year ended December 31, 2015 increased $4.4 million as compared to 2014 primarily due to increased expenses related to software design tools of $3.5 million, increased headcount related expenses of $2.1 million, increased bonus accrual expense of $1.5 million and increased cost of sales associated with increased sales of light guides and security products and engineering services of $1.5 million, offset by decreased accrual of retention bonuses of $1.5 million, decreased amortization costs of $1.5 million and decreased equipment and software maintenance costs of $0.7 million.

Sales, general and administrative expenses for the year ended December 31, 2015 decreased $4.2 million as compared to 2014 primarily due to decreased consulting costs of $3.1 million, decreased depreciation expense of $1.3 million, decreased software and equipment maintenance costs of $0.9 million and decreased litigation costs of $0.5 million, offset by increased headcount related expenses of $0.9 million and increased stock-based compensation expense of $0.8 million.

Trends

There are a number of trends that may have a material impact on us in the future, including but not limited to, the evolution of memory technology, adoption of LEDs in general lighting, the use and adoption of our inventions or technologies and global economic conditions with the resulting impact on sales of consumer electronic systems.

We have a high degree of revenue concentration, with our top five customers representing approximately 65%, 62% and 62% of our revenue for the years ended December 31, 2015, 2014 and 2013, respectively. As a result of renewing with Samsung in 2013 and settling with SK hynix and Micron in 2013, as well as extending our license agreement with SK hynix in June 2015, Samsung, SK hynix and Micron are expected to account for a significant portion of our ongoing licensing revenue. For both of the years ended December 31, 2015 and 2014, revenue from Micron, Samsung and SK hynix each accounted for 10% or more of our total revenue. For the year ended December 31, 2013, revenue from Samsung accounted for 10% or more of our total revenue in each year.

The particular customers which account for revenue concentration have varied from period to period as a result of the addition of new contracts, expiration of existing contracts, renewals of existing contracts, industry consolidation and the volumes and prices at which the customers have recently sold to their customers. These variations are expected to continue in the foreseeable future.

Our licensing cycle is lengthy, costly and unpredictable with any degree of certainty. We may incur costs in any particular period before any associated revenue stream begins, if at all. Our lengthy license negotiation cycles could make our future revenue difficult to predict because we may not be successful in entering into licenses with our customers in the amounts projected, or on our anticipated timelines. In addition, while some of our license agreements provide for fixed, quarterly royalty payments, many of our license agreements provide for volume-based royalties, and may also be subject to caps on royalties in a given period. The sales volume and prices of our customers' products in any given period can be difficult to predict. As a result, our actual results may differ substantially from analyst estimates or our forecasts in any given quarter or over the next year.

The semiconductor industry is intensely competitive and highly cyclical, limiting our visibility with respect to future sales. To the extent that macroeconomic fluctuations negatively affect our principal customers, the demand for our technology may be significantly and adversely impacted and we may experience substantial period-to-period fluctuations in our operating results. The royalties we receive from our semiconductor customers are partly a function of the adoption of our technologies by system companies. Many system companies purchase semiconductors containing our technologies from our customers and do not have a direct contractual relationship with us. Our customers generally do not provide us with details as to the identity or volume of

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licensed semiconductors purchased by particular system companies. As a result, we face difficulty in analyzing the extent to which our future revenue will be dependent upon particular system companies. System companies face intense competitive pressure in their markets, which are characterized by extreme volatility, frequent new product introductions and rapidly shifting consumer preferences.

Global demand for effective security technologies continues to increase. In particular, highly integrated devices such as smart phones and tablets are increasingly used for applications requiring security such as mobile payments, content protection, corporate information and user data. Our CRD is primarily focused on positioning its DPA countermeasures, CryptoFirewall™ and CryptoManager™ technology solutions, and the introduction of mobile payments and smart ticketing solutions to our offerings to capitalize on these trends and growing adoption among technology partners and customers.

The highly fragmented general lighting industry is undergoing a fundamental shift from incandescent technology to cold cathode fluorescent lights and LED driven technology due to the need to reduce energy consumption and to comply with government mandates. LED lighting typically saves energy costs as compared to existing installed lighting. Our LDT group's patents in LED edge-lit light guide technology can be applied in the design of next generation LED lighting products.

The strategy of the LDT group focuses on providing the market with novel, patented light guide technologies and products to customers who are leading the transition to solid-state LED-based general lighting fixtures.

