MAXLINEAR INC
Form 10-K
February 09, 2017

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

FORM 10-K
þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2016
OR

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Transition Period From to
Commission file number: 001-34666
MaxLinear, Inc.
(Exact name of Registrant as specified in its charter)

Delaware	14-1896129
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
5966 La Place Court, Suite 100 Carlsbad, California	92008
(Address of principal executive offices)	(Zip Code)

(760) 692-0711
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of the exchange on which registered
Class A Common Stock, $0.0001 par value	New York Stock Exchange

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No þ
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No 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 ¨
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 ¨
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.

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 Exchange Act). Yes ¨ No þ

The aggregate market value of the registrant’s common stock, $0.0001 par value per share, held by non-affiliates of the registrant on June 30, 2016, the last business day of the registrant’s most recently completed second fiscal quarter, was $1.0 billion (based on the closing sales price of the registrant’s Class A common stock on that date). Shares of the registrant’s Class A or Class B common stock held by each officer and director and each person known to the registrant to own 10% or more of the outstanding voting power of the registrant have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not a determination for other purposes. As of February 2, 2017, the registrant has 58,454,886 shares of Class A common stock, par value $0.0001, and 6,658,380 shares of Class B common stock, par value $0.0001, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Information required by Part III of this Form 10-K is incorporated by reference to the registrant’s proxy statement (the “Proxy Statement”) for the 2017 annual meeting of stockholders, which proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year covered by this Form 10-K.

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MAXLINEAR, INC.
PART I
Forward-Looking Statements
The information in this Annual Report on Form 10-K for the fiscal year ended December 31, 2016, or this Form 10-K, contains forward-looking statements and information within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, which are subject to the “safe harbor” created by those sections. These forward-looking statements include, but are not limited to, statements concerning our strategy, future operations, future financial position, future revenues, projected costs, prospects and plans and objectives of management. The words “anticipates”, “believes”, “estimates”, “expects”, “intends”, “may”, “plans”, “projects”, “will”, “woul similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements that we make. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those in the forward-looking statements, including, without limitation, the risks set forth in Part I, Item 1A, “Risk Factors” in this Form 10-K. We do not assume any obligation to update any forward-looking statements except as required by law.

ITEM 1. BUSINESS
Corporate Information
We incorporated in the State of Delaware in September 2003. Our executive offices are located at 5966 La Place Court, Suite 100, Carlsbad, California 92008, and our telephone number is (760) 692-0711. In this Form 10-K, unless the context otherwise requires, the “Company,” “we,” “us” and “our” refer to MaxLinear, Inc. and its wholly owned subsidiaries. Our website address is www.maxlinear.com. The contents of our website are not incorporated by reference into this Form 10-K. We provide free of charge through a link on our website access to our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as amendments to those reports, as soon as reasonably practical after the reports are electronically filed with, or furnished to, the Securities and Exchange Commission, or SEC. Refer to Intellectual Property Rights section below for a list of our trademarks and trade names. All other trademarks and trade names appearing in this Form 10-K are the property of their respective owners.
Overview

We are a provider of radio frequency, or RF, and mixed-signal integrated circuits for cable and satellite broadband communications and the connected home, and wired and wireless infrastructure markets. Our high performance RF receiver products capture and process digital and analog broadband signals to be decoded for various applications. These products include both RF receivers and RF receiver systems-on-chip, or SoCs, which incorporate our highly integrated radio system architecture and the functionality necessary to receive and demodulate broadband signals, modem solutions, and physical medium devices that provide a constant current source, current-to-voltage regulation, and data alignment and retiming functionality in optical interconnect applications. Through our acquisition of Entropic Communications, Inc., or Entropic, in April of 2015, we provide semiconductor solutions for the connected home, specifically MoCA® (Multimedia over Coax Alliance) solutions that transform how traditional HDTV broadcast and Internet Protocol, or IP, based streaming video content is seamlessly, reliably, and securely distributed into and throughout the home. Through our acquisition of the Microsemi wireless infrastructure access business in April of 2016, we provide integrated circuits for wireless infrastructure markets, including wideband RF transceivers and synthesizers for 3G, 4G, and future 5G cellular base station and remote radio head, or RRH, platforms. Through our acquisition of the Broadcom wireless infrastructure backhaul business in July of 2016, we also provide modem and RF transceiver solutions into cellular infrastructure backhaul applications.
We combine our high-performance RF and mixed-signal semiconductor design skills with our expertise in digital communications systems, software, and embedded systems to provide highly integrated semiconductor devices that

are manufactured using a range of semiconductor manufacturing processes, including low-cost complementary metal oxide semiconductor, or CMOS, process technology, Silicon Germanium, Gallium Arsenide, BiCMOS and Indium Phosphide process technologies. Our ability to design analog and mixed-signal circuits in CMOS allows us to efficiently combine analog and digital signal processing functionality in the same integrated circuit. As a result, our solutions have high levels of functional

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integration and performance, small silicon die size, and low power consumption. Moreover, our proprietary CMOS-based radio system architecture provides the benefits of superior RF system performance, shorter design cycles, significant design flexibility and low system cost across a wide range of broadband communications and wired and wireless infrastructure applications. It is our intention to drive future optical interconnect products to CMOS versus existing Silicon Germanium BiCMOS and Indium Phosphide process technology designs.

We sell our products to original equipment manufacturers, or OEMs, module makers and original design manufacturers, or ODMs. During 2016, we sold our products to 208 end customers. For the year ended December 31, 2016, our net revenue was $387.8 million as compared to $300.4 million in the year ended December 31, 2015.

Recent Developments

On April 28, 2016, we entered into an asset purchase agreement with Microsemi Storage Solutions, Inc., formerly known as PMC-Sierra, Inc., or Microsemi, and consummated the transactions contemplated by the asset purchase agreement. We paid cash consideration of $21.0 million for the purchase of certain wireless access assets of Microsemi's wireless infrastructure access business, and assumed certain specified liabilities. The assets acquired include, among other things, radio frequency and analog/mixed signal patents and other intellectual property, in-production and next-generation RF transceiver designs, a workforce-in-place, and other intangible assets, as well as tangible assets that include but are not limited to production masks and other production related assets, inventory, and other property, plant, and equipment. The liabilities assumed include, among other things, product warranty obligations and accrued vacation and severance obligations for employees of the wireless infrastructure access business that were rehired by the Company.

On May 9, 2016, we entered into a definitive agreement to purchase certain assets and assume certain liabilities of the wireless infrastructure backhaul business of Broadcom Corporation, or Broadcom. On July 1, 2016, we consummated the transactions contemplated by the purchase agreement and paid aggregate cash consideration of $80.0 million and hired certain employees of the wireless infrastructure backhaul business. The assets acquired include, among other things, digital baseband, radio frequency, and analog/mixed signal patents and other intellectual property, in-production and next-generation digital baseband and RF transceiver integrated circuit and reference platform designs, a workforce-in-place, and other intangible assets, as well as tangible assets that include but are not limited to production masks and other production related assets, inventory, and other property and equipment. The liabilities assumed include, among other things, product warranty obligations, liabilities for technologies acquired, and a payable to Broadcom as reimbursement of costs associated with the termination of those employees of the wireless infrastructure backhaul business who were neither hired by MaxLinear, nor retained by Broadcom, upon the closing of the acquisition. For more information, please refer to Note 3 of our consolidated financial statements.

The acquired assets and liabilities, together with the rehired employees for each of these acquisitions, represent businesses as defined in ASC 805, Business Combinations. We have integrated the acquired assets and rehired employees into our existing business.

As a result of the acquisitions, we believe we have benefited from increased economies of scale across engineering and supply chain operations, as well as from elimination of redundancy across engineering, sales, and general and administrative functions. For a discussion of specific risks and uncertainties that could affect our ability to achieve these and other strategic objectives of our acquisitions, please refer to Part I, Item 1A, “Risk Factors” under the subsection captioned “Risks Relating to Recent Acquisitions.”

During the fourth quarter of fiscal 2016, we completed a restructuring plan to realign our resources with our current objectives. We incurred restructuring expenses related to employee separation charges and lease-related impairment charges in an aggregate amount of approximately $3.4 million for the year ended December 31, 2016.

Industry Background

Technological advances in the broadband data, broadcast TV, voice, and wired and wireless communications markets are driving dramatic changes in the way consumers access the internet and experience multimedia content. These advances include the ongoing worldwide conversion from analog to digital television broadcasting; the increasing availability of high-speed broadband and wireless data connectivity, the resolution transitions from standard-definition, to high-definition to ultra-high-definition television, the proliferation of multi-channel digital video recording, or DVR, as well as the proliferation of multimedia content being both accessible and stored in the cloud through cable, satellite and telecommunications carrier services. As a result, system designers are adding enhanced multimedia functionality to set-top boxes and digital televisions, and expanding voice, video and data access functions and capabilities to home broadband gateways and mobile devices, which

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in turn is creating demand for higher speed optical interconnects in data center, metro, and long-haul transport network applications, as well as more bandwith capable access and backhaul links in wireless infrastructure applications. We believe that several trends, across multiple of our target markets, are creating revenue opportunities for providers of RF and analog/mixed-signal solutions. These trends include the following:

- Service Provider/Operator: Competing cable, satellite, and other broadband service providers differentiate their services by providing consumers with bundled video, voice, and broadband data access, referred to as triple-play services. These services include advanced features such as; channel guide information, video-on-demand, multi-channel digital video recording, or DVR, and picture-in-picture viewing. Many set-top boxes, including those used for triple-play services, now enable consumers to simultaneously access, and manage multimedia content from multiple locations in the same house. These advanced features require either a home gateway or a set-top box to simultaneously receive, demodulate, and decode multiple signals spread across several channels of frequency bandwidth. Traditional architectures would require that each simultaneously accessed signal require a dedicated RF receiver. In these emerging home gateway or media servers, where content may be delivered using internet protocol or IP, there may be "thin or remote clients" that may not have traditional TV tuners, but necessarily include a broadband RF receiver such as MoCA or WiFi. This greatly increases the number of RF receivers required to be deployed in each set-top box. In addition, in order to deliver increasing data bandwidth to the home, cable MSOs have deployed DOCSIS 3.0 equipment and services, which enable channel bonding, or the concurrent reception of multiple channels, resulting in higher aggregate "sum of the channels" bandwidth available to DOCSIS 3.0 cable subscribers.
- Infrastructure and Non-Operator Terrestrial: Growth in data traffic generated from smartphones and tablets, over-the-top, or OTT, streaming video, cloud computing and data analytics in hyper-scale data centers is creating demand for higher speed interconnect products addressing enterprise and telecommunications infrastructure market applications. These solutions provide the interconnect function between the top-of-rack to the core-router within a datacenter, and the metro and long-haul connections within a service provider network. Datacenter links are consistently increasing in performance and speed, and many are currently changing from 1Gbps to 10Gbps on the servers and from 10/40Gbps to 100Gbps on the routers and switches, and we believe that over the next several years they will likely migrate to 400Gbps. In the markets for non-operator terrestrial solutions, consumers are utilizing a broad array of consumer electronic devices beyond the television, such as personal computers, netbooks, tablets, and mobile phones to access broadcast television and other multimedia content. Specifically, with the increased popularity of accessing multimedia content over-the-top, or OTT, via broadband-enabled streaming services, consumers are increasingly augmenting these OTT multimedia content services with local free-to-air broadcast programming. Consumers can access these terrestrial broadcasts through set-top boxes containing terrestrial RF receiver solutions.

As a result of these trends, RF and analog/mixed signal receiver technology is being deployed in a variety of devices for the terrestrial, cable, satellite, datacenter, and metro and long-haul telecom transport network, and wireless access and backhaul markets. The proliferation of applications with advanced features has led to an increase in the number of devices with multiple RF receivers and RF receiver SoCs. RF receivers incorporate RF, digital and analog signal processing functions.

Challenges Faced by Providers of Systems and RF Receivers and Optical Interconnects

The stringent performance requirements of broadband communications and optical interconnect applications and the distinct technological challenges associated with the terrestrial, cable, satellite, datacenter, and metro and long-haul telecom transport and wireless infrastructure markets present significant obstacles to service providers and system designers. In particular, designing and implementing RF receivers to capture broadcast digital television signals is extremely challenging due in part to the wide frequency band across which broadcast digital television signals are transmitted. As compared to other digital radio technologies, such as those found in cellular, WiFi and Bluetooth applications, television signals that are broadcast over air, on cable, and by satellite are acquired over a much wider frequency band and encounter many more sources of interference. As a result, traditionally, design and implementation of these RF receivers have been accomplished using conventional radio system architectures that employ multiple discrete components and are fabricated using expensive special purpose semiconductor manufacturing processes, such as silicon germanium, gallium arsenide, and special purpose CMOS-based RF process technologies.

The core challenges of capturing and processing high quality broadband communications signals are common to the terrestrial, cable, and satellite markets. These challenges include:

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- Design Challenges of Receiving Multiple RF Signals. System designers and service providers across various markets are seeking to enhance consumer appeal through the addition of new features in their products. Incorporating more than one channel of RF reception in an electronic device enables many of these features and advanced applications that are rapidly becoming a part of the standard offering from device makers and service providers. For example, in the cable set-top box market, it is necessary to support the simultaneous reception of multiple channels for voice, video and data applications in many system designs. In order to meet such requirements, OEMs must employ either multiple narrow or wideband RF receivers or Full Spectrum Capture (FSC™) receiver SoCs in their system design. Each additional RF receiver poses new challenges to the system designer, such as increased design complexity, overall cost, circuit board space, power consumption and heat dissipation. In addition, a high level of integration in multiple-receiver designs is necessary to combat the reliability and signal interference issues arising from the close proximity of sensitive RF elements.
- Signal Clarity Performance Requirements. Television reception requires a robust and clear signal to provide a positive user experience. One of the core attributes of system performance is signal clarity, often measured by the signal-to-noise ratio parameter, which measures the strength of the desired signal relative to the combined noise and undesired signal strength in the same channel. Television reception requires an RF receiver that has a wide dynamic range and the ability to isolate the desired signal from the undesired signals, which include the noise generated by extraneous radio waves and interferers produced by home networking systems such as wireless local area network, or WLAN, and Bluetooth. Traditional RF receiver implementations utilized expensive discrete components, such as band-pass filters, resonance elements and varactor diodes to meet the stringent requirements imposed by broadband television reception. In high speed mobile environments, a method known as diversity combining of radio signals, in which the desired signal is captured using multiple RF receivers and reconstructed into a single signal, has been employed to improve the signal-to-noise ratio. Diversity combining of radio signals requires substantial RF, digital signal processing and software expertise. Both the traditional broadband reception and diversity combining of RF signals in mobile environments are difficult to implement and pose challenges to RF receiver providers.
- Multiple Standards. Worldwide, there are several regional standards for the transmission and reception of broadband analog and digital TV signals. Technical performance, feature requirements and the predominance of a particular means of TV transmission vary regionally. Further, each major geographic region has adopted its own TV standard for cable, terrestrial, and satellite transmissions, such as DVB-T/T2/C/C2/S/S2, ATSC, NTSC, ISDB-T, PAL, SECAM, DTMB, CMMB, etc. As a result of these multiple standards, there are region-specific RF receiver requirements and implementations, which make global standards compliance extremely challenging. Many system designers prefer a multiple standards and protocol compliant solution that was previously not possible. Providers of RF receivers face the design challenge of providing this flexibility to the system designer without any increase in power consumption, or any loss of performance quality or competitiveness.
- Power Consumption. Power consumption is an important consideration across consumer, broadband operator, and wired and wireless infrastructure applications, and a critical design specification for system designers. For example, in battery-operated devices such as netbooks and notebooks, and voice-enabled cable modems, long battery life is a differentiating device attribute. In wireless infrastructure applications, power consumption is critically important consideration given both the cost of provisioning power and its related cost of consumption, and in wired infrastructure there is the additional cost and consideration regarding cooling of larger-scale and densely-configured datacenters. In addition, government sponsored programs, such as Energy Star in the U.S., induce consumers to purchase more energy efficient products. For example, in September 2009, the U.S. Environmental Protection Agency announced that Energy Star compliant televisions would be required to be 40% more energy efficient than their noncompliant counterparts. The addition of one or more RF receivers to a system in order to enable digital TV functionality significantly increases the overall power consumption imposing severe platform level design constraints on multiple channel receiver systems. In fact, in some multiple receiver system designs, a majority of the system's overall power consumption is attributable to the RF receiver and related components. Providers of RF receivers and RF receiver SoCs are confronted with the design challenge of lowering power consumption while maintaining or improving device performance.
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Size. The size of electronic components, such as RF receivers, is a key consideration for system designers and service providers. Given the proliferation of the number of RF receivers in broadband service provider video and data gateways market, size can be a determining factor for whether or not a particular component, such as an RF receiver is designed into the product. In the television market, as system designers create thinner flat-screen

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displays, the size of RF receivers is becoming a significant consideration, especially when multiple RF receivers are incorporated in a single system. In wired infrastructure applications, form-factor is a critical design consideration given network server and switch faceplate density trends. In wireless infrastructure opportunities, space on the towers where the radios and modems are deployed is constrained and expensive to procure.

The challenges of processing high-speed optical interconnect signals for datacenter, metro and long-haul telecommunications transport markets include:

- Optical Fiber Channel Impairments. The optical properties of the fiber material results in impairments to the optical signal that is being propagated across the fiber. These impairments include loss of light intensity, modal, chromatic and polarization dispersion as the light propagates through the fiber. These impairments result in degradation of signal integrity which contributes to effective reduction in data throughput.
- Optical Device Technology. The state of the art in optical device technology today lags the speeds contemplated for data traffic within cloud data centers and transport links between telecom data centers. So, there are severe physical limits to the conversion of electrical signals to optical signals and vice versa at extremely high speeds. These limitations arise from bandwidth, nonlinearities, and noise properties in lasers, modulators, and photo detectors.
- Form Factor. The form factor of the face plates in server, storage, switch, and networking racks in data centers limits the capacity to dissipate heat generated by electrical and optical devices inside the transceivers to which optical fibers are connected. As data rates increase dramatically, the physical form of the face plates and connectors does not scale to cope with accompanying increase in power density.

Our RF Receiver Solution

We are a provider of radio frequency, or RF, and mixed-signal integrated circuits for cable and satellite broadband communications and the connected home, and wired and wireless infrastructure markets. Our high performance RF receiver products capture and process digital and analog broadband signals to be decoded for various applications. These products include both RF receivers and RF receiver SoCs, which incorporate our highly integrated radio system architecture and the functionality necessary to receive and demodulate broadband signals, and physical medium devices that provide a constant current source, current-to-voltage regulation, and data alignment and retiming functionality in optical interconnect applications.

We combine our high performance analog and mixed-signal semiconductor design skills with our expertise in digital communications systems, software and embedded systems to develop RF receivers and RF receiver SoCs. We integrate our RF receivers with digital demodulation and other communications functions in standard CMOS process technology. Our solutions have the following key features:

- Proprietary Radio Architecture. Digital signal processing is at the core of our RF receivers and RF receiver SoCs. Using our proprietary CMOS-based radio architecture, we leverage both analog and digital signal processing to improve system performance across multiple products. The partitioning of the signal processing in the chip between analog and digital domains is designed to deliver high performance, small die size and low power for a given application. Moreover, our architecture is implemented in standard CMOS process technology, which enables us to realize the integration benefits of analog and digital circuits on the same integrated circuit. This allows us to predictably scale the on-chip digital circuits in successive advanced CMOS process technology nodes. Our solutions have been designed into products in markets with extremely stringent specifications for quality, performance and reliability, such as the television and automotive markets. We believe that our success in these markets demonstrates that our solution can be implemented successfully across multiple markets and applications.
- High Signal Clarity Performance. We design our RF receivers and RF receiver SoCs to provide high signal clarity performance regardless of the application in which they are employed. For example, in the satellite and cable broadband gateway markets, we deploy our core RF and mixed-signal CMOS process technology platform and radio system architecture to overcome the interference from in-home networks that can degrade cable broadband signals. We believe that signal clarity is more critical in television compared to other communications applications such as voice and data, because signal loss and interference have a more adverse impact on the end user experience.

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- Highly Integrated. Our products integrate on a single chip the functionality associated with traditional analog and digital integrated circuits and other expensive discrete components. This high level of integration has the cost benefits associated with smaller silicon die area, fewer external components and lower power. Our CMOS-based RF receiver SoC eliminates analog interface circuit blocks and external components situated at the interface between discrete analog and digital demodulator chips and reduces the cost associated with multiple integrated circuit packages and related test costs. We are also able to integrate multiple RF receivers along with a demodulator onto a single die to create application-specific configurations for our customers. Thus, our highly integrated solution reduces the technical difficulties associated with overcoming the undesired interactions between multiple discrete analog and digital integrated circuits comprising a single system. Our solutions reduce the technical burden on system designers in deploying enhanced television functionality in their products.
- Low Power. Our products enable our customers to reduce power consumption in consumer electronic devices without compromising the stringent performance requirements of applications such as broadcast television. In addition, our products enable our customers to decrease overall system costs by reducing the power consumption and heat dissipation requirements in their systems. For example, in cable boxes supporting voice applications, low power consumption may enable a reduction in the number of batteries or battery capacity required to support standby and lifeline telephony. In certain set-top boxes and broadband gateways, reduced overall power consumption may allow system designers to eliminate one or more cooling fans required to dissipate the heat generated by high power consumption. The benefits of low power consumption increase with the number of RF receivers included in a system.
- Scalable Platform. Our product families share a highly modular, core radio system architecture, which enables us to offer RF receiver and RF receiver SoC solutions that meet the requirements of a wide variety of geographies, broadcast standards and applications. This is in contrast to legacy solutions that require significant customization to conform to regional standards, technical performance and feature requirements. Moreover, by leveraging our flexible core architecture platform, our integrated circuit solutions can be deployed across multiple device categories. As a result, our customers can minimize the design resources required to develop applications for multiple target markets. In addition, our engineering resources can be deployed more efficiently to design products for larger addressable markets. We believe that our core technology platform also can be applied to other communications markets with similar performance requirements.
- Space Efficient Solution. Our highly integrated CMOS-based RF receivers and RF receiver SoCs have an extremely small silicon die size, require minimal external components and consume very little power. Our unique radio architecture, more specifically our Full-Spectrum Capture™ technology, not only enables us to integrate multiple RF receivers in a chip, but also results in a reduction in the incremental power and die area required per each additional channel of reception. This enables our customers to design multi-receiver applications, such as cable modems and set-top boxes, in an extremely small form factor.

Our Strategy

Our objective is to be the leading provider of mixed-signal RF receivers and RF receiver SoCs for broadband video and data communications, and wired and wireless infrastructure applications and, in the future, to leverage this core competency to expand into other communications markets with similar performance requirements. The key elements of our strategy are:

- Extend Technology Leadership in RF Receivers and RF Receiver + Demodulator SoCs. We believe that our success has been, and will continue to be, largely attributable to our RF and mixed-signal design capability, as well as advanced digital design, which we leverage to develop high-performance, low-cost semiconductor solutions for broadband communications applications. The broadband RF receiver market presents significant opportunities for innovation through the further integration of RF and mixed-signal functionality with digital signal processing capability in CMOS process technology. By doing so, we will be able to deliver products with lower power consumption, superior performance and increased cost benefits to system designers and service providers. We believe that our core competencies and design expertise in this market will enable us to acquire more customers and design wins over time. We will continue to invest in this capability and strive to be an innovation leader in this market.
- Leverage and Expand our Existing Customer Base. We target customers who are leaders in their respective markets. We intend to continue to focus on sales to customers who are leaders in our current target markets, and to build on our

relationships with these leading customers to define and enhance our product roadmap. By solving

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the specific problems faced by our customers, we can minimize the risks associated with our customers' adoption of our new integrated circuit products, and reduce the length of time from the start of product design to customer revenue. Further, engaging with market leaders will enable us to participate in emerging technology trends and new industry standards.

- Target Additional High-Growth Markets. Our core competency is in RF analog and mixed-signal integrated circuit design in CMOS process technology. Several of the technological challenges involved in developing RF solutions for video broadcasting and broadband reception are common to a majority of communications markets. We intend to leverage our core competency in developing highly integrated RF receiver and RF receiver SoCs in standard CMOS process technology to address additional markets within broadband communications, communications infrastructure, and connectivity markets that we believe offer profitable high growth potential.
- Expand Global Presence. Due to the global nature of our supply chain and customer locations, we intend to continue to expand our sales, design and technical support organization both in the United States and overseas. In particular, we expect to increase the number of employees in Asia, Europe and the United States to provide regional support to our increasing base of customers. We believe that our customers will increasingly expect this kind of local capability and support.
- Attract and Retain Top Talent. We are committed to recruiting and retaining highly talented personnel with proven expertise in the design, development, marketing and sales of communications integrated circuits. We believe that we have assembled a high-quality team in all the areas of expertise required at a semiconductor communications company. We provide an attractive work environment for all of our employees. We believe that our ability to attract the best engineers is a critical component of our future growth and success in our chosen markets.

Products

Our products are integrated into a wide range of electronic devices, including cable and terrestrial and satellite set-top boxes and gates, DOCSIS data and voice gateways, hybrid analog and digital televisions, satellite low-noise blocker transponders or outdoor units, physical medium devices that go into optical modules for data center, metro, and long-haul transport network applications, and RF transceiver and modem devices for wireless access and backhaul applications.

We provide our customers with guidelines, known as reference designs, so that they can efficiently use our products in their product designs. We currently provide the following types of semiconductors:

- RF Receivers. These semiconductor products combine RF receiver technology that traditionally required multiple external discrete components, such as very high frequency, or VHF, and ultra-high frequency, or UHF, tracking filters, surface acoustic wave, or SAW, filters, intermediate-frequency, or IF, amplifiers, low noise amplifiers and transformers. All of these external components have been either eliminated or integrated into a single semiconductor produced entirely in standard CMOS process technology.
- RF Receiver SoCs. These semiconductor products combine the functionality of RF receivers, and demodulators in a single chip. In some configurations, these products may incorporate multiple RF receivers and single or multiple demodulators in a single chip to provide application or market specific solutions to customers.
- Wireless Infrastructure Backhaul Modem SoC's. These semiconductor products reside in wireless operator system deployments to enable communication between various metro network rings. These modem devices modulate one or more carrier wave signals to encode digital information for transmission and demodulate signals to decode the transmitted information. The increasing amounts of data and video content being consumed on mobile devices are creating new opportunities for innovative and efficient modem and RF receiver SoCs solutions.
- Laser Modulator Drivers. These semiconductor products reside in optical modules and provide a constant current source that delivers exactly the current to the laser diode that it needs to operate for a particular application
- Transimpedance Amplifiers. These semiconductor products reside in optical modules and provide current-to-voltage conversion, converting the low-level current of a sensor to a voltage.
- Clock and Data Recovery Circuits. These semiconductor products generate a clock from an approximate frequency reference, and then phase-aligns to the transitions in the data stream with a phase-locked loop, or PLL.

Customers

We sell our products, directly and indirectly, to original equipment manufacturers, or OEMs, module makers and original design manufacturers, or ODMs, and we refer to these as our end customers. By providing a highly integrated reference design solution that our customers can incorporate in their products with minimal modifications, we enable our customers to design cost-effective high performance SoC-based solutions rapidly. In the year ended December 31, 2016, we sold our products to 208 end customers. A significant portion of our sales to these and other customers are through distributors based in Asia, and we do not consider distributors as our end customers, despite selling the products to and being paid by the distributors.

A significant portion of our net revenue has historically been generated by a limited number of customers. In the years ended December 31, 2016, 2015 and 2014, ten customers accounted for approximately 74%, 76% and 67% of our net revenue, respectively. In the years ended December 31, 2016, 2015 and 2014, Arris Group, Inc., or Arris, represented 27%, 28% and 31% of our net revenue. Sales to Arris as a percentage of net revenue include sales to Pace, which was acquired by Arris in January 2016, for the year ended December 31, 2016. In the years ended December 31, 2016 and 2015, Technicolor (which includes Cisco, Inc.'s, or Cisco, former connected devices business), represented 10% and 13% of net revenue. In November 2015, Technicolor acquired Cisco's connected devices business. The 2015 net revenue percentage did not include 1% for Technicolor.

Products shipped to Asia accounted for 93%, 91% and 94% of our net revenue in the years ended December 31, 2016, 2015 and 2014, respectively. Products shipped to China and Taiwan accounted for 78% and 6%, respectively, of our net revenue in the year ended December 31, 2016. Products shipped to China and Taiwan accounted for 77% and 8%, respectively, of our net revenue in the year ended December 31, 2015. Products shipped to China and Taiwan accounted for 71% and 6%, respectively, of our net revenue in the year ended December 31, 2014. Although a large percentage of our products are shipped to Asia, we believe that a significant number of the systems designed by these customers and incorporating our semiconductor products are then sold outside Asia. For example, we believe revenue generated from sales of our digital terrestrial set-top box products during the years ended December 31, 2016, 2015 and 2014 related principally to sales to Asian set-top box manufacturers delivering products into Europe, Middle East, and Africa, or EMEA markets. Similarly, revenue generated from sales of our cable modem products during the years ended December 31, 2016, 2015 and 2014 related principally to sales to Asian ODM’s and contract manufacturers delivering products into European and North American markets. To date, all of our sales have been denominated in United States dollars. See Note 12 to our consolidated financial statements, included in Part IV, Item 15 of this Report for a discussion of total revenue by geographical region for the years ended December 31, 2016, 2015 and 2014.

Sales and Marketing

We sell our products worldwide through multiple channels, using our direct sales force, third party sales representatives, and a network of domestic and international distributors. We have direct sales personnel covering the United States, Europe and Asia, and operate customer engineering support offices in Carlsbad and Irvine in California; Tokyo in Japan; Shanghai and Shenzhen in China; Hsinchu in Taiwan; Seoul in South Korea; Bangalore in India; Burnaby in Canada; and Herzliya in Israel. We also employ a staff of field applications engineers to provide direct engineering support locally to some of our customers.

Our distributors are independent entities that assist us in identifying and servicing customers in a particular territory, usually on a non-exclusive basis. Sales through distributors accounted for approximately 19%, 13% and 28% of our net revenue in the years ended December 31, 2016, 2015 and 2014, respectively.

Our sales cycles typically require a significant amount of time and a substantial expenditure of resources before we can realize revenue from the sale of products, if any. Our typical sales cycle consists of a multi-month sales and development process involving our customers’ system designers and management. The typical time from early engagement by our sales force to actual product introduction ranges from nine to twelve months for the consumer market, to as much as 18 to 24 months for the cable and satellite markets, and 36 months or longer for wired and wireless infrastructure markets. If successful, this process culminates in a customer’s decision to use our products in its system, which we refer to as a design-win. Volume production may begin within three to twelve months after a design-win, depending on the complexity of our customer’s product and other factors upon which we may have little or no influence. Once our products have been incorporated into a customer’s design, they are likely to be used for the life cycle of the customer's product. Thus, a design-win may result in an extended period of revenue generation. Conversely, a design-loss to our competitors, may adversely impact our financial results for an extended period of time.

We generally receive purchase orders from our customers approximately six to twenty-four weeks prior to the scheduled product delivery date. These purchase orders may be cancelled without charge upon notification, so long as notification is received within an agreed-upon period of time in advance of the delivery date. Because of the scheduling requirements of our foundries and assembly and test contractors, we generally provide our contractors production forecasts and place firm orders for products with our suppliers up to twenty-four weeks prior to the anticipated delivery date, often without a purchase order from our own customers. Our standard warranty provides that products containing defects in materials, workmanship or product performance may be returned for a refund of the purchase price or for replacement, at our discretion.

Manufacturing

We use third-party foundries and assembly and test contractors to manufacture, assemble and test our semiconductor products. This outsourced manufacturing approach allows us to focus our resources on the design, sale and marketing of our products. Our engineers work closely with our foundries and other contractors to increase yield, lower manufacturing costs and improve product quality.

Wafer Fabrication. We utilize an increasing range of process technologies to manufacture our products, from standard CMOS to more exotic processes including SiGe and GaAs. Within this range of processes, we use a variety of process technology nodes ranging from 0.18µ down to 16 nanometer. We depend on independent silicon foundry manufacturers to support our wafer fabrication requirements. Our key foundry partners include United Microelectronics Corporation or UMC in Taiwan and Singapore, Taiwan Semiconductor Manufacturing Corporation or TSMC in Taiwan, Semiconductor Manufacturing International Corporation or SMIC in China, Global Foundries Inc. in Singapore, Silterra Malaysia Sdn. Bhd. in Malaysia, Tower-Jazz in Newport Beach California, and WIN Semiconductor in Taiwan.

Assembly/packaging and Test. Upon completion of the silicon processing at the foundry, we forward the finished silicon wafers to independent assembly/packaging and test service subcontractors. The majority of our assembly/packaging and test requirements are supported by the following independent subcontractors: Advanced Semiconductor Engineering or ASE in Taiwan (assembly/packaging and test), Giga Solution Technology Co. Ltd. in Taiwan (test only), Amkor Technology in Korea, Philippines, and China (assembly/packaging and test), United Test and Assembly Center or UTAC Holdings Ltd. in Singapore and China (assembly/packaging and test), SIGURD Microelectronics Corp. in Taiwan (test only), Siliconware Precision Industries Co. Ltd. or SPIL in Taiwan (assembly/packaging only) and Unisem (M) Berhad in China (assembly/packaging only).

Quality Assurance. We have implemented significant quality assurance procedures to assure high levels of product quality for our customers. We closely monitor the work-in-progress information and production records maintained by our suppliers, and communicate with our third-party contractors to assure high levels of product quality and an efficient manufacturing time cycle. Upon successful completion of the quality assurance procedures, all of our products are stored and shipped to our customers or distributors directly from our third-party contractors in accordance with our shipping instructions.

Research and Development

We believe that our future success depends on our ability to both improve our existing products and to develop new products for both existing and new markets. We direct our research and development efforts largely to the development of new high performance, mixed-signal semiconductor solutions for broadband communications, datacenter, and metro and long-haul telecommunications transport market applications. We target applications that require stringent overall system performance and low power consumption. As new and challenging communication applications proliferate, we believe that many of these applications may benefit from our SoC solutions combining analog and mixed-signal processing with digital signal processing functions. We have assembled a team of highly skilled semiconductor and embedded software design engineers with expertise in broadband RF and mixed-signal integrated circuit design, digital signal processing, communications systems and SoC design. As of December 31, 2016, we had approximately 401 employees in our research and development group. Our engineering design teams are located in Carlsbad, Irvine, and Camarillo in California; Shenzhen in China; Bangalore in India; Burnaby in Canada; and Herzliya in Israel. Our research and development expense was $97.7 million, $85.4 million and $56.6 million in 2016, 2015 and 2014, respectively.

Competition

We compete with both established and development-stage semiconductor companies that design, manufacture and market analog and mixed-signal broadband RF receiver and optical interconnect products. Our competitors include companies with much longer operating histories, greater name recognition, access to larger customer bases and substantially greater financial, technical and operational resources. In addition, our industry is experiencing substantial consolidation. As a result, our competitors are increasingly large multi-national semi-conductor companies with substantial market influence. Our

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competitors may develop products that are similar or superior to ours. We consider our primary competitors to be companies with a proven track record of supporting market leaders and the technical capability to develop and bring to market competing broadband RF receiver and RF receiver SoC, modem, and optical interconnect products. Our primary competitors include NXP B.V. in cable and terrestrial TV markets, Silicon Laboratories in terrestrial TV markets, RDA Microelectronics and Rafael Microelectronics, Inc. in TV and terrestrial set-top-box markets, and Broadcom Corporation in terrestrial, cable, and satellite markets. Competitors we face in our datacenter, and metro and long-haul telecommunications transport applications include Inphi, M/A-COM, Semtech, Qorvo, Broadcom, and Microsemi amongst others. Competitors we face in our wireless infrastructure markets, resulting from our recent Microsemi and Broadcom asset acquisitions, include most notably Analog Devices and Texas Instruments, in addition to competition from captive semiconductor development initiatives within our current and target system OEM customers who may choose to develop their own custom integrated circuits, or develop FPGA based solutions. In addition, it is very likely that a number of other public and private companies, including some of our customers and semiconductor platform partners, could be developing competing products for broadband communications, datacenter, and metro and long-haul telecommunications transport, and wireless access and backhaul applications.

The market for analog and mixed-signal semiconductor products is highly competitive, and we believe that it will grow more competitive as a result of continued technological advances. We believe that the principal competitive factors in our markets include the following:

- product performance;
- features and functionality;
- energy efficiency;
- size;
- ease of system design;
- customer support;
- product roadmap;
- reputation;
- reliability; and
- price.

We believe that we compete favorably as measured against each of these criteria. However, our ability to compete in the future will depend upon the successful design, development and marketing of compelling RF and mixed-signal semiconductor integrated solutions for high growth communications markets. In addition, our competitive position will depend on our ability to continue to attract and retain talent while protecting our intellectual property.

Intellectual Property Rights

Our success and ability to compete depend, in part, upon our ability to establish and adequately protect our proprietary technology and confidential information. To protect our technology and confidential information, we rely on a combination of intellectual property rights, including patents, trade secrets, copyrights and trademarks. We also protect our proprietary technology and confidential information through the use of internal and external controls, including contractual protections with employees, contractors, business partners, consultants and advisors. Protecting mask works, or the “topography” or semiconductor material designs, of our integrated circuit products is of particular importance to our business and we seek to prevent or limit the ability of others to copy, reproduce or distribute our mask works.

We have 836 issued patents and 339 patent applications pending in the United States. We also have 9 issued foreign patents and 10 other pending foreign patent applications, based on our issued patents and pending patent applications in the United States. Of the total 845 domestic and foreign issued patents, 531 are related to Entropic and 314 are related to MaxLinear. Of the total 349 domestic and foreign pending patents, 88 are related to Entropic and 261 are related to MaxLinear.

We are the owner of thirteen trademarks (“MXL,” “MXLWARE,” “BNC,” “FULL-SPECTRUM CAPTURE,” “FSC,” “FULL SPECTRUM TRANSCEIVER,” “FULL-SPECTRUM TRANSCEIVER,” “FST,” “C.LINK,” “ENTROPIC,”

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"ENTROPIC BUILT-IN and Design," "PROVIGENT" and "PVG") that have been registered and/or published for opposition in the United States. We own foreign counterparts (including seven foreign registrations) of certain of these registered trademarks in Chile, China, the EU, Israel, India and Taiwan. We also own the registration for the trademark "ENTROPIC and Design" in Chile. We also claim common law rights in certain other trademarks that are not registered.

We may not gain any competitive advantages from our patents and other intellectual property rights. Our existing and future patents may be circumvented, designed around, blocked or challenged as to inventorship, ownership, scope, validity or enforceability. It is possible that we may be provided with information in the future that could negatively affect the scope or enforceability of either our present or future patents. Furthermore, our pending and future patent applications may or may not be granted under the scope of the claims originally submitted in our patent applications. The scope of the claims submitted or granted may or may not be sufficiently broad to protect our proprietary technologies. Moreover, we have adopted a strategy of seeking limited patent protection with respect to the technologies used in or relating to our products.

We are a party to a number of license agreements for various technologies, such as a license agreement with Intel Corporation relating to demodulator technologies that are licensed specifically for use in our products for cable set-top boxes. The agreement was originally entered into with Texas Instruments but was subsequently assigned to Intel Corporation as part of Intel Corporation's acquisition of Texas Instruments' cable modem product line in 2010. The license agreement with Intel Corporation has a perpetual term, but Intel Corporation may terminate the agreement for any uncured material breach or in the event of bankruptcy. If the agreement is terminated, we would not be able to manufacture or sell products that contain the demodulator technology licensed from Intel Corporation, and there would be a delay in the shipment of our products containing the technology until we found a replacement for the demodulator technology in the marketplace on commercially reasonable terms or we developed the demodulator technology itself. We believe we could find a substitute for the currently licensed demodulator technology in the marketplace on commercially reasonable terms or develop the demodulator technology ourselves. In either case, obtaining new licenses or replacing existing technology could have a material adverse effect on our business, as described in "Risk Factors—Risks Related to Our Business—We utilize a significant amount of intellectual property in our business. If we are unable to protect our intellectual property, our business could be adversely affected."

The semiconductor industry is characterized by frequent litigation and other vigorous offensive and protective enforcement actions over rights to intellectual property. Moreover, there are numerous patents in the semiconductor industry, and new patents are being granted rapidly worldwide. Our competitors may obtain patents that block or limit our ability to develop new technology and/or improve our existing products. If our products were found to infringe any patents or other intellectual property rights held by third parties, we could be prevented from selling our products or be subject to litigation fees, statutory fines and/or other significant expenses. We may be required to initiate litigation in order to enforce any patents issued to us, or to determine the scope or validity of a third-party's patent or other proprietary rights. We may in the future be contacted by third parties suggesting that we seek a license to intellectual property rights that they may believe we are infringing. In addition, in the future, we may be subject to lawsuits by third parties seeking to enforce their own intellectual property rights, as described in "Risk Factors—Risks Related to Our Business—We recently settled and are currently a party to intellectual property litigation and may face additional claims of intellectual property infringement. Current litigation and any future litigation could be time-consuming, costly to defend or settle and result in the loss of significant rights" and in "Item 3—Legal Proceedings."

Employees

As of December 31, 2016, we had approximately 553 employees, including 401 in research and development, 59 in sales and marketing, 17 in operations and semiconductor technology and 76 in administration. None of our employees is represented by a labor organization or under any collective bargaining arrangement, and we have never had a work stoppage. We consider our employee relations to be good.

Backlog

Our sales are made primarily pursuant to standard purchase orders. Because industry practice allows customers to reschedule, or in some cases, cancel orders on relatively short notice, we do not believe that backlog is a good indicator of our future sales.