In 2013, we sold a set of patent assets related to our core display patents where the purchaser of the patents can proceed independently with a licensing program. We have a net proceeds-sharing program in place with the purchaser of the patents upon their licensing of these patent assets. We retain the rights to use certain application techniques and may selectively engage with customers to license our intellectual property and technology for use and applications as permitted under our agreement, including without limitation, display panel and designs.

During the third quarter of 2015 we announced that we are in technical development of the buffer chipset which we are currently sampling to key potential customers and critical ecosystem partners. We are currently working to make the chipset commercially available, but we do not expect any material contribution to revenue from the chipset through 2016.

Our revenue from companies headquartered outside of the United States accounted for approximately 60%, 63% and 70% of our total revenue for the years ended December 31, 2015, 2014 and 2013, respectively. We expect that revenue derived from international customers will continue to represent a significant portion of our total revenue in the future. To date, all of the revenue from international customers has been denominated in U.S. dollars. However, to the extent that such customers' sales to their customers are not denominated in U.S. dollars, any revenue that we receive as a result of such sales could be subject to fluctuations in currency exchange rates. In addition, if the effective price of licensed products sold by our foreign customers were to increase as a result of fluctuations in the exchange rate of the relevant currencies, demand for licensed products could fall, which in turn would reduce our revenue. We do not use financial instruments to hedge foreign exchange rate risk.

For additional information concerning international revenue, see Note 6, "Segments and Major Customers," of Notes to Consolidated Financial Statements of this Form 10-K.

Engineering costs in the aggregate and as a percentage of revenue increased during the year ended December 31, 2015 as compared to the prior year. In the near term, we expect engineering costs in the aggregate to be higher as we intend to continue to make investments in the infrastructure and technologies required to maintain our product innovation in semiconductor, lighting, security and other technologies, including the acquisition of Smart Card Software in January 2016.

Sales, general and administrative expenses in the aggregate and as a percentage of revenue decreased during the year ended December 31, 2015 as compared to the prior year. In the past, our litigation expenses have been high and difficult to predict. Because we successfully negotiated settlements and license agreements with SK hynix, Micron and Nanya during the course of 2013 and 2014, we have settled all outstanding litigation and should no longer have material litigation expenses related to these specific matters. In the near term, we expect our sales, general and administrative costs in the aggregate to be higher due to the acquisition of Smart Card Software. To the extent litigation is again necessary, our expectations on the amount and timing of any future general and administrative costs is uncertain.

Our continued investment in research and development projects, involvement in any future litigation or other legal proceedings and any lower revenue from our customers in the future, will negatively affect our cash from operations. As a part of our overall business strategy, from time to time, we evaluate businesses and technologies for potential acquisition that are aligned with our core business and designed to supplement our growth. On January 25, 2016, we acquired Smart Card Software Ltd., a privately held company who is a leader in mobile payments and a leading supplier of smart ticketing systems, which includes Bell Identification Ltd. and Ecebs Ltd. through the purchase of all outstanding shares of Smart Card Software Ltd., for approximately $93 million in cash.

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To provide us with more flexibility in returning capital back to our shareholders, on January 21, 2015, our Board authorized a new share repurchase program authorizing the repurchase of up to an aggregate of 20.0 million shares. In the fourth quarter of 2015, we entered into an accelerated share repurchase program to repurchase an aggregate of $100.0 million of our common stock and received an initial delivery of 7.8 million shares. We may continue to tactically execute the share repurchase program from time to time.

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Results of Operations

The following table sets forth, for the periods indicated, the percentage of total revenue represented by certain items reflected in our consolidated statements of operations:

	Years Ended December 31,		
	2015	2014	2013
Revenue:			
Royalties	88.6 %	91.6 %	97.3 %
Contract and other revenue	11.4 %	8.4 %	2.7 %
Total revenue	100.0 %	100.0 %	100.0 %
Operating costs and expenses:			
Cost of revenue*	15.3 %	14.1 %	12.2 %
Research and development*	37.5 %	37.1 %	43.5 %
Sales, general and administrative*	23.8 %	25.2 %	28.2 %
Restructuring charges	1.2 %	0.0 %	2.0 %
Impairment of goodwill and long-lived assets	— %	— %	6.5 %
Gain from sale of intellectual property	(1.2)%	(1.2)%	(0.5)%
Gain from settlement	(0.7)%	(0.6)%	(0.2)%
Total operating costs and expenses	75.9 %	74.6 %	91.7 %
Operating income	24.1 %	25.4 %	8.3 %
Interest income and other income, net	0.3 %	(0.1)%	(0.6)%
Interest expense	(4.2)%	(8.4)%	(12.1)%
Interest and other income (expense), net	(3.9)%	(8.5)%	(12.7)%
Income (loss) before income taxes	20.2 %	16.9 %	(4.4)%
Provision for (benefit from) income taxes	(51.0)%	8.1 %	8.0 %
Net income (loss)	71.2 %	8.8 %	(12.4)%

* Includes stock-based compensation:

Cost of revenue	0.0 %	0.0 %	0.0 %
Research and development	2.3 %	2.4 %	2.4 %
Sales, general and administrative	2.8 %	2.5 %	3.1 %

Segment Results

Revenue from the MID reportable segment decreased approximately $4.3 million to $222.0 million for the year ended December 31, 2015 from $226.3 million for the year ended December 31, 2014. The decrease was primarily due to lower royalty revenue from AMD, Nanya, NVIDIA, Renesas and STMicroelectronics, offset by higher royalty revenue from IBM and SK hynix.

Segment operating income from the MID reportable segment decreased approximately $11.3 million to $174.2 million for the year ended December 31, 2015 from $185.5 million for the year ended December 31, 2014. The decrease was primarily due to decrease in revenue as discussed above and increased expenses related to software design tools and increased prototyping costs.

Revenue from the CRD reportable segment increased approximately $1.2 million to $50.5 million for the year ended December 31, 2015 from $49.3 million for the year ended December 31, 2014. The increase was primarily due to higher revenue from security products, offset by lower royalty revenue from Qualcomm, STMicroelectronics and a smartphone and tablet manufacturer.

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Segment operating income from the CRD reportable segment remained relatively flat at $21.4 million for the year ended December 31, 2015 as compared to $21.7 million for the year ended December 31, 2014.

Revenue from the Other segment increased approximately $2.9 million to $23.8 million for the year ended December 31, 2015 from $20.9 million for the year ended December 31, 2014. The increase was primarily due to increased lighting technology development projects and sales of light guides.

Segment operating loss from the Other segment decreased approximately $4.9 million to $8.3 million for the year ended December 31, 2015 from $13.2 million for the year ended December 31, 2014. The decrease was primarily due to increase in revenue as discussed above and lower prototyping costs.

Revenue from the MID reportable segment decreased approximately $5.7 million to $226.3 million for the year ended December 31, 2014 from $232.0 million for the year ended December 31, 2013. The decrease was primarily due to lower royalty revenue from Samsung, NVIDIA and XDR™ DRAM associated with decreased shipments of the Sony PlayStation®3 product. The decreased revenue was partially offset by revenue from license agreements signed with SK hynix, Micron, Nanya and Qualcomm.

Segment operating income from the MID reportable segment decreased approximately $11.7 million to $185.5 million for the year ended December 31, 2014 from $197.2 million for the year ended December 31, 2013. The decrease was primarily due to decrease in revenue as discussed above and increased headcount related costs due to higher number of employees in 2014.

Revenue from the CRD reportable segment increased approximately $16.7 million to $49.3 million for the year ended December 31, 2014 from $32.6 million for the year ended December 31, 2013. The increase was primarily due to the license agreement signed with Qualcomm during 2014, the license agreement signed with Samsung during 2013 and new technology development contracts during 2014.

Segment operating income from the CRD reportable segment increased approximately $9.4 million to $21.7 million for the year ended December 31, 2014 from $12.3 million for the year ended December 31, 2013. The increase was primarily due to increase in revenue as discussed above, partially offset by increased headcount related costs from additional employees to support our cryptography development efforts.

Revenue from the Other segment increased approximately $14.1 million to $20.9 million for the year ended December 31, 2014 from $6.8 million for the year ended December 31, 2013. The increase was primarily due to increased lighting technology development projects and sales of light guides.

Segment operating loss from the Other segment decreased approximately $22.3 million to $13.2 million for the year ended December 31, 2014 from $35.5 million for the year ended December 31, 2013. The decrease was primarily due to increase in revenue as discussed above, gain from additional proceeds from sale of portfolio of patent assets covering lighting technologies during 2013 and decreased headcount related costs due to fewer average number of employees in 2014. The decrease was partially offset by increase in cost of sales associated with increased lighting product sales in 2014.