Geographic Information

During our last three years, over 90% of our revenue was generated from products shipped to Asia, including over 70% from products shipped to China. As of December 31, 2016, 55% and 39% of our long-lived assets were located within the

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United States and Singapore, respectively. As of December 31, 2015, substantially all of our long-lived assets were located within the United States.

Seasonality

The semiconductor industry is highly cyclical and is characterized by constant and rapid technological change, rapid product obsolescence and price erosion, evolving technical standards, short product life cycles and wide fluctuations in product supply and demand. From time to time, these and other factors, together with changes in general economic conditions, cause significant upturns and downturns in the industry, and in our business in particular.

In addition, our operating results are subject to substantial quarterly and annual fluctuations due to a number of factors, such as the demand for semiconductor solutions for broadband communications applications, the timing of receipt, reduction or cancellation of significant orders, the gain or loss of significant customers, market acceptance of our products and our customers' products, our ability to timely develop, introduce and market new products and technologies, the availability and cost of products from our suppliers, new product and technology introductions by competitors, intellectual property disputes and the timing and extent of product development costs.

ITEM 1A. RISK FACTORS

This Annual Report on Form 10-K, or Form 10-K, including any information incorporated by reference herein, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, referred to as the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, referred to as the Exchange Act. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "intend," "forecast," "anticipate," "believe," "estimate," "predict," "potential," "continue" or the negative of t other comparable terminology. The forward-looking statements contained in this 10-K involve known and unknown risks, uncertainties and situations that may cause our or our industry's actual results, level of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these statements. These factors include those listed below in this Item 1A and those discussed elsewhere in this Form 10-K. We encourage investors to review these factors carefully. We may from time to time make additional written and oral forward-looking statements, including statements contained in our filings with the SEC. We do not undertake to update any forward-looking statement that may be made from time to time by or on behalf of us, whether as a result of new information, future events or otherwise, except as required by law.

Before you invest in our securities, you should be aware that our business faces numerous financial and market risks, including those described below, as well as general economic and business risks. The following discussion provides information concerning the material risks and uncertainties that we have identified and believe may adversely affect our business, our financial condition and our results of operations. Before you decide whether to invest in our securities, you should carefully consider these risks and uncertainties, together with all of the other information included in this Form 10-K and in our other public filings.

During 2016, we acquired certain wireless infrastructure assets from Microsemi and Broadcom. For the risks relating to our recent acquisitions, please refer to the section of these risk factors captioned "Risks Relating to Our Recent Acquisitions."

Risks Related to Our Business

We face intense competition and expect competition to increase in the future, which could have an adverse effect on our revenue, revenue growth rate, if any, and market share.

The global semiconductor market in general, and the RF receiver market in particular, are highly competitive. We compete in different target markets to various degrees on the basis of a number of principal competitive factors, including our products' performance, features and functionality, energy efficiency, size, ease of system design, customer support, product roadmap, reputation, reliability and price, as well as on the basis of our customer support, the quality of our product roadmap and our reputation. We expect competition to increase and intensify as a result of industry consolidation and the resulting creation of larger semiconductor companies. In addition, we expect the internal resources of large, integrated original equipment manufacturers, or OEMs, may continue to enter our markets. Increased competition could result in price pressure, reduced profitability and loss of market share, any of which could materially and adversely affect our business, revenue, revenue growth rates and operating results.

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As our products are integrated into a variety of electronic devices, we compete with suppliers of both can tuners and traditional silicon RF receivers, and with providers of physical medium devices for optical interconnect markets. Our competitors range from large, international companies offering a wide range of semiconductor products to smaller companies specializing in narrow markets and internal engineering groups within television, set-top box, data modems and gateway, satellite low-noise blocker, and optical module manufacturers, some of which may be our customers. Our primary competitors include Silicon Labs, NXP B.V., RDA Microelectronics, Inc., Broadcom Ltd (created through the merger of Broadcom Corporation and Avago Technologies Limited), and Rafael Microelectronics, Inc. Inphi Corporation, M/A-COM Technology Solutions Holdings, Inc., Semtech Corporation, Qorvo Inc., Microsemi Corporation (which acquired PMC-Sierra), Texas Instruments, and Analog Devices. It is quite likely that competition in the markets in which we participate will increase in the future as existing competitors improve or expand their product offerings. In addition, it is quite likely that a number of other public and private companies are in the process of developing competing products for digital television and other broadband communication applications. Because our products often are building block semiconductors which provide functions that in some cases can be integrated into more complex integrated circuits, we also face competition from manufacturers of integrated circuits, some of which may be existing customers or platform partners that develop their own integrated circuit products. If we cannot offer an attractive solution for applications where our competitors offer more fully integrated tuner/demodulator/video processing products, we may lose significant market share to our competitors. Certain of our competitors have fully integrated tuner/demodulator/video processing solutions targeting high performance cable, satellite, or DTV applications, and thereby potentially provide customers with smaller and cheaper solutions. Some of our targeted customers for our optical interconnect solutions are module makers who are vertically integrated, where we compete with internally supplied components.

Our ability to compete successfully depends on factors both within and outside of our control, including industry and general economic trends. During past periods of downturns in our industry, competition in the markets in which we operate intensified as manufacturers of semiconductors reduced prices in order to combat production overcapacity and high inventory levels. Many of our competitors have substantially greater financial and other resources with which to withstand similar adverse economic or market conditions in the future. Moreover, the competitive landscape is changing as a result of consolidation within our industry as some of our competitors have merged with or been acquired by other competitors, and other competitors have begun to collaborate with each other. These developments may materially and adversely affect our current and future target markets and our ability to compete successfully in those markets.

We depend on a limited number of customers, that have undergone or are undergoing consolidation and who themselves are dependent on a consolidating set of service provider customers, for a substantial portion of our revenue, and the loss of, or a significant reduction in orders from one or more of our major customers could have a material adverse effect on our revenue and operating results.

For fiscal 2016, two customers accounted for 37% of our net revenue, and our ten largest customers accounted for 74% of our net revenue. For fiscal 2015, two customers accounted for approximately 41% of our net revenue, and our ten largest customers collectively accounted for approximately 76% of our net revenue. For fiscal 2014, one customer accounted for approximately 31% of our net revenue, and our ten largest customers collectively accounted for approximately 67% of our net revenue. We expect that our operating results for the foreseeable future will continue to show a substantial but declining percentage of sales dependent on a relatively small number of customers and on the ability of these customers to sell products that incorporate our RF receivers or RF receiver SoCs, digital STB video SoCs, DBS ODU, and MoCA® connectivity solutions. In the future, these customers may decide not to purchase our products at all, may purchase fewer products than they did in the past, or may defer or cancel purchases or otherwise alter their purchasing patterns. Factors that could affect our revenue from these large customers include the following:

- substantially all of our sales to date have been made on a purchase order basis, which permits our customers to cancel, change or delay product purchase commitments with little or no notice to us and without penalty;
- some of our customers have sought or are seeking relationships with current or potential competitors which may affect their purchasing decisions; and
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service provider and OEM consolidation across cable, satellite, and fiber markets could result in significant changes to our customers' technology development and deployment priorities and roadmaps, which could affect our ability to forecast demand accurately and could lead to increased volatility in our business.

In addition, delays in development could impair our relationships with our strategic customers and negatively impact sales of the products under development. Moreover, it is possible that our customers may develop their own product or adopt a

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competitor's solution for products that they currently buy from us. If that happens, our sales would decline and our business, financial condition and results of operations could be materially and adversely affected.
Our relationships with some customers may deter other potential customers who compete with these customers from buying our products. To attract new customers or retain existing customers, we may offer these customers favorable prices on our products. In that event, our average selling prices and gross margins would decline. The loss of a key customer, a reduction in sales to any key customer or our inability to attract new significant customers could seriously impact our revenue and materially and adversely affect our results of operations.
A significant portion of our revenue is attributable to demand for our products in markets for broadband and pay-TV operator applications, and development delays and consolidation trends among cable and satellite television operators could adversely affect our future revenues and operating results.
For fiscal 2016, revenue directly attributable to operator applications accounted for approximately 75% of our net revenue. For fiscal 2015, revenue directly attributable to these applications accounted for approximately 75% of our net revenue. For fiscal 2014, revenue directly attributable to cable and satellite operator applications accounted for approximately 76% of our net revenue. Delays in the development of, or unexpected developments in the operator applications markets could have an adverse effect on order activity by manufacturers in these markets and, as a result, on our business, revenue, operating results and financial condition. In addition, consolidation trends among television operators may continue, which could have a material adverse effect on our future operating results and financial condition. Most recently, we experienced sharper than previously anticipated declines in our legacy video SoC revenues as a result of the acquisition of Time Warner Cable by Charter Communication
If we fail to penetrate new markets, including in particular the market for satellite set-top and gateway boxes and outdoor units, our revenue, revenue growth rate, if any, and financial condition could be materially and adversely affected.
Currently, we sell most of our products to manufacturers of applications for television, terrestrial set-top boxes for sale in various markets worldwide including, but not limited to, cable broadband voice and data modems and gateways, pay-TV set-top boxes and gateways into cable and satellite operator markets, satellite outdoor units or LNB's, optical modules for long-haul and metro telecommunications markets and RF transceivers and modem solutions for wireless infrastructure markets. Our future revenue growth, if any, will depend in part on our ability to further penetrate into, and expand beyond, these markets with analog and mixed-signal solutions targeting the markets for high-speed optical interconnects for datacenter, metro, and long-haul optical modules, telecommunications wireless infrastructure, and cable DOCSIS 3.1 network infrastructure products. Each of these markets presents distinct and substantial risks. If any of these markets do not develop as we currently anticipate, or if we are unable to penetrate them successfully, it could materially and adversely affect our revenue and revenue growth rate, if any.
Broadband data modems/gateways and pay-TV and satellite set-top boxes and video gateways continue to represent our largest North American and European revenue generator. The North American and European pay-TV set-top box market is dominated by only a few OEMs, including Technicolor (which includes Cisco's former connected devices business), Arris Group, Inc. (includes Pace plc acquired by Arris Group, Inc. in January 2016), Humax Co., Ltd. and Samsung Electronics Co., Ltd. These OEMs are large multinational corporations with substantial negotiating power relative to us and are undergoing significant consolidation. Securing design wins with any of these companies requires a substantial investment of our time and resources. Even if we succeed, additional testing and operational certifications will be required by the OEMs' customers, which include large pay-TV television companies such as Comcast Corporation, Liberty Global plc, Charter Spectrum, AT&T and EchoStar Corporation. In addition, our products will need to be compatible with other components in our customers' designs, including components produced by our competitors or potential competitors. There can be no assurance that these other companies will support or continue to support our products.
If we fail to penetrate these or other new markets upon which we target our resources, our revenue and revenue growth rate, if any, likely will decrease over time and our financial condition could suffer.
We may be unable to make the substantial and productive research and development investments which are required to remain competitive in our business.

The semiconductor industry requires substantial investment in research and development in order to develop and bring to market new and enhanced technologies and products. Many of our products originated with our research and development efforts and we believe have provided us with a significant competitive advantage. For fiscal 2016, our research and development expense was $97.7 million. For fiscal 2015, our research and development expense was $85.4 million. For fiscal

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2014, our research and development expense was $56.6 million. For fiscal 2016 and 2015, we continued to increase our research and development expenditures as part of our strategy of devoting focused research and development efforts on the development of innovative and sustainable product platforms. We are committed to investing in new product development internally in order to stay competitive in our markets and plan to maintain research and development and design capabilities for new solutions in advanced semiconductor process nodes such as 28nm and 16nm and beyond. We do not know whether we will have sufficient resources to maintain the level of investment in research and development required to remain competitive as semiconductor process nodes continue to shrink and become increasingly complex. In addition, we cannot assure you that the technologies which are the focus of our research and development expenditures will become commercially successful.

We may not sustain our growth rate, and we may not be able to manage future growth effectively.

We have been experiencing significant growth in a short period of time. Our net revenue increased from approximately $133.1 million in 2014, to $300.4 million in 2015 and $387.8 million in 2016, in part due to acquisitions. We may not achieve similar growth rates in future periods. You should not rely on our operating results for any prior quarterly or annual periods as an indication of our future operating performance. If we are unable to maintain adequate revenue growth, our financial results could suffer and our stock price could decline.

To manage our growth successfully and handle the responsibilities of being a public company, we believe we must effectively, among other things:

- recruit, hire, train and manage additional qualified engineers for our research and development activities, especially in the positions of design engineering, product and test engineering and applications engineering;
- add sales personnel and expand customer engineering support offices;
- implement and improve our administrative, financial and operational systems, procedures and controls; and
- enhance our information technology support for enterprise resource planning and design engineering by adapting and expanding our systems and tool capabilities, and properly training new hires as to their use.

If we are unable to manage our growth effectively, we may not be able to take advantage of market opportunities or develop new products and we may fail to satisfy customer requirements, maintain product quality, execute our business plan or respond to competitive pressures.

In addition to our recent acquisitions, we may, from time to time, make additional business acquisitions or investments, which involve significant risks.

In addition to the acquisition of the wireless infrastructure backhaul business of Broadcom Corporation, which we completed in the third quarter of fiscal 2016, we also acquired the wireless infrastructure access business of Microsemi Storage Solutions, Inc., formerly known as PMC-Sierra, Inc., which we completed in the second quarter of fiscal 2016, Entropic Communications, Inc., which we completed in the second quarter of fiscal 2015, and Physpeed, Co., Ltd., which we completed in the fourth quarter of fiscal 2014, we may, from time to time, make acquisitions, enter into alliances or make investments in other businesses to complement our existing product offerings, augment our market coverage or enhance our technological capabilities. However, any such transactions could result in:

- issuances of equity securities dilutive to our existing stockholders;
- substantial cash payments;
- the incurrence of substantial debt and assumption of unknown liabilities;
- large one-time write-offs;
- amortization expenses related to intangible assets;
- a limitation on our ability to use our net operating loss carryforwards;
- the diversion of management's time and attention from operating our business to acquisition integration challenges;

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- stockholder or other litigation relating to the transaction;
- adverse tax consequences; and
- the potential loss of key employees, customers and suppliers of the acquired business.

Additionally, in periods subsequent to an acquisition, we must evaluate goodwill and acquisition-related intangible assets for impairment. If such assets are found to be impaired, they will be written down to estimated fair value, with a charge against earnings.

Integrating acquired organizations and their products and services, including the integration of completed acquisitions, may be expensive, time-consuming and a strain on our resources and our relationships with employees, customers, distributors and suppliers, and ultimately may not be successful. The benefits or synergies we may expect from the acquisition of complementary or supplementary businesses may not be realized to the extent or in the time frame we initially anticipate. Some of the risks that may affect our ability to successfully integrate acquired businesses, including the wireless infrastructure backhaul business of Broadcom Corporation, the wireless infrastructure access business of Microsemi Storage Solutions, Inc., Entropic Communications, Inc. and Physpeed, Co., Ltd., include those associated with:

- failure to successfully further develop the acquired products or technology;
- conforming the acquired company's standards, policies, processes, procedures and controls with our operations;
- coordinating new product and process development, especially with respect to highly complex technologies;
- loss of key employees or customers of the acquired company;
- hiring additional management and other critical personnel;
- in the case of foreign acquisitions, the need to integrate operations across different cultures and languages and to address the particular economic, currency, political and regulatory risks associated with specific countries;
- increasing the scope, geographic diversity and complexity of our operations;
- consolidation of facilities, integration of the acquired company's accounting, human resource and other administrative functions and coordination of product, engineering and sales and marketing functions;
- the geographic distance between the companies;
- liability for activities of the acquired company before the acquisition, including patent and trademark infringement claims, violations of laws, commercial disputes, tax liabilities and other known and unknown liabilities; and
- litigation or other claims in connection with the acquired company, including claims for terminated employees, customers, former stockholders or other third parties.

On or about August 2, 2016, Trango Systems, Inc., or Trango, filed a complaint in the Superior Court of California, County of San Diego, Central Division, against defendants Broadcom Corporation, Inc., or Broadcom, and us, collectively, Defendants. On or about December 6, 2016 Trango filed its second amended complaint. Trango is a purchaser that alleges various fraud, breach of contract, and interference with economic relations claims in connection with the discontinuance of a chip line we recently acquired from Broadcom. Trango seeks unspecified general and special damages, pre-judgment interest, expenses and costs, statutory penalties, attorneys' fees, punitive damages, and unspecified injunctive and equitable relief. We intend to vigorously defend against the lawsuit. On January 11, 2017, we filed our demurrer to each cause of action in the second amended complaint.
We cannot predict the outcome of the Trango Systems, Inc. litigation. Any adverse determination in the Trango Systems, Inc. litigation could have a material adverse effect on our business and operating results.

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The complexity of our products could result in unforeseen delays or expenses caused by undetected defects or bugs, which could reduce the market acceptance of our new products, damage our reputation with current or prospective customers and adversely affect our operating costs.

Highly complex products like our RF receivers and RF receiver SoCs, physical medium devices for optical modules, and RF transceiver and modem solutions for wireless infrastructure markets may contain defects and bugs when they are first introduced or as new versions are released. We have previously experienced, and may in the future experience, defects and bugs and, in particular, have identified several million dollars of liabilities arising from warranty claims related to legacy Entropic products. Where any of our products, including legacy acquired products, contain defects or bugs, or have reliability, quality or compatibility problems, we may not be able to successfully correct these problems. Consequently, our reputation may be damaged and customers may be reluctant to buy our products, which could materially and adversely affect our ability to retain existing customers and attract new customers, and our financial results. In addition, these defects or bugs could interrupt or delay sales to our customers. If any of these problems are not found until after we have commenced commercial production of a new product (as in the case of the legacy Entropic products experiencing warranty claims), we may be required to incur additional development costs and product recall, repair or replacement costs, and our operating costs could be adversely affected. These problems may also result in warranty or product liability claims against us by our customers or others that may require us to make significant expenditures to defend these claims or pay damage awards. In the event of a warranty claim, we may also incur costs if we compensate the affected customer. We maintain product liability insurance, but this insurance is limited in amount and subject to significant deductibles. There is no guarantee that our insurance will be available or adequate to protect against all claims. We also may incur costs and expenses relating to a recall of one of our customers' products containing one of our devices. The process of identifying a recalled product in devices that have been widely distributed may be lengthy and require significant resources, and we may incur significant replacement costs, contract damage claims from our customers and reputational harm. Costs or payments made in connection with warranty and product liability claims and product recalls could materially affect our financial condition and results of operations.

Average selling prices of our products could decrease rapidly, which would have a material adverse effect on our revenue and gross margins.

We may experience substantial period-to-period fluctuations in future operating results due to the erosion of our average selling prices. From time to time, we have reduced the average unit price of our products due to competitive pricing pressures, new product introductions by us or our competitors, and for other reasons, and we expect that we will have to do so again in the future. If we are unable to offset any reductions in our average selling prices by increasing our sales volumes or introducing new products with higher margins, our revenue and gross margins will suffer. To support our gross margins, we must develop and introduce new products and product enhancements on a timely basis and continually reduce our and our customers' costs. Our inability to do so would cause our revenue and gross margins to decline.

If we fail to develop and introduce new or enhanced products on a timely basis, our ability to attract and retain customers could be impaired and our competitive position could be harmed.

We operate in a dynamic environment characterized by rapidly changing technologies and industry standards and technological obsolescence. To compete successfully, we must design, develop, market and sell new or enhanced products that provide increasingly higher levels of performance and reliability and meet the cost expectations of our customers. The introduction of new products by our competitors, the market acceptance of products based on new or alternative technologies, or the emergence of new industry standards could render our existing or future products obsolete. Our failure to anticipate or timely develop new or enhanced products or technologies in response to technological shifts could result in decreased revenue and our competitors winning more competitive bid processes, known as "design wins." In particular, we may experience difficulties with product design, manufacturing, marketing or certification that could delay or prevent our development, introduction or marketing of new or enhanced products. If we fail to introduce new or enhanced products that meet the needs of our customers or penetrate new markets in a timely fashion, we will lose market share and our operating results will be adversely affected.

In particular, we believe that we will need to develop new products in part to respond to changing dynamics and trends in our end user markets, including (among other trends) consolidation among cable and satellite operators, potential industry shifts away from the hardware devices and other technologies that incorporate our products, and changes in consumer television viewing habits and how consumers access and receive broadcast content and digital broadband services. We cannot predict how these trends will continue to develop or how or to what extent they may affect our future revenues and operating results. We believe that we will need to continue to make substantial investments in research and development in an attempt to ensure a product roadmap that anticipates these types of changes; however, we cannot provide any assurances that we will accurately predict the direction in which our markets will evolve or that we will be able to develop, market, or sell new products that respond to such changes successfully or in a timely manner, if at all.

We have settled in the past and are currently a party to intellectual property litigation and may face additional claims of intellectual property infringement. Current litigation and any future litigation could be time-consuming, costly to defend or settle and result in the loss of significant rights.