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Total Revenue					
Royalties	$262.4	$271.5	$264.1	(3.4)%	2.8 %
Contract and other revenue	33.9	25.1	7.4	35.3 %	NM*
Total revenue	$296.3	$296.6	$271.5	(0.1)%	9.2 %

*NM — percentage is not meaningful

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Royalty Revenue
Patent Licenses
Our patent royalties decreased approximately $12.0 million to $248.9 million for the year ended December 31, 2015 from $260.9 million for the same period in 2014. The decrease in 2015 was primarily due to lower royalty revenue recognized from AMD, NVIDIA, Renesas, STMicroelectronics and a smartphone and tablet manufacturer, offset by higher royalty revenue from IBM and SK hynix. Of the $248.9 million patent royalties for the year ended December 31, 2015, $86.0 million is related to royalty revenue from settlement of past legal proceedings with SK hynix and Micron.
Our patent royalties increased approximately $11.8 million to $260.9 million for the year ended December 31, 2014 from $249.1 million for the same period in 2013. The increase was primarily due to revenue recognized from new license agreements signed with SK hynix and Micron during 2013 and Nanya and Qualcomm during 2014, partially offset by lower royalty payments from Samsung and NVIDIA. Of the $260.9 million patent royalties for the year ended December 31, 2014, $86.0 million is related to royalty revenue from settlement of past legal proceedings with SK hynix and Micron.
We are continuously in negotiations for licenses with prospective customers. We expect patent royalties will continue to vary from period to period based on our success in adding new customers, renewing or extending existing agreements, as well as the level of variation in our customers' reported shipment volumes, sales price and mix, offset in part by the proportion of customer payments that are fixed or hybrid in nature.
Technology Licenses
Royalties from technology licenses increased approximately $2.9 million to $13.5 million for the year ended December 31, 2015 from $10.6 million for the same period in 2014. The increase was primarily due to higher royalties from security and lighting technology license revenue, offset by lower royalties from XDR™ DRAM associated with decreased shipments of the Sony PlayStation®3 product.
Royalties from technology licenses decreased approximately $4.4 million to $10.6 million for the year ended December 31, 2014 from $15.0 million for the same period in 2013. The decrease was primarily due to lower royalties from XDR™ DRAM associated with decreased shipments of the Sony PlayStation®3 product.
In the future, we expect technology royalties will continue to vary from period to period based on our customers' shipment volumes, sales prices, and product mix.

Royalty Revenue by Reportable Segment

Royalty revenue from the MID reportable segment, which includes patent and technology license royalties, decreased approximately $5.8 million to $217.7 million for the year ended December 31, 2015 from $223.5 million for the year ended December 31, 2014. The decrease was primarily due to lower royalty revenue from AMD, Nanya, NVIDIA, Renesas and STMicroelectronics, offset by higher royalty revenue from IBM and SK hynix.
Royalty revenue from the CRD reportable segment, which includes patent and technology license royalties, decreased approximately $4.3 million to $41.4 million for the year ended December 31, 2015 from $45.7 million for the year ended December 31, 2014. The decrease was primarily due to lower royalty revenue from Qualcomm, STMicroelectronics and a smartphone and tablet manufacturer.
Royalty revenue from the Other segment increased $1.0 million to $3.3 million for the year ended December 31, 2015 from $2.3 million for the year ended December 31, 2014. The increase was due to increased royalties from technology licenses associated with increased shipments of lighting products.
Royalty revenue from the MID reportable segment decreased approximately $8.2 million to $223.5 million for the year ended December 31, 2014 from $231.7 million for the year ended December 31, 2013. The decrease was primarily due to lower royalty revenue from Samsung, NVIDIA and XDR™ DRAM associated with decreased shipments of the Sony PlayStation®3 product. The decreased revenue was partially offset by revenue from license agreements signed with SK hynix, Micron, Nanya and Qualcomm.
Royalty revenue from the CRD reportable segment increased approximately $14.5 million to $45.7 million for the year ended December 31, 2014 from $31.2 million for the year ended December 31, 2013. The increase was primarily

due to the new license agreements signed with Qualcomm during 2014 and Samsung during 2013.

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Royalty revenue from the Other segment increased $1.1 million to $2.3 million for the year ended December 31, 2014 from $1.2 million for the year ended December 31, 2013. The increase was due to increased royalties from technology licenses associated with increased shipments of lighting products.