The semiconductor industry is characterized by companies that hold large numbers of patents and other intellectual property rights and that vigorously pursue, protect and enforce intellectual property rights. Third parties have in the past and may in the future assert against us and our customers and distributors their patent and other intellectual property rights to technologies that are important to our business. In particular, from time to time, we receive correspondence from competitors seeking to engage us in discussions concerning potential claims against us, and we receive correspondence from customers seeking indemnification for potential claims related to infringement claims asserted against down-stream users of our products. We investigate these requests as received and could be required to enter license agreements with respect to third party intellectual property rights or indemnify third parties, either of which could have an adverse effect on our future operating results.

On January 21, 2014, CrestaTech Technology Corporation, or CrestaTech, filed a complaint for patent infringement against us in the United States District Court of Delaware, or the District Court Litigation. In its complaint, CrestaTech alleges that we infringe U.S. Patent Nos. 7,075,585, or the '585 Patent and 7,265,792, or the '792 Patent. In addition to asking for compensatory damages, CrestaTech alleges willful infringement and seeks a permanent injunction. CrestaTech also names Sharp Corporation, Sharp Electronics Corp. and VIZIO, Inc. as defendants based upon their alleged use of our television tuners.

On January 28, 2014, CrestaTech filed a complaint with the U.S. International Trade Commission, or ITC, again naming, among others, us, Sharp, Sharp Electronics, and VIZIO, or the ITC Investigation. On May 16, 2014, the ITC granted CrestaTech's motion to file an amended complaint adding six OEM Respondents, namely, SIO International, Inc., Hon Hai Precision Industry Co., Ltd., Wistron Corp., Wistron Infocomm Technology (America) Corp., Top Victory Investments Ltd. and TPV International (USA), Inc. which are collectively referred to with us, Sharp and VIZIO as the Company Respondents. CrestaTech's ITC complaint alleged a violation of 19 U.S.C. § 1337 through the importation into the United States, the sale for importation, or the sale within the United States after importation of MaxLinear's accused products that CrestaTech alleged infringe the same two patents asserted in the Delaware action. Through its ITC complaint, CrestaTech sought an exclusion order preventing entry into the United States of certain of our television tuners and televisions containing such tuners from Sharp, Sharp Electronics, and VIZIO. CrestaTech also sought a cease and desist order prohibiting the Company Respondents from engaging in the importation into, sale for importation into, the sale after importation of, or otherwise transferring within the United States certain of our television tuners or televisions containing such tuners.

On March 10, 2014, the court stayed the District Court Litigation pending resolution of the ITC Investigation.

On December 15, 2014, the ITC held a trial in the ITC Investigation. On February 27, 2015, the Administrative Law Judge, or the ALJ, issued a written Initial Determination, or ID, ruling that the Company Respondents do not violate Section 1337 in connection with CrestaTech's asserted patents because CrestaTech failed to satisfy the economic prong of the domestic industry requirement pursuant to Section 1337(a)(2). In addition, the ID stated that certain of our television tuners and televisions incorporating those tuners manufactured and sold by certain customers infringe three claims of the ‘585 Patent, and these three claims were not determined to be invalid. On April 30, 2015, the ITC issued a notice indicating that it intended to review portions of the ID finding no violation of Section 1337, including the ID's findings of infringement with respect to, and validity of, the ‘585 Patent, and the ID's finding that CrestaTech failed to establish the existence of a domestic industry within the meaning of Section 1337.

The ITC has subsequently issued its opinion, which terminated its investigation. The opinion affirmed the findings of the ALJ that no violation of Section 1337 had occurred because CrestaTech had failed to establish the economic prong of the domestic industry requirement. The ITC also affirmed the ALJ's finding of infringement with respect to the three claims of the '585 Patent that were not held to be invalid.

On November 30, 2015, CrestaTech filed an appeal of the ITC decision with the United States Court of Appeals for the Federal Circuit, or the Federal Circuit. On March 7, 2016, CrestaTech voluntarily dismissed its appeal, resulting in

a final determination of the ITC Investigation in our favor.
In addition, we have filed four petitions for inter partes review, or IPR, by the US Patent Office, two for each of the CrestaTech patents asserted against us. The Patent Trial and Appeal Board, or the PTAB, did not institute two of these IPRs as

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being redundant to IPRs filed by another party that were already underway for the same CrestaTech patent. The remaining two petitions were instituted or instituted-in-part and, together with the IPRs filed by third parties, there are currently six pending IPR proceedings involving the two CrestaTech patents asserted against us.

In October 2015, the PTAB issued final decisions in two of the six pending IPR proceedings (one for each of the two asserted patents), holding that all of the reviewed claims are unpatentable. Included in these decisions was one of the three claims of the ‘585 Patent mentioned above in connection with the ITC’s final decision. CrestaTech appealed the PTAB’s decisions at the Federal Circuit. On November 8, 2016, the Federal Circuit issued an opinion affirming the PTAB’s finding of unpatentability.

In August 2016, the PTAB issued final written decisions in the remaining four pending IPR proceedings (two for each of the asserted patents), holding that many of the reviewed claims - including the two remaining claims of the ‘585 Patent which the ITC held were infringed - are unpatentable. As a result of these IPR decisions, all 13 claims that CrestaTech asserted against us in the ITC Investigation have been found to be unpatentable by the PTAB. The parties have filed notices to appeal the two decisions related to the ‘585 Patent. Opening briefs are currently due in late January - early February 2017. CrestaTech, however, did not appeal the PTAB’s rulings related to the ‘792 Patent.

On March 18, 2016, CrestaTech filed a petition for Chapter 7 bankruptcy in the Northern District of California. As a result of this proceeding, all rights in the CrestaTech asserted patents, including the right to control the pending litigation, were assigned to CF Crespe LLC, or CF Crespe. CF Crespe is now the named party in the pending IPRs, the Federal Circuit appeal and District Court Litigation. CF Crespe has not sought to lift the stay in the District Court Litigation given the resolution of the ITC Investigation.

We cannot predict the outcome of any appeal by CF Crespe, CrestaTech, the District Court Litigation, or the IPRs. Any adverse determination in the District Court Litigation could have a material adverse effect on our business and operating results.

Claims that our products, processes or technology infringe third-party intellectual property rights, regardless of their merit or resolution and including the CrestaTech claims, are costly to defend or settle and could divert the efforts and attention of our management and technical personnel. In addition, many of our customer and distributor agreements require us to indemnify and defend our customers or distributors from third-party infringement claims and pay damages in the case of adverse rulings. Claims of this sort also could harm our relationships with our customers or distributors and might deter future customers from doing business with us. In order to maintain our relationships with existing customers and secure business from new customers, we have been required from time to time to provide additional assurances beyond our standard terms. If any future proceedings result in an adverse outcome, we could be required to:

- cease the manufacture, use or sale of the infringing products, processes or technology;
- pay substantial damages for infringement;
- expend significant resources to develop non-infringing products, processes or technology;
- license technology from the third-party claiming infringement, which license may not be available on commercially reasonable terms, or at all;
- cross-license our technology to a competitor to resolve an infringement claim, which could weaken our ability to compete with that competitor; or
- pay substantial damages to our customers or end users to discontinue their use of or to replace infringing technology sold to them with non-infringing technology.

Any of the foregoing results could have a material adverse effect on our business, financial condition and results of operations.

We utilize a significant amount of intellectual property in our business. If we are unable to protect our intellectual property, our business could be adversely affected.

Our success depends in part upon our ability to protect our intellectual property. To accomplish this, we rely on a combination of intellectual property rights, including patents, copyrights, trademarks and trade secrets in the United States and in selected foreign countries where we believe filing for such protection is appropriate. Effective patent, copyright, trademark

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and trade secret protection may be unavailable, limited or not applied for in some countries. Some of our products and technologies are not covered by any patent or patent application. We cannot guarantee that:

- any of our present or future patents or patent claims will not lapse or be invalidated, circumvented, challenged or abandoned;
- our intellectual property rights will provide competitive advantages to us;
- our ability to assert our intellectual property rights against potential competitors or to settle current or future disputes will not be limited by our agreements with third parties;
- any of our pending or future patent applications will be issued or have the coverage originally sought;
- our intellectual property rights will be enforced in jurisdictions where competition may be intense or where legal protection may be weak;
- any of the trademarks, copyrights, trade secrets or other intellectual property rights that we presently employ in our business will not lapse or be invalidated, circumvented, challenged or abandoned; or
- we will not lose the ability to assert our intellectual property rights against or to license our technology to others and collect royalties or other payments.

In addition, our competitors or others may design around our protected patents or technologies. Effective intellectual property protection may be unavailable or more limited in one or more relevant jurisdictions relative to those protections available in the United States, or may not be applied for in one or more relevant jurisdictions. If we pursue litigation to assert our intellectual property rights, an adverse decision in any of these legal actions could limit our ability to assert our intellectual property rights, limit the value of our technology or otherwise negatively impact our business, financial condition and results of operations.

Monitoring unauthorized use of our intellectual property is difficult and costly. Unauthorized use of our intellectual property may have occurred or may occur in the future. Although we have taken steps to minimize the risk of this occurring, any such failure to identify unauthorized use and otherwise adequately protect our intellectual property would adversely affect our business. Moreover, if we are required to commence litigation, whether as a plaintiff or defendant as has occurred with CrestaTech, not only will this be time-consuming, but we will also be forced to incur significant costs and divert our attention and efforts of our employees, which could, in turn, result in lower revenue and higher expenses.

We also rely on customary contractual protections with our customers, suppliers, distributors, employees and consultants, and we implement security measures to protect our trade secrets. We cannot assure you that these contractual protections and security measures will not be breached, that we will have adequate remedies for any such breach or that our suppliers, employees or consultants will not assert rights to intellectual property arising out of such contracts.

In addition, we have a number of third-party patent and intellectual property license agreements. Some of these license agreements require us to make one-time payments or ongoing royalty payments. Also, a few of our license agreements contain most-favored nation clauses or other price restriction clauses which may affect the amount we may charge for our products, processes or technology. We cannot guarantee that the third-party patents and technology we license will not be licensed to our competitors or others in the semiconductor industry. In the future, we may need to obtain additional licenses, renew existing license agreements or otherwise replace existing technology. We are unable to predict whether these license agreements can be obtained or renewed or the technology can be replaced on acceptable terms, or at all.

When we settled a trademark dispute with Linear Technology Corporation, we agreed not to register the “MAXLINEAR” mark or any other marks containing the term “LINEAR”. We may continue to use “MAXLINEAR” as a corporate identifier, including to advertise our products and services, but may not use that mark on our products. The agreement does not affect our ability to use our registered trademark “MxL”, which we use on our products. Due to our agreement not to register the “MAXLINEAR” mark, our ability to effectively prevent third parties from using the “MAXLINEAR” mark in connection with similar products or technology may be affected. If we are unable to protect our trademarks, we may experience difficulties in achieving and maintaining brand recognition and customer loyalty.

Our business, revenue and revenue growth, if any, will depend in part on the timing and development of the global transition from analog to digital television, which is subject to numerous regulatory and business risks outside our control.

In the year ended December 31, 2016, sales of our RF receiver products used in digital terrestrial television applications, or DTT, including digital televisions, terrestrial set-top boxes, and terrestrial receivers in satellite video gateways represented a declining, but not insignificant, portion of our revenues. We expect a declining but not insignificant portion of our revenue in future periods to continue to depend on the demand for DTT applications. In contrast to the United States, where the transition from analog to digital television occurred on a national basis in June 2009, in Europe and other parts of the world, the digital transition is being phased in on a local and regional basis and is expected to occur over many years. Many countries in Eastern Europe and Latin America are expected to convert to digital television by the end of 2018, with other countries targeting dates as late as 2024. As a result, our future revenue will depend in part on government mandates requiring conversion from analog to digital television and on the timing and implementation of those mandates. If the ongoing global transition to digital TV standards does not continue to progress or experiences significant delays, our business, revenue, operating results and financial condition would be materially and adversely affected. If during the transition to digital TV standards, consumers disproportionately purchase TV's with digital or hybrid tuning capabilities, this could diminish the size of the market for our digital-to-analog converter set-top box solutions, and as result our business, revenue, operating results and financial condition would be materially and adversely affected.

We rely on a limited number of third parties to manufacture, assemble and test our products, and the failure to manage our relationships with our third-party contractors successfully could adversely affect our ability to market and sell our products.

We do not have our own manufacturing facilities. We operate an outsourced manufacturing business model that utilizes third-party foundry and assembly and test capabilities. As a result, we rely on third-party foundry wafer fabrication and assembly and test capacity, including sole sourcing for many components or products. Currently, all of our products are manufactured by United Microelectronics Corporation, or UMC, Silterra Malaysia Sdn Bhd, Global Foundries, Semiconductor Manufacturing International Corporation, or SMIC, Taiwan Semiconductor Manufacturing Corp, or TSMC, Tower-Jazz Semiconductor, and WIN Semiconductor at foundries in Taiwan, Singapore, Malaysia, China, and the United States. We also use third-party contractors for all of our assembly and test operations.

Relying on third party manufacturing, assembly and testing presents significant risks to us, including the following:

- failure by us, our customers, or their end customers to qualify a selected supplier;
- capacity shortages during periods of high demand;
- reduced control over delivery schedules and quality;
- shortages of materials;
- misappropriation of our intellectual property;
- limited warranties on wafers or products supplied to us; and
- potential increases in prices.

The ability and willingness of our third-party contractors to perform is largely outside our control. If one or more of our contract manufacturers or other outsourcers fails to perform its obligations in a timely manner or at satisfactory quality levels, our ability to bring products to market and our reputation could suffer. For example, in the event that manufacturing capacity is reduced or eliminated at one or more facilities, including as a response to the recent worldwide decline in the semiconductor industry, manufacturing could be disrupted, we could have difficulties fulfilling our customer orders and our net revenue could decline. In addition, if these third parties fail to deliver quality products and components on time and at reasonable prices, we could have difficulties fulfilling our customer orders, our net revenue could decline and our business, financial condition and results of operations would be adversely affected.

Additionally, our manufacturing capacity may be similarly reduced or eliminated at one or more facilities due to the fact that our fabrication and assembly and test contractors are all located in the Pacific Rim region, principally in China, Taiwan, Singapore and Malaysia. The risk of earthquakes in these geographies is significant due to the proximity of major earthquake fault lines, and Taiwan in particular is also subject to typhoons and other Pacific storms. Earthquakes, fire, flooding, or other natural disasters in Taiwan or the Pacific Rim region, or political unrest, war, labor strikes, work stoppages or public health

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crises, such as outbreaks of H1N1 flu, in countries where our contractors' facilities are located could result in the disruption of our foundry, assembly or test capacity. Any disruption resulting from these events could cause significant delays in shipments of our products until we are able to shift our manufacturing, assembly or test from the affected contractor to another third-party vendor. There can be no assurance that alternative capacity could be obtained on favorable terms, if at all.

We do not have any long-term supply contracts with our contract manufacturers or suppliers, and any disruption in our supply of products or materials could have a material adverse effect on our business, revenue and operating results.

We currently do not have long-term supply contracts with any of our third-party vendors, including UMC, Silterra Malaysia Sdn Bhd, Global Foundries, SMIC, TSMC, Jazz Semiconductor, and WIN Semiconductor. We make substantially all of our purchases on a purchase order basis, and neither UMC nor our other contract manufacturers are required to supply us products for any specific period or in any specific quantity. Foundry capacity may not be available when we need it or at reasonable prices. Availability of foundry capacity has in the past been reduced from time to time due to strong demand. Foundries can allocate capacity to the production of other companies' products and reduce deliveries to us on short notice. It is possible that foundry customers that are larger and better financed than we are, or that have long-term agreements with our foundry, may induce our foundry to reallocate capacity to them. This reallocation could impair our ability to secure the supply of components that we need. We expect that it would take approximately nine to twelve months to transition performance of our foundry or assembly services to new providers. Such a transition would likely require a qualification process by our customers or their end customers. We generally place orders for products with some of our suppliers approximately four to five months prior to the anticipated delivery date, with order volumes based on our forecasts of demand from our customers. Accordingly, if we inaccurately forecast demand for our products, we may be unable to obtain adequate and cost-effective foundry or assembly capacity from our third-party contractors to meet our customers' delivery requirements, or we may accumulate excess inventories. On occasion, we have been unable to adequately respond to unexpected increases in customer purchase orders and therefore were unable to benefit from this incremental demand. None of our third-party contractors has provided any assurance to us that adequate capacity will be available to us within the time required to meet additional demand for our products.

To address capacity considerations, we are in the process of qualifying additional semiconductor fabricators. Qualification will not occur if we identify a defect in a fabricator's manufacturing process or if our customers choose not to invest the time and expense required to qualify the proposed fabricator. If full qualification of a fabricator does not occur, we may not be able to sell all of the materials produced by this fabricator or to fulfill demand for our products, which would adversely affect our business, revenue and operating results. In addition, the resulting write-off of unusable inventories would have an adverse effect on our operating results.

We may have difficulty accurately predicting our future revenue and appropriately budgeting our expenses particularly as we seek to enter new markets where we may not have prior experience.

Our recent operating history has focused on developing integrated circuits for specific terrestrial, cable and satellite television, and broadband voice and data applications, and as part of our strategy, we seek to expand our addressable market into new product categories. For example, we have recently expanded into the market for satellite set-top and gateway boxes and outdoor units and physical medium devices for the optical interconnect markets, and through the Broadcom and Microsemi business line acquisitions have entered the markets for wireless telecommunications infrastructure and cable network infrastructure. Our limited operating experience in these new markets or potential markets we may enter, combined with the rapidly evolving nature of our markets in general, substantial uncertainty concerning how these markets may develop and other factors beyond our control, reduces our ability to accurately forecast quarterly or annual revenue. If our revenue does not increase as anticipated, we could incur significant losses due to our higher expense levels if we are not able to decrease our expenses in a timely manner to offset any shortfall in future revenue.

If we are unable to attract, train and retain qualified personnel, especially our design and technical personnel, we may not be able to execute our business strategy effectively.

Our future success depends on our ability to retain, attract and motivate qualified personnel, including our management, sales and marketing and finance, and especially our design and technical personnel. We do not know whether we will be able to retain all of these personnel as we continue to pursue our business strategy. Historically, we have encountered difficulties in hiring and retaining qualified engineers because there is a limited pool of engineers with the expertise required in our field. Competition for these personnel is intense in the semiconductor industry. As the source of our technological and product innovations, our design and technical personnel represent a significant asset. The loss of the services of one or more of our key employees, especially our key design and technical personnel, or our inability to retain, attract and motivate qualified design and technical personnel, could have a material adverse effect on our business, financial condition and results of operations.

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Our business would be adversely affected by the departure of existing members of our senior management team.

Our success depends, in large part, on the continued contributions of our senior management team. None of our senior management team is bound by written employment contracts to remain with us for a specified period. In addition, we have not entered into non-compete agreements with members of our senior management team. The loss of any member of our senior management team could harm our ability to implement our business strategy and respond to the rapidly changing market conditions in which we operate.

Our customers require our products and our third-party contractors to undergo a lengthy and expensive qualification process which does not assure product sales.

Prior to purchasing our products, our customers require that both our products and our third-party contractors undergo extensive qualification processes, which involve testing of the products in the customer's system and rigorous reliability testing. This qualification process may continue for six months or more. However, qualification of a product by a customer does not assure any sales of the product to that customer. Even after successful qualification and sales of a product to a customer, a subsequent revision to the RF receiver or RF receiver SoC and physical medium devices for optical modules, changes in our customer's manufacturing process or our selection of a new supplier may require a new qualification process, which may result in delays and in us holding excess or obsolete inventory. After our products are qualified, it can take six months or more before the customer commences volume production of components or devices that incorporate our products. Despite these uncertainties, we devote substantial resources, including design, engineering, sales, marketing and management efforts, to qualifying our products with customers in anticipation of sales. If we are unsuccessful or delayed in qualifying any of our products with a customer, sales of this product to the customer may be precluded or delayed, which may impede our growth and cause our business to suffer.

We are subject to risks associated with our distributors' product inventories and product sell-through. Should any of our distributors cease or be forced to stop distributing our products, our business would suffer.

We currently sell a significant portion of our products to customers through our distributors, who maintain their own inventories of our products.

For fiscal 2016, sales through distributors accounted for 19% of our net revenue. For fiscal 2015, sales through distributors accounted for 13% of our net revenue. For fiscal 2014, sales through distributors accounted for 28% of our net revenue. For these distributor transactions, revenue is not recognized until product is shipped to the end customer and the amount that will ultimately be collected is fixed or determinable. Upon shipment of product to these distributors, title to the inventory transfers to the distributor and the distributor is invoiced, generally with 30 to 60 day terms. On shipments to our distributors where revenue is not recognized, we record a trade receivable for the selling price as there is a legally enforceable right to payment, relieving the inventory for the carrying value of goods shipped since legal title has passed to the distributor, and record the corresponding gross profit in the consolidated balance sheet as a component of deferred revenue and deferred profit, representing the difference between the receivable recorded and the cost of inventory shipped. Future pricing credits and/or stock rotation rights from our distributors may result in the realization of a different amount of profit included our future consolidated statements of operations than the amount recorded as deferred profit in our consolidated balance sheets.