Contract and Other Revenue

Contract and other revenue consists of revenue from technology development, sale of security and lighting products as well as sale of selected intellectual property developed by our MID business unit. Contract and other revenue increased approximately $8.8 million to $33.8 million for the year ended December 31, 2015 from $25.0 million for the year ended December 31, 2014. The increase was primarily due to increased revenue from security technology development projects and products as well as lighting technology development projects and sales of light guides, offset by lower revenue from the sale of selected intellectual property.

Contract and other revenue increased approximately $17.6 million to $25.0 million for the year ended December 31, 2014 from $7.4 million for the year ended December 31, 2013. The increase was primarily due to increased lighting technology development projects, sales of light guides and sale of selected intellectual property.

We believe that contract and other revenue will fluctuate over time based on our ongoing technology development contractual requirements, the amount of work performed, the timing of completing engineering deliverables, and the changes to work required, as well as new technology development contracts booked in the future.

Contract and Other Revenue by Reportable Segments

Contract and other revenue from the MID reportable segment increased approximately $1.4 million to $4.3 million for the year ended December 31, 2015 from $2.9 million for the year ended December 31, 2014, primarily due to new technology development contracts in 2015. Contract and other revenue from the CRD reportable segment increased approximately $5.5 million to $9.1 million for the year ended December 31, 2015 from $3.6 million for the year ended December 31, 2014, primarily due to higher revenue from security products. Contract and other revenue from the Other segment increased approximately $1.9 million to $20.5 million for the year ended December 31, 2015 from $18.6 million for the year ended December 31, 2014, primarily due to increased lighting technology development projects and sales of light guides.

Contract and other revenue from the MID reportable segment increased approximately $2.6 million to $2.9 million for the year ended December 31, 2014 from $0.3 million for the year ended December 31, 2013, primarily due to sale of selected intellectual property. Contract and other revenue from the CRD reportable segment increased approximately $2.2 million to $3.6 million for the year ended December 31, 2014 from $1.4 million for the year ended December 31, 2013, primarily due to new technology development contracts. Contract and other revenue from the Other segment increased approximately $12.9 million to $18.6 million for the year ended December 31, 2014 from $5.7 million for the year ended December 31, 2013, primarily due to increased lighting technology development projects and sales of light guides.

Engineering costs:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Engineering costs					
Cost of revenue	$22.7	$19.1	$7.3	19.0 %	NM*
Amortization of intangible assets	22.6	22.9	25.9	(1.1)%	(11.8)%
Total cost of revenue	45.3	42.0	33.2	8.1 %	26.3 %
Research and development	104.3	102.8	111.4	1.5 %	(7.7)%
Stock-based compensation	6.8	7.2	6.6	(6.3)%	9.4 %
Total research and development	111.1	110.0	118.0	1.0 %	(6.7)%
Total engineering costs	$156.4	$152.0	$151.2	2.9 %	0.5 %

*NM — percentage is not meaningful

Engineering costs are allocated between cost of revenue and research and development expenses. Cost of revenue reflects the portion of the total engineering costs which are specifically devoted to individual customer development and support services, costs of security and lighting products sold as well as amortization expense related to various acquired intellectual

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property for patent licensing. The balance of engineering costs, incurred for the development of applicable technologies, is charged to research and development. In a given period, the allocation of engineering costs between these two components is a function of the timing of the development and implementation schedules of individual customer contracts.

For the year ended December 31, 2015 as compared to the same period in 2014, total engineering costs increased 2.9% primarily due to increased expenses related to software design tools of $3.5 million, increased headcount related expenses of $2.1 million, increased bonus accrual expense of $1.5 million and increased cost of sales associated with increased sales of light guides and security products and engineering services of $1.5 million, offset by decreased accrual of retention bonuses of $1.5 million, decreased amortization costs of $1.5 million and decreased equipment and software maintenance costs of $0.7 million.

For the year ended December 31, 2014 as compared to the same period in 2013, total engineering costs increased 0.5% primarily due to increased cost of sales associated with sales of light guides of $6.5 million, increased headcount related costs of $1.8 million from higher number of employees in 2014, increased expenses related to software design tools of $1.9 million, increased prototyping costs of $1.7 million and legal patent costs of $0.7 million, offset by decreased accrual of retention bonuses related to acquisitions of $7.1 million as a result of the payouts, decreased amortization costs of $2.2 million and decreased information technology costs of $1.1 million.