If our distributors are unable to sell an adequate amount of their inventories of our products in a given quarter to manufacturers and end users or if they decide to decrease their inventories of our products for any reason, our sales through these distributors and our revenue may decline. In addition, if some distributors decide to purchase more of our products than are required to satisfy end customer demand in any particular quarter, inventories at these distributors would grow in that quarter. These distributors likely would reduce future orders until inventory levels realign with end customer demand, which could adversely affect our product revenue in a subsequent quarter.

Our reserve estimates with respect to the products stocked by our distributors are based principally on reports provided to us by our distributors, typically on a weekly basis. To the extent that this resale and channel inventory data is inaccurate or not received in a timely manner, we may not be able to make reserve estimates for future periods accurately or at all.

We are subject to order and shipment uncertainties, and differences between our estimates of customer demand and product mix and our actual results could negatively affect our inventory levels, sales and operating results.

Our revenue is generated on the basis of purchase orders with our customers rather than long-term purchase commitments. In addition, our customers can cancel purchase orders or defer the shipments of our products under certain circumstances. Our products are manufactured using a silicon foundry according to our estimates of customer demand, which requires us to make separate demand forecast assumptions for every customer, each of which may introduce significant variability into our aggregate estimate. We have limited visibility into future customer demand and the product mix that our customers will require, which could adversely affect our revenue forecasts and operating margins. Moreover, because our target markets are relatively new, many of our customers have difficulty accurately forecasting their product requirements and estimating the timing of their new product introductions, which ultimately affects their demand for our products. Historically, because of this limited visibility, actual results have been different from our forecasts of customer demand. Some of these differences have been material, leading to excess inventory or product shortages and revenue and margin forecasts above those we were actually able to achieve. These differences may occur in the future, and the adverse impact of these differences between forecasts and actual results could grow if we are successful in selling more products to some customers. In addition, the rapid pace of innovation in our industry could render significant portions of our inventory obsolete. Excess or obsolete inventory levels could result in unexpected expenses or increases in our reserves that could adversely affect our business, operating results and financial condition. Conversely, if we were to underestimate customer demand or if sufficient manufacturing capacity were unavailable, we could forego revenue opportunities, potentially lose market share and damage our customer relationships. In addition, any significant future cancellations or deferrals of product orders or the return of previously sold products due to manufacturing defects could materially and adversely impact our profit margins, increase our write-offs due to product obsolescence and restrict our ability to fund our operations.

Winning business is subject to lengthy competitive selection processes that require us to incur significant expenditures. Even if we begin a product design, customers may decide to cancel or change their product plans, which could cause us to generate no revenue from a product and adversely affect our results of operations.

We are focused on securing design wins to develop RF receivers and RF receiver SoCs, MoCA SoCs, DBS-ODU SoCs, physical medium devices for optical modules, and SoC solutions targeting infrastructure opportunities within the telecommunications, wireless, and cable operator markets for use in our customers' products. These selection processes typically are lengthy and can require us to incur significant design and development expenditures and dedicate scarce engineering resources in pursuit of a single customer opportunity. We may not win the competitive selection process and may never generate any revenue despite incurring significant design and development expenditures. These risks are exacerbated by the fact that some of our customers' products likely will have short life cycles. Failure to obtain a design win could prevent us from offering an entire generation of a product, even though this has not occurred to date. This could cause us to lose revenue and require us to write off obsolete inventory, and could weaken our position in future competitive selection processes. After securing a design win, we may experience delays in generating revenue from our products as a result of the lengthy development cycle typically required. Our customers generally take a considerable amount of time to evaluate our products. The typical time from early engagement by our sales force to actual product introduction runs from nine to twelve months for the consumer market, to as much as 36 months for the cable and satellite operator markets, and beyond 36 months in the wired and wireless infrastructure markets. The delays inherent in these lengthy sales cycles increase the risk that a customer will decide to cancel, curtail, reduce or delay its product plans, causing us to lose anticipated sales. In addition, any delay or cancellation of a customer's plans could materially and adversely affect our financial results, as we may have incurred significant expense and generated no revenue. Finally, our customers' failure to successfully market and sell their products could reduce demand for our products and materially and adversely affect our business, financial condition and results of operations. If we were unable to generate revenue after incurring substantial expenses to develop any of our products, our business would suffer.

Our operating results are subject to substantial quarterly and annual fluctuations and may fluctuate significantly due to a number of factors that could adversely affect our business and our stock price.

Our revenue and operating results have fluctuated in the past and are likely to fluctuate in the future. These fluctuations may occur on a quarterly and on an annual basis and are due to a number of factors, many of which are beyond our control. These factors include, among others:

- changes in end-user demand for the products manufactured and sold by our customers;
- the receipt, reduction or cancellation of significant orders by customers;
- fluctuations in the levels of component inventories held by our customers;

- the gain or loss of significant customers;
- market acceptance of our products and our customers' products;

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- our ability to develop, introduce and market new products and technologies on a timely basis;
- the timing and extent of product development costs;
- new product announcements and introductions by us or our competitors;
- incurrence of research and development and related new product expenditures;
- seasonality or cyclical fluctuations in our markets;
- currency fluctuations;
- fluctuations in IC manufacturing yields;
- significant warranty claims, including those not covered by our suppliers;
- changes in our product mix or customer mix;
- intellectual property disputes;
- loss of key personnel or the shortage of available skilled workers;
- impairment of long-lived assets, including masks and production equipment; and
- the effects of competitive pricing pressures, including decreases in average selling prices of our products.

These factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly or annual operating results. We typically are required to incur substantial development costs in advance of a prospective sale with no certainty that we will ever recover these costs. A substantial amount of time may pass between a design win and the generation of revenue related to the expenses previously incurred, which can potentially cause our operating results to fluctuate significantly from period to period. In addition, a significant amount of our operating expenses are relatively fixed in nature due to our significant sales, research and development costs. Any failure to adjust spending quickly enough to compensate for a revenue shortfall could magnify its adverse impact on our results of operations.

We are subject to the cyclical nature of the semiconductor industry.

The semiconductor industry is highly cyclical and is characterized by constant and rapid technological change, rapid product obsolescence and price erosion, evolving standards, short product life cycles and wide fluctuations in product supply and demand. Any future downturns may result in diminished product demand, production overcapacity, high inventory levels and accelerated erosion of average selling prices. Furthermore, any upturn in the semiconductor industry could result in increased competition for access to third-party foundry and assembly capacity. We are dependent on the availability of this capacity to manufacture and assemble our all of our products. None of our third-party foundry or assembly contractors has provided assurances that adequate capacity will be available to us in the future. A significant downturn or upturn could have a material adverse effect on our business and operating results.

The use of open source software in our products, processes and technology may expose us to additional risks and harm our intellectual property.

Our products, processes and technology sometimes utilize and incorporate software that is subject to an open source license. Open source software is typically freely accessible, usable and modifiable. Certain open source software licenses require a user who intends to distribute the open source software as a component of the user’s software to disclose publicly part or all of the source code to the user’s software. In addition, certain open source software licenses require the user of such software to make any derivative works of the open source code available to others on unfavorable terms or at no cost. This can subject previously proprietary software to open source license terms.

While we monitor the use of all open source software in our products, processes and technology and try to ensure that no open source software is used in such a way as to require us to disclose the source code to the related product, processes or technology when we do not wish to do so, such use could inadvertently occur. Additionally, if a third party software provider has incorporated certain types of open source software into software we license from such third party for our products, processes or technology, we could, under certain circumstances, be required to disclose the source code to our products,

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processes or technology. This could harm our intellectual property position and have a material adverse effect on our business, results of operations and financial condition.

We rely on third parties to provide services and technology necessary for the operation of our business. Any failure of one or more of our partners, vendors, suppliers or licensors to provide these services or technology could have a material adverse effect on our business.

We rely on third-party vendors to provide critical services, including, among other things, services related to accounting, billing, human resources, information technology, network development, network monitoring, in-licensing and intellectual property that we cannot or do not create or provide ourselves. We depend on these vendors to ensure that our corporate infrastructure will consistently meet our business requirements. The ability of these third-party vendors to successfully provide reliable and high quality services is subject to technical and operational uncertainties that are beyond our control. While we may be entitled to damages if our vendors fail to perform under their agreements with us, our agreements with these vendors limit the amount of damages we may receive. In addition, we do not know whether we will be able to collect on any award of damages or that these damages would be sufficient to cover the actual costs we would incur as a result of any vendor's failure to perform under its agreement with us. Any failure of our corporate infrastructure could have a material adverse effect on our business, financial condition and results of operations. Upon expiration or termination of any of our agreements with third-party vendors, we may not be able to replace the services provided to us in a timely manner or on terms and conditions, including service levels and cost, that are favorable to us and a transition from one vendor to another vendor could subject us to operational delays and inefficiencies until the transition is complete.

Additionally, we incorporate third-party technology into and with some of our products, and we may do so in future products. The operation of our products could be impaired if errors occur in the third-party technology we use. It may be more difficult for us to correct any errors in a timely manner if at all because the development and maintenance of the technology is not within our control. There can be no assurance that these third parties will continue to make their technology, or improvements to the technology, available to us, or that they will continue to support and maintain their technology. Further, due to the limited number of vendors of some types of technology, it may be difficult to obtain new licenses or replace existing technology. Any impairment of the technology or our relationship with these third parties could have a material adverse effect on our business.

Unanticipated changes in our tax rates or unanticipated tax obligations could affect our future results.

Since we operate in different countries and are subject to taxation in different jurisdictions, our future effective tax rates could be impacted by changes in such countries' tax laws or their interpretations. Both domestic and international tax laws are subject to change as a result of changes in fiscal policy, changes in legislation, evolution of regulation and court rulings. The application of these tax laws and related regulations is subject to legal and factual interpretation, judgment and uncertainty. We cannot determine whether any legislative proposals may be enacted into law or what, if any, changes may be made to such proposals prior to their being enacted into law. If U.S. or international tax laws change in a manner that increases our tax obligation, it could result in a material adverse impact on our net income and our financial position. We adopted amendments to U.S. generally accepted accounting principles related to stock-based compensation in the second quarter of 2016 and included excess tax benefits associated with employee stock-based compensation in income tax expense, which reduced our income tax expense for the fiscal year 2016 by $8.3 million. However, since the amount of such excess tax benefits and deficiencies depend on the fair market value of our common stock, our income tax provision is now subject to volatility in our stock price and in the future, could unfavorably affect our future effective tax rate.

We are not currently under any tax examinations, but we are still subject to examination in various jurisdictions. In the event we are determined to have any unaccrued tax obligation arising from future audits, our operating results would be adversely affected.

Our future effective tax rate could be unfavorably affected by unanticipated changes in the valuation of our deferred tax assets and liabilities, and the ultimate use and depletion of these various tax credits and net operating loss carryforwards. Changes in our effective tax rate could have a material adverse impact on our results of operations. We record a valuation allowance to reduce our net deferred tax assets to the amount that we believe is more likely than not to be realized. In assessing the need for a valuation allowance, we consider historical levels of income, expectations and risks associated with estimates of future taxable income and ongoing prudent and practical tax planning strategies. On a periodic basis we evaluate our deferred tax asset balance for realizability. To the extent we believe it is more likely than not that some portion of our deferred tax assets will not be realized, we will recognize a valuation allowance against the deferred tax asset. Realization of our deferred tax assets is dependent primarily upon future U.S. taxable income. Based upon our review of all positive and negative evidence, we concluded that a full valuation allowance should continue to be recorded against our U.S. and certain foreign net deferred tax assets at December 31, 2016. However, in the past year, we have generated significant taxable income. If we continue to generate taxable income, we could remove some or all of the valuation allowance against federal, California and certain foreign deferred tax assets if we meet the more-likely-than-not threshold. The impact of releasing some or all of such valuation allowance will be material in the period in which such release occurs.

Global economic conditions, including factors that adversely affect consumer spending for the products that incorporate our integrated circuits, could adversely affect our revenues, margins, and operating results.

Our products are incorporated in numerous consumer devices, and demand for our products will ultimately be driven by consumer demand for products such as televisions, automobiles, cable modems, and set-top boxes. Many of these purchases are discretionary. Global economic volatility and economic volatility in the specific markets in which the devices that incorporate our products are ultimately sold can cause extreme difficulties for our customers and third-party vendors in accurately forecasting and planning future business activities. This unpredictability could cause our customers to reduce spending on our products, which would delay and lengthen sales cycles. Furthermore, during challenging economic times our customers may face challenges in gaining timely access to sufficient credit, which could impact their ability to make timely payments to us. These events, together with economic volatility that may face the broader economy and, in particular, the semiconductor and communications industries, may adversely affect, our business, particularly to the extent that consumers decrease their discretionary spending for devices deploying our products.

Our business, financial condition and results of operations could be adversely affected by the political and economic conditions of the countries in which we conduct business and other factors related to our international operations.

We sell our products throughout the world. Products shipped to Asia accounted for 93% of our net revenue in the year ended December 31, 2016. In addition, approximately 43% of our employees are located outside of the United States. All of our products are manufactured, assembled and tested in Asia, and all of our major distributors are located in Asia. Multiple factors relating to our international operations and to particular countries in which we operate could have a material adverse effect on our business, financial condition and results of operations. These factors include:

- changes in political, regulatory, legal or economic conditions;
- restrictive governmental actions, such as restrictions on the transfer or repatriation of funds and foreign investments and trade protection measures, including export duties and quotas and customs duties and tariffs;
- disruptions of capital and trading markets;
- changes in import or export licensing requirements;
- transportation delays;
- civil disturbances or political instability;
- geopolitical turmoil, including terrorism, war or political or military coups;
- public health emergencies;
- differing employment practices and labor standards;
- limitations on our ability under local laws to protect our intellectual property;
- local business and cultural factors that differ from our customary standards and practices;
- nationalization and expropriation;
- changes in tax laws;
- currency fluctuations relating to our international operating activities; and
- difficulty in obtaining distribution and support.

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In addition to a significant portion of our wafer supply coming from Taiwan, Singapore, China and Malaysia, substantially all of our products undergo packaging and final testing in Taiwan, Singapore, China, South Korea, and the Philippines. Any conflict or uncertainty in these countries, including due to natural disaster or public health or safety concerns, could have a material adverse effect on our business, financial condition and results of operations. In addition, if the government of any country in which our products are manufactured or sold sets technical standards for products manufactured in or imported into their country that are not widely shared, it may lead some of our customers to suspend imports of their products into that country, require manufacturers in that country to manufacture products with different technical standards and disrupt cross-border manufacturing relationships which, in each case, could have a material adverse effect on our business, financial condition and results of operations. We also are subject to risks associated with international political conflicts involving the U.S. government. For example, in 2008 we were instructed by the U.S. Department of Homeland Security to cease using Polar Star International Company Limited, a distributor based in Hong Kong, that delivered third-party products, to a political group that the U.S. government did not believe should have been provided with the products in question. As a result, we immediately ceased all business operations with that distributor. Similarly, we ceased business operations with entities affiliated with ZTE Corp. when the Bureau of Industry and Security at the U.S. Department of Commerce imposed an export licensing requirement, which was subsequently suspended through February 27, 2017. We cannot provide assurances that similar disruptions in the future of distribution arrangements or the imposition of governmental prohibitions on selling our products to particular customers will not adversely affect our revenues and operating results. Loss of a key distributor or customer under similar circumstances could have an adverse effect on our business, revenues and operating results.

If we suffer losses to our facilities or distribution system due to catastrophe, our operations could be seriously harmed.

Our facilities and distribution system, and those of our third-party contractors, are subject to risk of catastrophic loss due to fire, flood or other natural or man-made disasters. A number of our facilities and those of our contract manufacturers are located in areas with above average seismic activity. The foundries that manufacture all of our wafers are located in Taiwan, Singapore, Malaysia, Southern California and China, and all of the third-party contractors who assemble and test our products also are located in Asia. In addition, our headquarters are located in Southern California. The risk of an earthquake in the Pacific Rim region or Southern California is significant due to the proximity of major earthquake fault lines. For example, in 2002 and 2003, major earthquakes occurred in Taiwan. Any catastrophic loss to any of these facilities would likely disrupt our operations, delay production, shipments and revenue and result in significant expenses to repair or replace the facility.

Our business is subject to various governmental regulations, and compliance with these regulations may cause us to incur significant expenses. If we fail to maintain compliance with applicable regulations, we may be forced to recall products and cease their manufacture and distribution, and we could be subject to civil or criminal penalties.

Our business is subject to various international and U.S. laws and other legal requirements, including packaging, product content, labor, import/export control regulations, and the Foreign Corrupt Practices Act. These regulations are complex, change frequently and have generally become more stringent over time. We may be required to incur significant costs to comply with these regulations or to remedy violations. Any failure by us to comply with applicable government regulations could result in cessation of our operations or portions of our operations, product recalls or impositions of fines and restrictions on our ability to conduct our operations. In addition, because many of our products are regulated or sold into regulated industries, we must comply with additional regulations in marketing our products.

Our products and operations are also subject to the rules of industrial standards bodies, like the International Standards Organization, as well as regulation by other agencies, such as the U.S. Federal Communications Commission. If we fail to adequately address any of these rules or regulations, our business could be harmed.

For example, the SEC adopted a final rule to implement Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which requires new disclosures concerning the use of conflict minerals, generally tantalum, tin, gold, or tungsten that originated in the Democratic Republic of the Congo or an adjoining country. These disclosures are required whether or not these products containing conflict minerals are manufactured by us or third parties. Verifying the source of any conflict minerals in our products has created and will continue to create additional costs in order to comply with the new disclosure requirements and we may not be able to certify that the metals in our products are conflict free, which may create issues with our customers. In addition, the new rule may affect the pricing, sourcing and availability of minerals used in the manufacture of our products.

We must conform the manufacture and distribution of our semiconductors to various laws and adapt to regulatory requirements in all countries as these requirements change. If we fail to comply with these requirements in the manufacture or distribution of our products, we could be required to pay civil penalties, face criminal prosecution and, in some cases, be prohibited from distributing our products in commerce until the products or component substances are brought into compliance.

We may be subject to information technology failures, including data protection breaches and cyber-attacks, that could disrupt our operations, damage our reputation and adversely affect our business, operations, and financial results.

We rely on our information technology systems for the effective operation of our business and for the secure maintenance and storage of confidential data relating to our business and third party businesses. Although we have implemented security controls to protect our information technology systems, experienced programmers or hackers may be able to penetrate our security controls, and develop and deploy viruses, worms and other malicious software programs that compromise our confidential information or that of third parties and cause a disruption or failure of our information technology systems. Any such compromise of our information technology systems could result in the unauthorized publication of our confidential business or proprietary information, result in the unauthorized release of customer, supplier or employee data, result in a violation of privacy or other laws, expose us to a risk of litigation, or damage our reputation. The cost and operational consequences of implementing further data protection measures either as a response to specific breaches or as a result of evolving risks, could be significant. In addition, our inability to use or access our information systems at critical points in time could adversely affect the timely and efficient operation of our business. Any delayed sales, significant costs or lost customers resulting from these technology failures could adversely affect our business, operations and financial results.

Third parties with which we conduct business, such as foundries, assembly and test contractors, and distributors, have access to certain portions of our sensitive data. In the event that these third parties do not properly safeguard our data that they hold, security breaches could result and negatively impact our business, operations and financial results.

Investor confidence may be adversely impacted if we are unable to comply with Section 404 of the Sarbanes-Oxley Act of 2002, and as a result, our stock price could decline.

We are subject to rules adopted by the Securities Exchange Commission, or SEC, pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act, which require us to include in our Annual Report on Form 10-K our management's report on, and assessment of the effectiveness of, our internal controls over financial reporting.

If we fail to maintain the adequacy of our internal controls, there is a risk that we will not comply with all of the requirements imposed by Section 404. Moreover, effective internal controls, particularly those related to revenue recognition, are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. Any of these possible outcomes could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our consolidated financial statements and could result in investigations or sanctions by the SEC, the New York Stock Exchange, or NYSE, or other regulatory authorities or in stockholder litigation. Any of these factors ultimately could harm our business and could negatively impact the market price of our securities. Ineffective control over financial reporting could also cause investors to lose confidence in our reported financial information, which could adversely affect the trading price of our common stock.

Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives. However, our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected.

Our products must conform to industry standards in order to be accepted by end users in our markets.

Generally, our products comprise only a part of a communications device. All components of these devices must uniformly comply with industry standards in order to operate efficiently together. We depend on companies that provide other components of the devices to support prevailing industry standards. Many of these companies are significantly larger and more influential in driving industry standards than we are. Some industry standards may not be widely adopted or implemented uniformly, and competing standards may emerge that may be preferred by our customers or end users. If larger companies do not support the same industry standards that we do, or if competing standards emerge, market acceptance of our products could be adversely affected, which would harm our business.

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Products for communications applications are based on industry standards that are continually evolving. Our ability to compete in the future will depend on our ability to identify and ensure compliance with these evolving industry standards. The emergence of new industry standards could render our products incompatible with products developed by other suppliers. As a result, we could be required to invest significant time and effort and to incur significant expense to redesign our products to ensure compliance with relevant standards. If our products are not in compliance with prevailing industry standards for a significant period of time, we could miss opportunities to achieve crucial design wins. We may not be successful in developing or using new technologies or in developing new products or product enhancements that achieve market acceptance. Our pursuit of necessary technological advances may require substantial time and expense.

Risks Relating to Our Common Stock

The dual class structure of our common stock as contained in our charter documents will have the effect of allowing our founders, executive officers, employees and directors and their affiliates to limit your ability to influence corporate matters that you may consider unfavorable.

We sold Class A common stock in our initial public offering. Our founders, executive officers, directors and their affiliates and employees hold shares of our Class B common stock, which is not publicly traded. Until March 29, 2017, the dual class structure of our common stock will have the following effects with respect to the holders of our Class A common stock:

- allows the holders of our Class B common stock to have the sole right to elect two management directors to the Board of Directors;
- with respect to change of control matters, allows the holders of our Class B common stock to have ten votes per share compared to the holders of our Class A common stock who will have one vote per share on these matters; and
- with respect to the adoption of or amendments to our equity incentive plans, allows the holders of our Class B common stock to have ten votes per share compared to the holders of our Class A common stock who will have one vote per share on these matters, subject to certain limitations.

Thus, our dual class structure will limit your ability to influence corporate matters, including with respect to transactions involving a change of control, and, as a result, we may take actions that our stockholders do not view as beneficial, which may adversely affect the market price of our Class A common stock. In addition to the additional voting rights granted to holders of our Class B common stock, which is held principally by certain of our executive officers and founders, we have entered change of control agreements with our executive officers, which could have an adverse effect on a third party's willingness to consider acquiring us, either because it may be more difficult to retain key employees with change of control benefits or because of the incremental cost associated with these benefits.

The concentration of our capital stock ownership with our founders will limit your ability to influence corporate matters and their interests may differ from other stockholders.

As of December 31, 2016, our founders who are existing employees of MaxLinear, including our Chairman, President and Chief Executive Officer, Dr. Seendripu, together control approximately 10% of our outstanding capital stock. Until the elimination of our dual class stock on March 29, 2017, this will represent approximately 48% of the voting power of our outstanding capital stock with respect to change of control matters and the adoption of or amendment to our equity incentive plans. Dr. Seendripu and the other founders therefore have significant influence over our management and affairs and over all matters requiring stockholder approval, including the election of two Class B directors and significant corporate transactions, such as a merger or other sale of MaxLinear or its assets.

Our management team may use our available cash, cash equivalents, and liquid investment assets in ways with which you may not agree or in ways which may not yield a return.

We use our cash, cash equivalents, and liquid investment assets for general corporate purposes, including working capital. We may also use a portion of these assets to acquire complementary businesses, products, services or technologies. Our management has considerable discretion in the application of our cash, cash equivalents, and investment resources, and you will not have the opportunity to assess whether these liquid assets are being used in a manner that you deem best to maximize your return. We may use our available resources for corporate purposes that do not increase our operating results or market value. In addition, our cash, cash equivalents, and liquid investment resources may be placed in investments that do not produce significant income or that may lose value.

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Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us more difficult, limit attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

Provisions in our certificate of incorporation and bylaws, as amended and restated, may have the effect of delaying or preventing a change of control or changes in our management. These provisions provide for the following:

- authorize our Board of Directors to issue, without further action by the stockholders, up to 25,000,000 shares of undesignated preferred stock;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders can be called only by our Board of Directors, our Chairman of the Board of Directors, our President or by unanimous written consent of our directors appointed by the holders of Class B common stock (until the Class B common stock is eliminated);
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our Board of Directors;
- establish that our Board of Directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered terms;
- provide for a dual class common stock structure until March 29, 2017, which provides our founders, current investors, executives and employees with significant influence over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our Company or its assets;
- provide that our directors may be removed only for cause;
- provide that vacancies on our Board of Directors may be filled only by a majority of directors then in office, even though less than a quorum;
- specify that no stockholder is permitted to cumulate votes at any election of directors; and
- require supermajority votes of the holders of our common stock to amend specified provisions of our charter documents.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board of Directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any “interested” stockholder for a period of three years following the date on which the stockholder became an “interested” stockholder.

Our share price may be volatile as a result of limited trading volume and other factors.

Our shares of Class A common stock began trading on the New York Stock Exchange in March 2010. An active public market for our shares on the New York Stock Exchange may not be sustained. In particular, limited trading volumes and liquidity may limit the ability of stockholders to purchase or sell our common stock in the amounts and at the times they wish. Trading volume in our common stock tends to be modest relative to our total outstanding shares, and the price of our common stock may fluctuate substantially (particularly in percentage terms) without regard to news about us or general trends in the stock market. An inactive market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

In addition, the trading price of our common stock could become highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include those discussed in this “Risk Factors” section of this Annual Report on Form 10-K and others such as:

- actual or anticipated fluctuations in our financial condition and operating results;

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- overall conditions in the semiconductor market;
- addition or loss of significant customers;
- changes in laws or regulations applicable to our products;
- actual or anticipated changes in our growth rate relative to our competitors;
- announcements of technological innovations by us or our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- additions or departures of key personnel;
- competition from existing products or new products that may emerge;
- issuance of new or updated research or reports by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain intellectual property protection for our technologies;
- the recently completed acquisition of Entropic and the wireless infrastructure access and backhaul businesses may not be accretive and may cause dilution to our earnings per shares;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us or our stockholders;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares; and
- general economic and market conditions.

Furthermore, the stock markets recently have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, especially due to our dual-class voting structure, our share price and trading volume could decline.

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business, especially with respect to our unique dual-class voting structure as to the election of directors, change of control matters and matters related to our equity incentive plans. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our shares or change their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of our Company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

Future sales of our common stock in the public market could cause our share price to decline.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. As of December 31, 2016, we had 58.4 million shares of Class A common stock and 6.7 million shares of Class B common stock outstanding. On March 29, 2017, the then outstanding Class A and Class B common stock will convert on a one-for-one basis into a single class of common stock.

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All shares of common stock are freely tradable without restrictions or further registration under the Securities Act of 1933, as amended, or the Securities Act, except for any shares held by our affiliates as defined in Rule 144 under the Securities Act.

We have filed registration statements on Form S-8 under the Securities Act to register 22.1 million shares of our common stock for issuance under our 2010 Equity Incentive Plan and 2010 Employee Stock Purchase Plan in addition to 3.2 million awards that were assumed and remain outstanding in connection with the Entropic acquisition. These shares may be freely sold in the public market upon issuance and once vested, subject to other restrictions provided under the terms of the applicable plan and/or the option agreements entered into with option holder.

Our Executive Incentive Bonus Plan permits the settlement of awards under the plan in the form of shares of its common stock. We issued 0.2 million shares of our common stock for the 2014 performance period upon settlement of the bonus awards on May 14, 2015. We issued 0.3 million shares of our common stock for the January 1, 2015 to June 30, 2015 performance period upon settlement of the bonus awards on August 20, 2015. We issued 0.2 million shares of our common stock for the July 1, 2015 to December 31, 2015 performance period on May 13, 2016. We issued 0.2 million shares of our common stock for the January 1, 2016 to June 30, 2016 performance period on August 12, 2016. We expect to issue additional shares of common stock for second half of 2016 fiscal performance period in February 2017. These shares may be freely sold in the public market immediately following the issuance of such shares and the issuance of such shares may have an adverse effect on our share price once they are issued.

We do not intend to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our common stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our Board of Directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

Risks Relating to Our Recent Acquisitions

Actual financial and operating results could differ materially from any expectations or guidance provided by us concerning future results, including (without limitation) expectations or guidance with respect to the financial impact of any cost savings and other potential synergies resulting from our recent acquisitions.

We currently expect to continue realizing material cost savings and other synergies as a result of recent acquisitions, and as a result, we currently believe that these acquisitions will continue to be accretive to our earnings per share, excluding upfront non-recurring charges, transaction related expenses, and the amortization of purchased intangible assets. The expectations and guidance we have provided with respect to the potential financial impact of the acquisitions are subject to numerous assumptions, however, including assumptions derived from our diligence efforts concerning the status of and prospects for the acquired businesses, and assumptions relating to the near-term prospects for the semiconductor industry generally and the markets for the legacy acquired products in particular. Additional assumptions we have made relate to numerous matters, including (without limitation) the following:

- projections of future revenues in the legacy acquired businesses;
- the anticipated financial performance of legacy acquired products and products currently in development;
- anticipated cost savings and other synergies associated with the acquisitions, including potential revenue synergies;
- the amount of goodwill and intangibles that will result from the acquisitions;
- certain other purchase accounting adjustments that we have recorded in our financial statements in connection with the acquisitions;
- acquisition costs, including restructuring charges and transactions costs payable to our financial, legal, and accounting advisors; and
- our ability to maintain, develop, and deepen relationships with customers of the legacy acquired businesses.

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We cannot provide any assurances with respect to the accuracy of our assumptions, including our assumptions with respect to future revenues or revenue growth rates, if any, of the legacy acquired businesses, and we cannot provide assurances with respect to our ability to realize further cost savings. Risks and uncertainties that could cause our actual results to differ materially from currently anticipated results include, but are not limited to, risks relating to our ability to integrate the legacy acquired businesses successfully; currently unanticipated additional incremental costs that we may incur in connection with integrating the acquired companies; risks relating to our ability to continue to realize incremental revenues from the acquisitions in the amounts that we currently anticipate; risks relating to the willingness of legacy acquired customers and other partners to continue to conduct business with MaxLinear; and numerous risks and uncertainties that affect the semiconductor industry generally and the markets for our products and those of the legacy acquired businesses specifically. Any failure to integrate the legacy acquired businesses successfully and to continue to realize the financial benefits we currently anticipate from the acquisitions would have a material adverse impact on our future operating results and financial condition and could materially and adversely affect the trading price or trading volume of our common stock.

Failure to integrate our business and operations successfully with those of acquired businesses in the expected time-frame or otherwise may adversely affect our operating results and financial condition.

Our history of acquiring businesses is recent, and prior to our acquisition of Entropic, we had never pursued an acquisition of that size and complexity. We may complete larger-scale acquisitions in the future. The success of our recent and future acquisitions depends, in substantial part, on our ability to integrate acquired businesses and operations efficiently and successfully with those of MaxLinear and to realize fully the anticipated benefits and potential synergies from combining our companies, including, among others, cost savings from eliminating duplicative functions; operational efficiencies in our respective supply chains and in research and development investments; and revenue growth resulting from the addition of acquired product portfolios. If we are unable to achieve these objectives, the anticipated benefits and potential synergies from the acquisitions may not be realized fully, or may take longer to realize than expected. Any failure to timely realize these anticipated benefits would have a material adverse effect on our business, operating results, and financial condition.

We completed our recent acquisitions in April 2015, April 2016 and July 2016. We believe the integration process is substantially complete for our 2015 acquisition of Entropic and our 2016 wireless infrastructure business acquisitions. We have incurred material restructuring costs in recent periods, some of which included employees from acquired businesses. To the extent we acquire additional businesses in the future, we cannot ensure that integration objectives will not adversely affect our operating results. In connection with the integration process, we could experience the loss of key customers, decreases in revenues relative to current expectations and increases in operating costs, as well as the disruption of our ongoing businesses, any or all of which could limit our ability to achieve the anticipated benefits and potential synergies from the acquisitions and have a material adverse effect on our business, operating results, and financial condition.

Our business relationships, including customer relationships, and those of our acquired businesses may be subject to disruption due to uncertainty associated with the acquisitions.

In response to the completion of our recent acquisitions, customers, vendors, licensors, and other third parties with whom we do business or the acquired entities did business or otherwise have relationships may experience uncertainty associated with the acquisitions, and this uncertainty could materially affect their decisions with respect to existing or future business relationships with us. Moreover, with respect to Entropic's prior acquisition of certain television and set-top box assets from Trident Microsystems, Inc., or Trident, we were unable to conduct substantial diligence with respect to certain licenses and intellectual property rights because Entropic acquired these assets through Trident's bankruptcy proceedings. As a result, we are in many instances unable to evaluate the impact of the acquisition on certain assumed contract rights and obligations, including intellectual property rights.

These business relationships may be subject to disruption as customers and others may elect to delay or defer purchase or design-win decisions or switch to other suppliers due to the uncertainty about the direction of our offerings, any perceived unwillingness on our part to support existing legacy acquired products, or any general perceptions by customers or other third parties that impute operational or business challenges to us arising from the acquisitions. In addition, customers or other third parties may attempt to negotiate changes in existing business relationships, which may result in additional obligations imposed on us. These disruptions could have a material adverse effect on our business, operating results, and financial condition. Any loss of customers, customer products, design win opportunities, or other important strategic relationships could have a material adverse effect on our business, operating results, and financial condition and could have a material and adverse effect on the trading price or trading volume of our common stock.

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We have incurred and expect to continue to incur substantial expenses related to the operational integration of our recent acquisitions.

We have incurred and expect to continue to incur substantial expenses in connection with integrating the operations, technologies, and business systems of MaxLinear and acquired businesses. Business systems integration between the companies requires, and we expect it to continue to require into the foreseeable future, substantial management attention, including integration of information management, purchasing, accounting and finance, sales, and regulatory compliance functions. Numerous factors, many of which, are beyond our control, could affect the total cost or the timing of expected integration expenses. Moreover, many of the expenses that will be incurred are by their nature difficult to estimate accurately at the present time. These expenses could reduce the savings that we expect to achieve from the elimination of duplicative expenses and the realization of economies of scale and cost savings related to the integration of the businesses. These integration expenses have resulted in MaxLinear’s taking significant charges against earnings following the completion of the acquisitions.

We have recorded goodwill that could become impaired and adversely affect our future operating results.

The acquisitions of Entropic, the wireless infrastructure access business of Microsemi, and the wireless infrastructure backhaul business of Broadcom are accounted for under the acquisition method of accounting by MaxLinear in accordance with accounting principles generally accepted in the United States. Under the acquisition method of accounting, the assets and liabilities of acquired businesses are recorded, as of completion, at their respective fair values and added to our assets and liabilities. Our reported financial condition and results of operations after completion of the acquisition reflect acquired businesses' balances and results but are not restated retroactively to reflect the historical financial position or results of operations of acquired businesses for periods prior to the acquisition. As a result, comparisons of future results against prior period results will be more difficult for investors. Under the acquisition method of accounting, the total purchase price is allocated to tangible assets and liabilities and identifiable intangible assets of acquired businesses based on their fair values as of the date of completion of the acquisition. The excess of the purchase price over those fair values is recorded as goodwill. The acquisitions have resulted in the creation of goodwill based upon the application of the acquisition method of accounting. To the extent the value of goodwill or intangibles becomes impaired, we may be required to incur material charges relating to such impairment. We conduct our annual goodwill impairment analysis on October 31 each year, or more frequently if we believe indicators of impairment exist. In addition, there can be no guarantee that acquired intangible assets, particularly in-process research and development, will generate revenues or profits that we include in our forecast that is the basis for their fair values as of the acquisition date. Any such impairment charges relating to goodwill or other intangible assets could have a material impact on our operating results in future periods, and the announcement of a material impairment could have an adverse effect on the trading price and trading volume of our common stock. For example, in the year ended December 31, 2016, we recognized IPR&D impairment losses of $1.3 million related principally to acquired wireless infrastructure access assets, and in the year ended December 31, 2015, we recognized IPR&D impairment losses of $21.6 million related principally to acquired Entropic assets. As of December 31, 2016, our balance sheet reflected goodwill of $76.0 million and other intangible assets of $104.3 million, including IPR&D intangible assets of $22.4 million, and we could recognize impairment charges in the future.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our corporate headquarters occupy approximately 68,000 square feet in Carlsbad, California under a lease that expires in June 2022. A full range of business and engineering functions are represented at our corporate headquarters, including a laboratory for research and development and manufacturing operations. In addition to our principal office spaces in Carlsbad, we have leased facilities in Irvine, California; Bangalore, India; Singapore; Taiwan; Shenzhen, China; Burnaby, Canada; and in Herzliya, Israel.

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ITEM 3. LEGAL PROCEEDINGS

CrestaTech Litigation

On January 21, 2014, CrestaTech Technology Corporation, or CrestaTech, filed a complaint for patent infringement against us in the United States District Court of Delaware, or the District Court Litigation. In its complaint, CrestaTech alleges that we infringe U.S. Patent Nos. 7,075,585, or the '585 Patent and 7,265,792, or the '792 Patent. In addition to asking for compensatory damages, CrestaTech alleges willful infringement and seeks a permanent injunction. CrestaTech also names Sharp Corporation, Sharp Electronics Corp. and VIZIO, Inc. as defendants based upon their alleged use of our television tuners.

On January 28, 2014, CrestaTech filed a complaint with the U.S. International Trade Commission, or ITC, again naming, among others, us, Sharp, Sharp Electronics, and VIZIO, or the ITC Investigation. On May 16, 2014, the ITC granted CrestaTech’s motion to file an amended complaint adding six OEM Respondents, namely, SIO International, Inc., Hon Hai Precision Industry Co., Ltd., Wistron Corp., Wistron Infocomm Technology (America) Corp., Top Victory Investments Ltd. and TPV International (USA), Inc. which are collectively referred to with us, Sharp and VIZIO as the Company Respondents. CrestaTech’s ITC complaint alleged a violation of 19 U.S.C. § 1337 through the importation into the United States, the sale for importation, or the sale within the United States after importation of MaxLinear’s accused products that CrestaTech alleged infringe the same two patents asserted in the Delaware action. Through its ITC complaint, CrestaTech sought an exclusion order preventing entry into the United States of certain of our television tuners and televisions containing such tuners from Sharp, Sharp Electronics, and VIZIO. CrestaTech also sought a cease and desist order prohibiting the Company Respondents from engaging in the importation into, sale for importation into, the sale after importation of, or otherwise transferring within the United States certain of our television tuners or televisions containing such tuners.

On March 10, 2014, the court stayed the District Court Litigation pending resolution of the ITC Investigation.

On December 15, 2014, the ITC held a trial in the ITC Investigation. On February 27, 2015, the Administrative Law Judge, or the ALJ, issued a written Initial Determination, or ID, ruling that the Company Respondents do not violate Section 1337 in connection with CrestaTech’s asserted patents because CrestaTech failed to satisfy the economic prong of the domestic industry requirement pursuant to Section 1337(a)(2). In addition, the ID stated that certain of our television tuners and televisions incorporating those tuners manufactured and sold by certain customers infringe three claims of the ‘585 Patent, and these three claims were not determined to be invalid. On April 30, 2015, the ITC issued a notice indicating that it intended to review portions of the ID finding no violation of Section 1337, including the ID’s findings of infringement with respect to, and validity of, the ‘585 Patent, and the ID’s finding that CrestaTech failed to establish the existence of a domestic industry within the meaning of Section 1337.

The ITC has subsequently issued its opinion, which terminated its investigation. The opinion affirmed the findings of the ALJ that no violation of Section 1337 had occurred because CrestaTech had failed to establish the economic prong of the domestic industry requirement. The ITC also affirmed the ALJ's finding of infringement with respect to the three claims of the '585 Patent that were not held to be invalid.

On November 30, 2015, CrestaTech filed an appeal of the ITC decision with the United States Court of Appeals for the Federal Circuit, or the Federal Circuit. On March 7, 2016, CrestaTech voluntarily dismissed its appeal, resulting in a final determination of the ITC Investigation in our favor.

In addition, we have filed four petitions for inter partes review, or IPR, by the US Patent Office, two for each of the CrestaTech patents asserted against us. The Patent Trial and Appeal Board, or the PTAB, did not institute two of these IPRs as being redundant to IPRs filed by another party that were already underway for the same CrestaTech patent. The remaining two petitions were instituted or instituted-in-part and, together with the IPRs filed by third parties, there are currently six pending IPR proceedings involving the two CrestaTech patents asserted against us.

In October 2015, the PTAB issued final decisions in two of the six pending IPR proceedings (one for each of the two asserted patents), holding that all of the reviewed claims are unpatentable. Included in these decisions was one of the three claims of the ‘585 Patent mentioned above in connection with the ITC’s final decision. CrestaTech appealed the PTAB’s decisions at the Federal Circuit. On November 8, 2016, the Federal Circuit issued an opinion affirming the PTAB’s finding of unpatentability.

In August 2016, the PTAB issued final written decisions in the remaining four pending IPR proceedings (two for each of the asserted patents), holding that many of the reviewed claims - including the two remaining claims of the ‘585 Patent which the ITC held were infringed - are unpatentable. As a result of these IPR decisions, all 13 claims that CrestaTech asserted against us in the ITC Investigation have been found to be unpatentable by the PTAB. The parties have filed notices to appeal the two

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decisions related to the ‘585 Patent. Opening briefs are currently due in late January - early February 2017. CrestaTech, however, did not appeal the PTAB’s rulings related to the ‘792 Patent.

On March 18, 2016, CrestaTech filed a petition for Chapter 7 bankruptcy in the Northern District of California. As a result of this proceeding, all rights in the CrestaTech asserted patents, including the right to control the pending litigation, were assigned to CF Crespe LLC, or CF Crespe. CF Crespe is now the named party in the pending IPRs, the Federal Circuit appeal and District Court Litigation. CF Crespe has not sought to lift the stay in the District Court Litigation given the resolution of the ITC Investigation.