In the near term, we expect engineering costs to be higher as we continue to make investments in the infrastructure and technologies required to maintain our product innovation in semiconductor, lighting, security and other technologies, including costs related to the acquisition of Smart Card Software.

Sales, general and administrative costs:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Sales, general and administrative costs					
Sales, general and administrative costs	$62.0	$66.5	$70.7	(6.7)%	(6.0)%
Litigation expense	0.3	0.8	(2.6)	(67.3)%	NM*
Stock-based compensation	8.3	7.5	8.3	10.7%	(10.7)%
Total sales, general and administrative costs	$70.6	$74.8	$76.4	(5.6)%	(2.2)%

*NM — percentage is not meaningful

Sales, general and administrative expenses include expenses and costs associated with trade shows, public relations, advertising, litigation, general legal, insurance and other sales, marketing and administrative efforts. Litigation expenses have historically been a significant portion of our sales, general and administrative expenses and has declined over the past three years. Consistent with our business model, our licensing, sales and marketing activities aim to develop or strengthen relationships with potential new and current customers. In addition, we work with current customers through marketing, sales and technical efforts to drive adoption of their products that use our innovations and solutions, by system companies. Due to the long business development cycles we face and the semi-fixed nature of sales, general and administrative expenses in a given period, these expenses generally do not correlate to the level of revenue in that period or in recent or future periods.

For the year ended December 31, 2015 as compared to 2014, total sales, general and administrative costs decreased 5.6% primarily due to decreased consulting costs of $3.1 million, decreased depreciation expense of $1.3 million, decreased software and equipment maintenance costs of $0.9 million and decreased litigation costs of $0.5 million, offset by increased headcount related expenses of $0.9 million and increased stock-based compensation expense of $0.8 million.

For the year ended December 31, 2014 as compared to 2013, total sales, general and administrative costs decreased 2.2% due to decreased consulting costs of $2.5 million, decreased depreciation expense of $1.7 million, decreased stock-based compensation expenses of $0.9 million, decreased accrual of retention bonuses related to acquisitions of $0.8 million and decreased facilities costs of $0.6 million partially offset by the one-time reversal of accrued SK hynix and Micron related litigation costs of $9.0 million in the same period of 2013 and increased headcount related costs of

$1.2 million from higher number of employees in 2014.

In the future, sales, general and administrative costs will vary from period to period based on the trade shows, advertising, legal, acquisition and other sales, marketing and administrative activities undertaken, and the change in sales, marketing and administrative headcount in any given period. In the near term, we expect our sales, general and administrative costs to be higher due to the acquisition of Smart Card Software.

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Restructuring charges:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Restructuring charges	$3.6	$0.0	$5.5	NM*	(99.3)%

*NM — percentage is not meaningful

During 2015, we initiated a restructuring program to reduce overall corporate expenses which is expected to improve future profitability by reducing spending on sales, general and administrative programs and refining some of our research and development efforts. As a result of the restructuring program, we recorded a charge of $3.6 million during 2015 related primarily to the reduction in workforce.

During 2013, we initiated a restructuring program related primarily to our LDT group as a result of the change in our business strategy to reduce our focus on the lower margin bulb products. Additionally, we curtailed spending on our immersive media platform. As a result of these actions, we recorded an immaterial charge related to this plan during 2014 and a charge of $3.4 million related primarily to the reduction in workforce in 2013. The restructuring plan was completed in 2014. Additionally, we recorded a charge of $2.1 million during 2013 related primarily to the consolidation of certain facilities and the reduction in workforce which was part of our approved 2012 plan.

Refer to Note 15, “Restructuring Charges,” of Notes to Consolidated Financial Statements of this Form 10-K for further discussion.

Impairment of goodwill and long-lived assets:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Impairment of goodwill and long-lived assets	$—	$—	$17.8	0.0 %	(100.0)%

During 2015 and 2014, we did not record a charge for the impairment of long-lived assets or goodwill.

During 2013, we recorded a charge for the impairment of long-lived assets of $9.7 million related primarily to our LDT group as a result of the change in our business strategy to reduce our focus on the lower margin bulb products. Additionally, we recorded a charge for the impairment of goodwill of $8.1 million related to our MTD group as we curtailed our immersive media platform spending. Under generally accepted accounting principles, when indicators of potential impairment are identified, companies are required to conduct a review of the carrying amounts of goodwill and other long-lived assets to determine if impairment exists. We conducted this impairment review as a result of the change in our strategy related to the groups.