We cannot predict the outcome of any appeal by CF Crespe, CrestaTech, the District Court Litigation, or the IPRs. Any adverse determination in the District Court Litigation could have a material adverse effect on our business and operating results.

Trango Systems, Inc. Litigation

On or about August 2, 2016, Trango Systems, Inc., or Trango, filed a complaint in the Superior Court of California, County of San Diego, Central Division, against defendants Broadcom Corporation, Inc., or Broadcom, and us, collectively, Defendants. On or about December 6, 2016, Trango filed its second amended complaint. Trango is a purchaser that alleges various fraud, breach of contract, and interference with economic relations claims in connection with the discontinuance of a chip line we recently acquired from Broadcom. Trango seeks unspecified general and special damages, pre-judgment interest, expenses and costs, statutory penalties, attorneys’ fees, punitive damages, and unspecified injunctive and equitable relief. We intend to vigorously defend against the lawsuit. On January 11, 2017, we filed our demurrer to each cause of action in the second amended complaint.

We cannot predict the outcome of the Trango Systems, Inc. litigation. Any adverse determination in the Trango Systems, Inc. litigation could have a material adverse effect on our business and operating results.

Other Matters

In addition, from time to time, we are subject to threats of litigation or actual litigation in the ordinary course of business, some of which may be material. Other than the CrestaTech and Trango litigation described above, we believe that there are no other currently pending litigation matters that, if determined adversely by us, would have a material effect on our business or that would not be covered by our existing liability insurance.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II — FINANCIAL INFORMATION

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information and Holders

In March 2010, we completed the initial public offering of our Class A common stock. Our Class A common stock is traded on the New York Stock Exchange, or the NYSE, under the symbol MXL. The following table sets forth, for the periods indicated, the high and low sale prices for our Class A common stock as reported by the NYSE:

	Year Ended December 31, 2016	
	High	Low
First Quarter (January 1, 2016 to March 31, 2016)	$18.62	$13.49
Second Quarter (April 1, 2016 to June 30, 2016)	$20.91	$15.86
Third Quarter (July 1, 2016 to September 30, 2016)	$22.36	$17.30
Fourth Quarter (October 1, 2016 to December 31, 2016)	$22.70	$18.37

	Year Ended December 31, 2015	
	High	Low
First Quarter (January 1, 2015 to March 31, 2015)	$9.21	$7.15
Second Quarter (April 1, 2015 to June 30, 2015)	$13.33	$8.06
Third Quarter (July 1, 2015 to September 30, 2015)	$12.96	$9.00
Fourth Quarter (October 1, 2015 to December 31, 2015)	$17.75	$11.76

On December 31, 2016, the last reported sales price of our common stock was $21.80 and, according to our transfer agent, as of February 2, 2017, there were 53 record holders of our Class A common stock and 48 record holders of our Class B common stock. We believe we have approximately 25,000 beneficial holders of our Class A common stock. Our Class B common stock is not publicly traded. Each share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock and in most instances automatically converts upon sale or other transfer. In addition, on March 29, 2017, our Class A and Class B common stock will be converted on a one-for-one basis into a single class of common stock.

Dividend Policy

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our Board of Directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our Board of Directors may deem relevant.

Stock Performance Graph

Notwithstanding any statement to the contrary in any of our previous or future filings with the SEC, the following information relating to the price performance of our common stock shall not be deemed "filed" with the SEC or "Soliciting Material" under the Exchange Act, or subject to Regulation 14A or 14C, or to liabilities of Section 18 of the Exchange Act except to the extent we specifically request that such information be treated as soliciting material or to the extent we specifically incorporate this information by reference.

The graph below compares the cumulative total stockholder return on our Class A common stock with the cumulative total return on The NYSE Composite Index and The Philadelphia Semiconductor Index. The period shown commences on December 31, 2011 and ends on December 31, 2016, the end of our last fiscal year. The graph assumes an investment of $100 on December 31, 2011, and the reinvestment of any dividends.

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The comparisons in the graph below are required by the Securities and Exchange Commission and are not intended to forecast or be indicative of possible future performance of our common stock.

Recent Sales of Unregistered Securities

In the year ended December 31, 2016, we issued an aggregate of 0.2 million shares of our Class B common stock to certain employees upon the exercise of options awarded under our 2004 Stock Plan. We received aggregate proceeds of approximately $0.4 million in the year ended December 31, 2016 as a result of the exercise of these options. We believe these transactions were exempt from the registration requirements of the Securities Act in reliance on Rule 701 thereunder as transactions pursuant to compensatory benefit plans and contracts relating to compensation as provided under Rule 701. As of December 31, 2016, options to purchase an aggregate of 1.2 million shares of our Class B common stock remain outstanding. All issuances of shares of our Class B common stock pursuant to the exercise of these options will be made in reliance on Rule 701. All option grants made under the 2004 Stock Plan were made prior to the effectiveness of our initial public offering. No further option grants will be made under our 2004 Stock Plan.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering.

Each share of our Class B common stock is convertible at any time at the option of the holder into one share of our Class A common stock. In addition, each share of our Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, except for certain transfers described in our certificate of incorporation.

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ITEM 6. SELECTED FINANCIAL DATA

We have derived the selected consolidated statement of operations data for the years ended December 31, 2016, 2015 and 2014 and selected consolidated balance sheet data as of December 31, 2016 and 2015 from our consolidated financial statements and related Notes included elsewhere in this report. We have derived the consolidated statement of operations data for the years ended December 31, 2013 and 2012 and the consolidated balance sheet data as of December 31, 2014, 2013 and 2012 from our consolidated financial statements not included in this report. Our historical results are not necessarily indicative of the results to be expected for any future period. The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this report.

	Years Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands, except per share amounts)				
Consolidated Statement of Operations Data:					
Net revenue	$387,832	$300,360	$133,112	$119,646	$97,728
Cost of net revenue	157,842	144,937	51,154	46,683	37,082
Gross profit	229,990	155,423	81,958	72,963	60,646
Operating expenses:					
Research and development	97,745	85,405	56,625	53,132	46,458
Selling, general and administrative	64,454	77,981	34,191	32,181	27,254
IPR&D impairment losses	1,300	21,600	—	—	—
Restructuring charges	3,432	14,086	—	—	—
Total operating expenses	166,931	199,072	90,816	85,313	73,712
Income (loss) from operations	63,059	(43,649)	(8,858)	(12,350)	(13,066)
Interest income	572	275	236	222	282
Other income (expense), net	59	468	(123)	(203)	(127)
Income (loss) before income taxes	63,690	(42,906)	(8,745)	(12,331)	(12,911)
Provision (benefit) for income taxes	2,398	(575)	(1,704)	402	341
Net income (loss)	$61,292	$(42,331)	$(7,041)	$(12,733)	$(13,252)
Net income (loss) per share:					
Basic	$0.96	$(0.79)	$(0.19)	$(0.37)	$(0.40)
Diluted	$0.91	$(0.79)	$(0.19)	$(0.37)	$(0.40)
Shares used to compute net income (loss) per share:					
Basic	63,781	53,378	36,472	34,012	33,198
Diluted	67,653	53,378	36,472	34,012	33,198

	As of December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and short- and long-term investments, available-for-sale	$136,805	$130,498	$79,351	$86,354	$77,256
Working capital	159,500	134,170	67,668	56,558	68,450
Total assets	422,652	334,505	135,711	124,929	110,597
Total stockholders' equity	352,424	262,924	99,102	86,674	80,233

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

The following discussion and analysis of the financial condition and results of our operations should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled “Risk Factors” included elsewhere in this report.

Overview

We are a provider of radio frequency, or RF, and mixed-signal integrated circuits for cable and satellite broadband communications and the connected home, and wired and wireless infrastructure markets. Our high performance RF receiver products capture and process digital and analog broadband signals to be decoded for various applications. These products include both RF receivers and RF receiver systems-on-chip, or SoCs, which incorporate our highly integrated radio system architecture and the functionality necessary to receive and demodulate broadband signals, and physical medium devices that provide a constant current source, current-to-voltage regulation, and data alignment and retiming functionality in optical interconnect applications. Through our acquisition of Entropic Communications, Inc., or Entropic, in April of 2015, we provide semiconductor solutions for the connected home, ranging from MoCA® (Multimedia over Coax Alliance) solutions that transform how traditional HDTV broadcast and Internet Protocol, or IP, based streaming video content is seamlessly, reliably, and securely delivered, processed, and distributed into and throughout the home. Through our acquisition of the Microsemi wireless infrastructure access business in April of 2016, we provide integrated circuits for wireless infrastructure markets, including wideband RF transceivers and synthesizers for 3G, 4G, and future 5G cellular base station and remote radio head (RRH) unit platforms. Through our recently closed acquisition of the Broadcom wireless infrastructure backhaul business in July of 2016, we also provide modem and RF transceiver solutions into cellular infrastructure backhaul applications.

Our net revenue has grown from approximately $0.6 million in fiscal 2006 to $387.8 million in fiscal 2016. In fiscal 2016, our net revenue was derived primarily from sales of RF receivers and RF receiver systems-on-chip and MoCA connectivity solutions into operator voice and data modems and gateways and global analog and digital RF receiver products for analog and digital television applications. These analog and digital television applications include Direct Broadcast Satellite outdoor unit, or DBS ODU, solutions, which consist of our translation switch, or BTS, and channel stacking switch, or CSS, products. These products simplify the installation required to support simultaneous reception of multiple channels from multiple satellites over a single cable. Our ability to achieve revenue growth in the future will depend, among other factors, on our ability to further penetrate existing markets; our ability to expand our target addressable markets by developing new and innovative products; and our ability to obtain design wins with device manufacturers, in particular manufacturers of set-top boxes, data modems, and gateways for the broadband service provider and Pay-TV industries, manufacturers selling into the Cable infrastructure market, and manufacturers of optical module and telecommunications infrastructure equipment.

Products shipped to Asia accounted for 93%, 91% and 94% of net revenue during the years ended December 31, 2016, 2015 and 2014, respectively. Although a large percentage of our products is shipped to Asia, we believe that a significant number of the systems designed by these customers and incorporating our semiconductor products are then sold outside Asia. For example, we believe revenue generated from sales of our digital terrestrial set-top box products during the years ended December 31, 2016, 2015 and 2014 related principally to sales to Asian set-top box manufacturers delivering products into Europe, Middle East, and Africa, or EMEA markets. Similarly, revenue generated from sales of our cable modem products during the years ended December 31, 2016, 2015 and 2014 related principally to sales to Asian ODMs and contract manufacturers delivering products into European and North American markets. To date, most of our sales have been denominated in United States dollars. There is a growing portion of our business, related specifically to our high-speed optical interconnect products, that are shipped to, and are ultimately consumed in Asian markets, with the majority of these products being purchased by end customers in China.

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A significant portion of our net revenue has historically been generated by a limited number of customers. In the year ended December 31, 2016, two of our customers, Arris and Technicolor (which includes Cisco's former connected devices business), accounted for 37% of our net revenue, and our ten largest customers collectively accounted for 74% of our net revenue. Sales to Arris as a percentage of revenue include sales to Pace, which was acquired by Arris in January 2016, for the year ended December 31, 2016. In the year ended December 31, 2015, two of our customers, Arris and Technicolor (which includes Cisco's former connected devices business), accounted for 41% of our net revenue, and our ten largest customers collectively accounted for 76% of our net revenue. In November 2015, Technicolor completed its purchase of Cisco’s connected devices business. For the year ended December 31, 2015, the revenue percentage did not include the 1% revenue percentage for Technicolor. In the year ended December 31, 2014, one of our customers, Arris, accounted for 31% of our net revenue, and our ten largest customers collectively accounted for 67% of our net revenue. For the year ended December 31, 2014, sales to Arris as a percentage of revenue include sales to Motorola Home, which was acquired by Arris in April 2013. For certain customers, we sell multiple products into disparate end user applications such as cable modems and both cable and satellite cable set-top boxes and broadband gateways.

Our business depends on winning competitive bid selection processes, known as design wins, to develop semiconductors for use in our customers’ products. These selection processes are typically lengthy, and as a result, our sales cycles will vary based on the specific market served, whether the design win is with an existing or a new customer and whether our product being designed in our customer’s device is a first generation or subsequent generation product. Our customers’ products can be complex and, if our engagement results in a design win, can require significant time to define, design and result in volume production. Because the sales cycle for our products is long, we can incur significant design and development expenditures in circumstances where we do not ultimately recognize any revenue. We do not have any long-term purchase commitments with any of our customers, all of whom purchase our products on a purchase order basis. Once one of our products is incorporated into a customer’s design, however, we believe that our product is likely to remain a component of the customer’s product for its life cycle because of the time and expense associated with redesigning the product or substituting an alternative chip. Product life cycles in our target markets will vary by application. For example, in the hybrid television market, a design-in can have a product life cycle of 9 to 18 months. In the terrestrial retail digital set-top box market, a design-in can have a product life cycle of 18 to 24 months. In the cable operator modem and gateway sectors, a design-in can have a product life cycle of 24 to 48 months. In the satellite operator gateway and DBS ODU sectors, a design-in can have a product life cycle of 24 to 60 months and beyond.

On April 30, 2015, the Company completed its acquisition of Entropic. Pursuant to the terms of the merger agreement or merger agreements dated as of February 3, 2015, by and among MaxLinear, Entropic, and two wholly-owned subsidiaries of the Company, all of the Entropic outstanding shares were converted into the right to receive consideration consisting of cash and shares of our Class A common stock. We paid an aggregate of $111.1 million in cash and issued an aggregate of 20.4 million shares of our Class A common stock to the stockholders of Entropic. In addition, we assumed all outstanding Entropic stock options and unvested restricted stock units that were held by continuing service providers (as defined in the merger agreement). The Company used Entropic’s cash and cash equivalents to fund a significant portion of the cash portion of the merger consideration and, to a lesser extent, our own cash and cash equivalents.

Recent Developments

On April 28, 2016, we entered into an asset purchase agreement with Microsemi Storage Solutions, Inc., formerly known as PMC-Sierra, Inc., or Microsemi, and consummated the transactions contemplated by the asset purchase agreement. We paid cash consideration of $21.0 million for the purchase of certain wireless access assets of Microsemi's wireless infrastructure access business, and assumed certain specified liabilities. The assets acquired include, among other things, radio frequency and analog/mixed signal patents and other intellectual property, in-production and next-generation RF transceiver designs, a workforce-in-place, and other intangible assets, as well as tangible assets that include but are not limited to production masks and other production related assets, inventory, and other property, plant, and equipment. The liabilities assumed include, among other things, product warranty obligations and accrued vacation and severance obligations for employees of the wireless infrastructure access business that were rehired by the Company.

On May 9, 2016, we entered into a definitive agreement to purchase certain assets and assume certain liabilities of the wireless infrastructure backhaul business of Broadcom Corporation, or Broadcom. On July 1, 2016, we consummated the transactions contemplated by the purchase agreement and paid aggregate cash consideration of $80.0 million and hired certain employees of the wireless infrastructure backhaul business. The assets acquired include, among other things, digital baseband, radio frequency, or RF, and analog/mixed signal patents and other intellectual property, in-production and next-generation digital baseband and RF transceiver integrated circuit and reference platform designs, a workforce-in-place, and other intangible assets, as well as tangible assets that include but are not limited to production masks and other production related assets, inventory, and other property and equipment. The liabilities assumed include, among other things, product warranty obligations, liabilities for technologies acquired, and a payable to Broadcom as reimbursement of costs associated with the termination of those employees of the wireless infrastructure backhaul business who were not hired by MaxLinear upon the closing of the acquisition. For more information, please refer to Note 3 of our consolidated financial statements.

The acquired assets and liabilities, together with the rehired employees for each of these acquisitions, represent businesses as defined in ASC 805, Business Combinations. We have integrated the acquired assets and rehired employees into our existing business.

On March 29, 2017, each share of our then outstanding Class A common stock and Class B common stock will convert automatically into a single class of common stock pursuant to the terms of our Amended and Restated Certificate of Incorporation. Holders of our Class A common stock are entitled to one vote per share and holders of Class B common stock are entitled to ten votes per share with respect to transactions that would result in a change of control of the Company or that relate to our equity incentive plans. In addition, holders of Class B common stock have the exclusive right to elect two members of our Board of Directors, each referred to as a Class B Director. Following the conversion, each share of common stock will be entitled to one vote per share and otherwise have the same designations, rights, powers and preferences as the Class A common stock prior to the conversion. In addition, holders of the common stock will vote as a single class of stock on any matter that is submitted to a vote of stockholders.

Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations is based upon our financial statements which are prepared in accordance with accounting principles that are generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, related disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. We continually evaluate our estimates and judgments, the most critical of which are those related to revenue recognition, allowance for doubtful accounts, inventory valuation, income taxes and stock-based compensation. We base our estimates and judgments on historical experience and other factors that we believe to be reasonable under the circumstances. Materially different results can occur as circumstances change and additional information becomes known.

We believe that the following accounting policies involve a greater degree of judgment and complexity than our other accounting policies. Accordingly, these are the policies we believe are the most critical to understanding and evaluating our consolidated financial condition and results of operations.

Revenue Recognition

Revenue is generated from sales of our integrated circuits. We recognize revenue when all of the following criteria are met: 1) there is persuasive evidence that an arrangement exists, 2) delivery of goods has occurred, 3) the sales price is fixed or determinable and 4) collectability is reasonably assured. Title to product transfers to customers either when it is shipped to or received by the customer, based on the terms of the specific agreement with the customer.

Revenue is recorded based on the facts at the time of sale. Transactions for which we cannot reliably estimate the amount that will ultimately be collected at the time the product has shipped and title has transferred to the customer are deferred until the amount that is probable of collection can be determined. Items that are considered when determining the amounts that will be ultimately collected are a customer's overall creditworthiness and payment history, customer rights to return unsold product, customer rights to price protection, customer payment terms conditioned on sale or use of product by the customer, or extended payment terms granted to a customer.

A portion of our revenues are generated from sales made through distributors under agreements allowing for pricing credits and/or stock rotation rights of return. Revenues from sales through our distributors accounted for 19%, 13% and 28% of net revenue during the years ended December 31, 2016, 2015 and 2014, respectively. Pricing credits to our distributors may result from our price protection and unit rebate provisions, among other factors. These pricing credits and/or stock rotation rights prevent us from being able to reliably estimate the final sales price of the inventory sold and the amount of inventory that could be returned pursuant to these agreements. As a result, for sales through distributors, we have determined that it does not meet all of the required revenue recognition criteria at the time we deliver our products to distributors as the final sales price is not fixed or determinable.

For these distributor transactions, revenue is not recognized until product is shipped to the end customer and the amount that will ultimately be collected is fixed or determinable. Upon shipment of product to these distributors, title to the inventory transfers to the distributor and the distributor is invoiced, generally with 30 to 60 day terms. On shipments to our distributors where revenue is not recognized, we record a trade receivable for the selling price as there is a legally enforceable right to payment, relieving the inventory for the carrying value of goods shipped since legal title has passed to the distributor, and record the corresponding gross profit in our consolidated balance sheet as a component of deferred revenue and deferred profit,

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representing the difference between the receivable recorded and the cost of inventory shipped. Future pricing credits and/or stock rotation rights from our distributors may result in the realization of a different amount of profit included in our future consolidated statements of operations than the amount recorded as deferred profit in our consolidated balance sheets.

We record reductions in revenue for estimated pricing adjustments related to price protection agreements with our end customers in the same period that the related revenue is recorded. Price protection pricing adjustments are recorded at the time of sale as a reduction to revenue and an increase in our accrued liabilities. The amount of these reductions is based on specific criteria included in the agreements and other factors known at the time. We accrue 100% of potential price protection adjustments at the time of sale and do not apply a breakage factor. We de-recognize the accrual for unclaimed price protection amounts as specific programs contractually end or when we believe unclaimed amounts are no longer subject to payment and will not be paid. See Note 7 for a summary of our price protection activity.

Allowance for Doubtful Accounts

We perform ongoing credit evaluations of our customers and assess each customers' credit worthiness. We monitor collections and payments from our customers and maintain an allowance for doubtful accounts based upon our historical experience, our anticipation of uncollectible accounts receivable and any specific customer collection issues that we have identified. While our credit losses have historically been insignificant, we may experience higher credit loss rates in the future than we have in the past. Our receivables are concentrated in relatively few customers. Therefore, a significant change in the liquidity or financial position of any one significant customer could make collection of our accounts receivable more difficult, require us to increase our allowance for doubtful accounts and negatively affect our working capital.