Refer to Note 5 “Intangible Assets and Goodwill,” of Notes to Consolidated Financial Statements of this Form 10-K for further discussion.

Gain from sale of intellectual property:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Gain from sale of intellectual property	$3.7	$3.5	$1.4	4.4 %	NM*

*NM — percentage is not meaningful

During 2013, we sold portfolios of our patent assets covering lighting technologies. As part of these transactions, we received an initial upfront payment and expect to receive subsequent payments when the purchaser of the patents is successful in licensing that portfolio. During 2015 and 2014, we received $3.7 million and $3.4 million, respectively, from the purchaser of the patents related to this transaction which was recorded as gain from sale of intellectual property.

During 2014, we sold portfolios of our patent assets covering wireless and other technologies.

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Gain from settlement:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Gain from settlement	$2.0	$2.0	$0.5	0.0 %	NM*

*NM — percentage is not meaningful

The settlements with SK hynix and Micron are multiple element arrangements for accounting purposes. For a multiple element arrangement, we are required to determine the fair value of the elements. We considered several factors in determining the accounting fair value of the elements of the settlement with SK hynix and the settlement with Micron which included a third party valuation using an income approach (the “SK hynix Fair Value” and "Micron Fair Value", respectively). The total gain from settlement related to the settlements with SK hynix and Micron was $1.9 million and $3.3 million, respectively. During the years ended December 31, 2015 and 2014, we recognized $2.0 million as gain from settlement in each year, which represents the portion of the SK hynix Fair Value and Micron Fair Value of the cash consideration allocated to the resolution of the antitrust litigation settlements. Refer to Note 18, “Agreements with SK hynix and Micron,” of Notes to Consolidated Financial Statements of this Form 10-K for further discussion.

Interest and other income (expense), net:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Interest income and other income (expense), net	$1.2	$(0.3)	$(1.6)	NM*	(82.7)%
Interest expense	(12.4)	(24.8)	(32.9)	(50.0)%	(24.5)%
Interest and other income (expense), net	$(11.2)	$(25.1)	$(34.5)	(55.4)%	(27.2)%

*NM — percentage is not meaningful

Interest income and other income (expense), net, consists primarily of interest income generated from investments in high quality fixed income securities. Additionally, in 2013, during our review of the fair value of our $2.0 million investment in a non-marketable equity security of a private company, based on the information provided by the private company, we determined that there was a decrease in the security's fair value. The fair value of the non-marketable equity security was determined based on an income approach, using level 3 fair value inputs, as it was deemed to be the most indicative of the security's fair value. Accordingly, we recorded an impairment charge of $1.4 million related to our investment in the non-marketable equity security in 2013. In 2014, during our review of the remaining fair value of our $0.6 million investment in the non-marketable equity security of a private company, based on the information provided by the private company, we determined that there was a decrease in the security's fair value. Accordingly, we recorded an impairment charge for the entire remaining amount of $0.6 million related to our investment in the non-marketable equity security in 2014.

Interest expense consists of interest expense associated with our imputed facility lease obligations on the Sunnyvale and Ohio facilities and non-cash interest expense related to the amortization of the debt discount and issuance costs on the 5% convertible senior notes due 2014 (the “2014 Notes”) and the 1.125% convertible senior notes due 2018 (the “2018 Notes”), as well as the coupon interest related to these notes. Interest expense decreased in 2015 as compared to the same period in 2014 primarily due to the repayment of the 2014 Notes in the second quarter of 2014. Interest expense decreased in 2014 as compared to the same period in 2013 primarily due to the repayment of the 2014 Notes in second quarter of 2014. For the years ended December 31, 2015, 2014 and 2013, we recognized $4.5 million, $4.5 million and $4.4 million, respectively, of interest expense in connection with the imputed financing obligations in our statements of operations. We expect our non-cash interest expense to increase steadily as the notes reach maturity. See Note 10, “Convertible Notes,” of Notes to Consolidated Financial Statements of this Form 10-K for additional details.

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Provision for (benefit from) income taxes:

	Years Ended December 31,			2014 to 2015	2013 to 2014
	2015	2014	2013	Change	Change
	(Dollars in millions)				
Provision for (benefit from) income taxes	$(151.2)	$24.0	$21.7	NM*	10.7 %
Effective tax rate	(251.0)%	47.9 %			