Inventory Valuation

We assess the recoverability of our inventory based on assumptions about demand and market conditions. Forecasted demand is determined based on historical sales and expected future sales. Inventory is stated at the lower of cost or market. Cost approximates actual cost on a first-in, first-out basis and market reflects current replacement cost (e.g. net replacement value) which cannot exceed net realizable value or fall below net realizable value less an allowance for an approximately normal profit margin. We reduce our inventory to its lower of cost or market on a part-by-part basis to account for its obsolescence or lack of marketability. Reductions are calculated as the difference between the cost of inventory and its market value based upon assumptions about future demand and market conditions. Once established, these adjustments are considered permanent and are not revised until the related inventory is sold or disposed of. If actual market conditions are less favorable than those projected by management, additional inventory write-downs may be required that may adversely affect our operating results. If actual market conditions are more favorable, we may have higher gross profits when products are sold.

Production Masks

Production masks with alternative future uses or discernible future benefits are capitalized and amortized over their estimated useful life of two years. To determine if the production mask has alternative future uses or benefits, we evaluate risks associated with developing new technologies and capabilities, and the related risks associated with entering new markets. Production masks that do not meet the criteria for capitalization are expensed as research and development costs.

Business Combinations

We apply the provisions of ASC 805, Business Combinations, in the accounting for our acquisitions. ASC 805 requires us to recognize separately from goodwill the assets acquired and the liabilities assumed, at the acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While we use our best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations.

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Costs to exit or restructure certain activities of an acquired company or our internal operations are accounted for as termination and exit costs pursuant to ASC 420, Exit or Disposal Cost Obligations, and are accounted for separately from the business combination. A liability for costs associated with an exit or disposal activity is recognized and measured at its fair value in the consolidated statement of operations in the period in which the liability is incurred. When estimating the fair value of facility restructuring activities, assumptions are applied regarding estimated sub-lease payments to be received, which can differ materially from actual results. This may require us to revise our initial estimates which may materially affect the results of operations and financial position in the period the revision is made.

For a given acquisition, we may identify certain pre-acquisition contingencies as of the acquisition date and may extend our review and evaluation of these pre-acquisition contingencies throughout the measurement period in order to obtain sufficient information to assess whether we include these contingencies as a part of the fair value estimates of assets acquired and liabilities assumed and, if so, to determine their estimated amounts.

If we cannot reasonably determine the fair value of a pre-acquisition contingency (non-income tax related) by the end of the measurement period, which is generally the case given the nature of such matters, we will recognize an asset or a liability for such pre-acquisition contingency if (i) it is probable that an asset existed or a liability had been incurred at the acquisition date and (ii) the amount of the asset or liability can be reasonably estimated. Subsequent to the measurement period, changes in estimates of such contingencies will affect earnings and could have a material effect on results of operations and financial position.

In addition, uncertain tax positions and tax related valuation allowances assumed in connection with a business combination are initially estimated as of the acquisition date. We reevaluate these items quarterly based upon facts and circumstances that existed as of the acquisition date with any adjustments to the preliminary estimates being recorded to goodwill if identified within the measurement period. Subsequent to the measurement period or final determination of the tax allowance’s or contingency’s estimated value, whichever comes first, changes to these uncertain tax positions and tax related valuation allowances will affect the provision for income taxes in the consolidated statement of operations and could have a material impact on the results of operations and financial position.

Goodwill and Intangible Assets

Goodwill is recorded as the difference, if any, between the aggregate consideration paid for an acquisition and the fair value of the acquired net tangible and intangible assets. Intangible assets represent purchased intangible assets including developed technology and in-process research and development, or IPR&D, and technologies acquired or licensed from other companies, customer relationships, backlog and tradenames. Purchased intangible assets with definitive lives are capitalized and amortized over their estimated useful life. Technologies acquired or licensed from other companies, customer relationships, backlog and tradenames are capitalized and amortized over the greater of the terms of the agreement, or estimated useful life. We capitalize IPR&D projects acquired as part of a business combination. On completion of each project, IPR&D assets are reclassified to developed technology and amortized over their estimated useful lives.

Impairment of Goodwill and Long-Lived Assets

Goodwill is the excess of the purchase price over the fair value of identifiable net assets acquired in business combinations accounted for under the acquisition method. Goodwill is not amortized but is tested for impairment using a qualitative assessment, and subsequently the two-step method as needed. This involves comparing the fair value of each reporting unit, which we have determined to be the entity itself, with its carrying amount, including goodwill. If the fair value of a reporting unit exceeds the carrying amount, the goodwill of the reporting unit is considered not impaired and the second step of the impairment test is unnecessary. If the carrying amount of a reporting unit exceeds its fair value, the second step of the impairment test is performed to measure the amount of impairment loss, if any. We test by reporting unit, goodwill and other indefinite-lived intangible assets for impairment at October 31 each year or more frequently if we believe indicators of impairment exist.

During development, IPR&D is not subject to amortization and is tested for impairment annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. We review indefinite-lived intangible assets each year for impairment using a qualitative assessment, followed by a quantitative assessment, as needed, each

year as of October 31, the date of our annual goodwill impairment review, or whenever events or changes in circumstances indicate the carrying value may not be recoverable. Recoverability of indefinite-lived intangible assets is measured by comparing the carrying amount of the asset to its fair value. Once an IPR&D project is complete, it becomes a finite-lived intangible asset and is evaluated for impairment in accordance with our policy for long-lived assets.
We regularly review the carrying amount of our long-lived assets, as well as the useful lives, to determine whether indicators of impairment may exist which warrant adjustments to carrying values or estimated useful lives. An impairment loss

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would be recognized when the sum of the expected future undiscounted net cash flows is less than the carrying amount of the asset. Should impairment exist, the impairment loss would be measured based on the excess of the carrying amount of the asset over the asset's fair value.

Income Taxes

We provide for income taxes utilizing the asset and liability approach of accounting for income taxes. Under this approach, deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid. Deferred taxes are presented net as noncurrent. The provision for income taxes generally represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Deferred taxes result from the differences between the financial and tax bases of our assets and liabilities and are adjusted for changes in tax rates and tax laws when changes are enacted. Valuation allowances are recorded to reduce deferred tax assets when a judgment is made that is considered more likely than not that a tax benefit will not be realized. A decision to record a valuation allowance results in an increase in income tax expense or a decrease in income tax benefit. If the valuation allowance is released in a future period, income tax expense will be reduced accordingly.

The calculation of tax liabilities involves dealing with uncertainties in the application of complex global tax regulations. The impact of an uncertain income tax position is recognized at the largest amount that is "more likely than not" to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained. If the estimate of tax liabilities proves to be less than the ultimate assessment, a further charge to expense would result.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We continue to assess the need for a valuation allowance on the deferred tax asset by evaluating both positive and negative evidence that may exist. Any adjustment to the net deferred tax asset valuation allowance would be recorded in the income statement for the period that the adjustment is determined to be required.

Stock-Based Compensation

We measure the cost of employee services received in exchange for equity incentive awards, including stock options, employee stock purchase rights, restricted stock units and restricted stock awards based on the grant date fair value of the award. We use the Black-Scholes valuation model to calculate the fair value of stock options and employee stock purchase rights granted to employees. We calculate the fair value of restricted stock units and restricted stock awards based on the fair market value of our Class A common stock on the grant date. Stock-based compensation expense is recognized over the period during which the employee is required to provide services in exchange for the award, which is usually the vesting period. We recognize compensation expense over the vesting period using the straight-line method and classify these amounts in the statements of operations based on the department to which the related employee reports. We calculate the weighted-average expected life of options using the simplified method as prescribed by guidance provided by the Securities and Exchange Commission. This decision was based on the lack of historical data due to our limited number of stock option exercises under the 2010 Equity Incentive Plan. We will continue to assess the appropriateness of the use of the simplified method as we develop a history of option exercises.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued new accounting guidance related to revenue recognition. This new standard will replace all current U.S. GAAP guidance on this topic and eliminate all industry-specific guidance. The new revenue recognition standard provides a unified model to determine when and how revenue is recognized. The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. This guidance will be effective for us beginning in the first quarter of fiscal year 2018 and can be applied either retrospectively to each period presented or as a cumulative-effect adjustment as of the date of adoption. Adoption of the amendments in this guidance is expected to accelerate the timing of our revenue recognition on products sold via distributors which will change from the sell-through method to the sell-in method. We currently have no plans to alter our selling practices or terms of sales through distributors in anticipation of adoption of the amendments in this guidance. We have performed a preliminary assessment of the impact of adopting this new accounting standard on our consolidated financial position and results of operations and believe the change would not have a material impact on our revenues for the year ending December 31, 2018 and comparative periods expected to be presented, based on the current volume and amount of distributor transactions. We plan to apply the guidance prospectively with an adjustment to retained earnings for the cumulative effect of adoption.

In July 2015, the FASB issued ASU No. 2015-11, Simplifying the Measurement of Inventory, which requires inventory to be subsequently measured using the lower of cost and net realizable value, and thereby eliminating the market value approach. The FASB has defined net realizable value to be the “estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation.” ASU 2015-11 is effective for us beginning in the first quarter of fiscal year 2017 and is applied prospectively. The adoption of the amendments in this update are not expected to have a material impact on our consolidated financial position and results of operations.

In September 2015, the FASB issued ASU No. 2015-16, Business Combinations: Simplifying the Accounting for Measurement-Period Adjustments. To simplify the accounting for adjustments made to provisional amounts recognized in a business combination, the amendments in this update eliminate the requirement to retrospectively account for those adjustments and to revise comparative information for prior periods presented as a result of changes made to provisional amounts. Instead, those adjustments are recognized in the reporting period that the adjustments are determined. Those adjustments are required when new information is obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts initially recognized or would have resulted in the recognition of additional assets or liabilities. The amendments in this update also require an entity to present separately on the face of the income statement or disclose in the notes the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. The amendments in this update were effective for us beginning in the first quarter of fiscal year 2016, and were applied prospectively. The adoption of ASU No. 2015-16 in 2016 did not have a material impact on our consolidated financial position and results of operations.

In January 2016, the FASB issued ASU No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities. The amendments in this update include a requirement to measure equity investments (except equity method investments) at fair value with changes in fair value recognized in net income; previously changes in fair value were recognized in other comprehensive income. The amendments in this update are effective for us beginning in the first quarter of fiscal year 2018. The adoption of the amendments in this update are not expected to have a material impact on our consolidated financial position and results of operations.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). The amendments in this update require a lessee to recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term for all leases with terms greater than twelve months. For leases less than twelve months, an entity is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expense for such leases generally on a straight-line basis over the lease term. The amendments in this update are effective for us for fiscal years beginning with fiscal year 2019, including interim periods within those years, with early adoption permitted. We are currently in the process of evaluating the impact of adoption of the amendments in this update on our consolidated financial position and results of operations; however, adoption of the amendments in this update are expected to be material for most entities, including us, that have material leases greater than twelve months.

In March 2016, the FASB issued ASU No. 2016-08, Principal versus Agent Considerations (Reporting Revenue Gross versus Net) to clarify the revenue recognition implementation guidance on principal versus agent considerations. The amendments in this update clarify that when another party is involved in providing goods or services to a customer, an entity that is the principal has obtained control of a good or service before it is transferred to a customer, and provides indicators to assist an entity in determining whether it controls a specified good or service prior to the transfer to the customer. An entity that is the principal recognizes revenue in the gross amount of consideration to which it expects to be entitled in exchange for the specified good or service transferred to the customer, whereas an agent recognizes revenue in the amount of any fee or commission to which it expects to be entitled in exchange for arranging for the specified good or service to be provided by the other party. The amendments in this update are effective for us beginning in the first quarter of fiscal year 2018, concurrent with the new revenue recognition standard. The adoption of the amendments in this update are not expected to have a material impact on our consolidated financial position and results of operations.

In March 2016, the FASB issued ASU No. 2016-09, Improvements to Share-Based Compensation to simplify certain aspects of accounting for share-based payment transactions associated with income taxes, classification as equity or liabilities, and classification on the statement of cash flows. The amendments in this update are effective for us for fiscal years beginning with fiscal year 2017, including interim periods within those years, with early adoption permitted. Early adoption, if elected, must be completed for all of the amendments in the same period. The new guidance requires, among other things, excess tax benefits and tax deficiencies to be recorded in the income statement in the provision for income taxes when awards vest or are

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settled. Also, because excess tax benefits are no longer recognized in additional paid-in capital, the assumed proceeds from applying the treasury stock method when computing earnings per share is amended to exclude the amount of excess tax benefits that would be recognized in additional paid-in capital. We adopted ASU No. 2016-09 during the quarter ended June 30, 2016, as previously described in our Report on Form 10-Q for the period ended June 30, 2016 filed with the Securities Exchange Commission on August 8, 2016. For the year ended December 31, 2016, the impact on the Company's results of operations was to reduce the provision for income taxes and increase net income by $8.3 million and increase basic net income per share by $0.13, and increase diluted net income per share by $0.12. The increase to diluted net income per share includes the effect of the reduction of the tax provision and an increase in the number of incremental shares used in computing diluted EPS by 846,000 shares for the year ended December 31, 2016 (Note 2).

There was no cumulative effect on retained earnings in the consolidated balance sheet since we have a full valuation allowance against U.S. deferred tax assets. We elected to continue to estimate forfeitures of share-based awards resulting in no impact to stock-based compensation expense, and we are also continuing to classify cash paid by us when directly withholding shares for tax withholding purposes in cash flows from financing activities.

In August 2016, the FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments to eliminate the diversity in practice regarding the presentation and classification of certain cash receipts and cash payments, including, among other things, contingent consideration payments made following a business combination and proceeds from the settlement of insurance claims in the statement of cash flows. Cash payments not made soon after the acquisition date up to the amount of the contingent consideration liability recognized at the acquisition date should be classified as financing activities, with any excess payments classified as operating activities, whereas cash payments made soon after the acquisition date to settle the contingent consideration should be classified as investing activities. Cash proceeds received from settlement of insurance claims should be classified on the basis of the nature of the related losses. The amendments in this update are effective for fiscal years beginning with fiscal year 2017, including interim periods within those years, with early adoption permitted. We do not expect the adoption of the amendments in this update to have a material impact on our consolidated statement of cash flows.

In October 2016, the FASB issued ASU No. 2016-16, Income Taxes (Topic 740) to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. Current GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. The Board decided that an entity should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amendments in this update are effective for us beginning in the first quarter of fiscal 2018. The impact of adoption of the amendments in this update could be material depending on the size of any intra-entity transfers we may implement in 2018 and future periods.

Results of Operations

The following describes the line items set forth in our consolidated statements of operations.

Net Revenue. Net revenue is generated from sales of radio-frequency and mixed-signal integrated circuits for cable and satellite broadband communications and the connected home, and wired and wireless infrastructure markets. A significant portion of our end customers purchases products indirectly from us through distributors. Although we actually sell the products to, and are paid by, the distributors, we refer to these end customers as our customers.

Cost of Net Revenue. Cost of net revenue includes the cost of finished silicon wafers processed by third-party foundries; costs associated with our outsourced packaging and assembly, test and shipping; costs of personnel, including stock-based compensation, and equipment associated with manufacturing support, logistics and quality assurance; amortization of certain production mask costs; cost of production load boards and sockets; and an allocated portion of our occupancy costs.

Research and Development. Research and development expense includes personnel-related expenses, including stock-based compensation, new product engineering mask costs, prototype integrated circuit packaging and test costs, computer-aided design software license costs, intellectual property license costs, reference design development costs, development testing and evaluation costs, depreciation expense and allocated occupancy costs. Research and development activities include the design of new products, refinement of existing products and design of test methodologies to ensure compliance with required specifications. All research and development costs are expensed as incurred.

Selling, General and Administrative. Selling, general and administrative expense includes personnel-related expenses, including stock-based compensation, distributor and other third-party sales commissions, field application engineering support, travel costs, professional and consulting fees, legal fees, depreciation expense and allocated occupancy costs.

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Impairment Losses. Impairment losses are attributed to the impairment charges to intangible assets.
Restructuring Charges. Restructuring charges consist of employee severance and stock compensation expenses, and lease and leasehold impairment charges related to certain of our restructuring plans entered into as a result of our acquisition of Entropic and internal operations, and an adjustment related to restructuring plan implemented by Entropic prior to acquisition.
Interest Income. Interest income consists of interest earned on our cash, cash equivalents and investment balances.
Other Income (Expense). Other income (expense) generally consists of income (expense) generated from non-operating transactions.
Provision (Benefit) for Income Taxes. We make certain estimates and judgments in determining income tax expense (benefit) for financial statement purposes. These estimates and judgments occur in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expenses for tax and financial statement purposes and the realizability of assets in future years.

The following table sets forth our consolidated statement of operations data as a percentage of net revenue for the periods indicated:

	Years Ended December 31,		
	2016	2015	2014
Net revenue	100%	100%	100%
Cost of net revenue	41	48	38
Gross profit	59	52	62
Operating expenses:			
Research and development	25	28	42
Selling, general and administrative	17	26	26
IPR&D impairment losses	—	7	—
Restructuring charges	1	5	—
Total operating expenses	43	66	68
Income (loss) from operations	16	(14)	(6)
Interest income	—	—	—
Other income (expense), net	—	—	—
Income (loss) before income taxes	16	(14)	(6)
Provision (benefit) for income taxes	—	—	(1)
Net income (loss)	16 %	(14)%	(5)%

Net Revenue

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
Operator	$293,313	$225,265	$101,393	30 %	122 %
% of net revenue	75 %	75 %	76 %		
Infrastructure and other	60,568	29,585	31,719	105 %	(7)%
% of net revenue	16 %	10 %	24 %		
Legacy video SoC	33,951	45,510	—	(25)%	N/A
% of net revenue	9 %	15 %	—		
Total net revenue	$387,832	$300,360	$133,112	29 %	126 %

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Net revenue increased $87.5 million to $387.8 million for the year ended December 31, 2016, as compared to $300.4 million for the year ended December 31, 2015. The change was primarily due to an increase of $68.0 million in operator applications, related primarily to increased cable and satellite RF receivers, digital channel-stacking, and both satellite and cable MoCA product shipments. The increase in infrastructure and other revenues of $31.0 million were primarily driven by the continued ramp of high-speed interconnect product shipments as well as contributions from our wireless access acquisition starting in May 2016 and our wireless backhaul acquisition starting in July 2016. Shipments of legacy video SoC products declined by $11.6 million in the year ended December 31, 2016 as compared to the year ended December 31, 2015. We expect year-over-year revenue declines in the legacy video SoC and analog channel stacking, or aCSS, products we acquired from Entropic to continue, as these products are near the end of their life cycles, which along with other factors, including but not limited to operator consolidation, could adversely affect future revenues for these product categories.

Net revenue increased $167.2 million to $300.4 million in the year ended December 31, 2015, as compared to $133.1 million in the year ended December 31, 2014. The increase in net revenue was primarily attributable to an increase of $123.9 million in operator applications, contributed primarily by analog channel-stacking and MoCA products related to our Entropic acquisition, as well as organic growth across each of our other operator sub-categories. Declines in infrastructure and other revenues of $2.1 million were primarily driven by hybrid-TV and consumer digital-to-analog terrestrial set-top box applications, which offset growth in retail MoCA products related to our Entropic acquisition and high-speed interconnect products related to our Physpeed acquisition. An increase of $45.5 million in our legacy video SoC products was attributable to our acquisition of Entropic.

Cost of Net Revenue and Gross Profit

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
Cost of net revenue	$157,842	$144,937	$51,154	9 %	183%
% of net revenue	41 %	48 %	38 %		
Gross profit	229,990	155,423	81,958	48%	90 %
% of net revenue	59 %	52 %	62 %		

Cost of net revenue increased $12.9 million to $157.8 million for the year ended December 31, 2016, as compared to $144.9 million for the year ended December 31, 2015. The increase was primarily driven by an increase in sales and a $4.3 million increase in amortization of purchased intangible assets costs related to our wireless infrastructure access and backhaul acquisitions during 2016, partially offset by a decrease in amortization of inventory step-up of $8.6 million and reductions in our average manufacturing costs. The increase in gross profit percentage for the year ended December 31, 2016, as compared to the year ended December 31, 2015, was due to an increase in sales of higher margin products and the previously mentioned reduction in amortization of inventory step-up.

Cost of net revenue increased $93.8 million to $144.9 million for the year ended December 31, 2015, as compared to $51.2 million for the year ended December 31, 2014. This increase was primarily driven by increased sales. The decrease in gross profit percentages for the year ended December 31, 2015, as compared to the year ended December 31, 2014, was primarily due to amortization of inventory step-up costs of $14.2 million and amortization of intellectual property costs of $4.2 million related to the Entropic acquisition, partially offset by reductions in our average manufacturing costs. The gross margin decline was also driven by the significant increase in Entropic-related product revenue, which has historically generated lower gross margin than our previous corporate average.

We currently expect that gross profit percentage will fluctuate in the future, from period-to-period, based on changes in product mix, average selling prices, and average manufacturing costs.

Research and Development

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
Research and development	$97,745	$85,405	$56,625	14%	51%
% of net revenue	25 %	28 %	43 %		

Research and development expense increased $12.3 million to $97.7 million for the year ended December 31, 2016 from $85.4 million in the year ended December 31, 2015. The increase was primarily due to increases in headcount-related expense and occupancy expense of $9.4 million related to our acquisitions of the wireless infrastructure access business from Microsemi, and the wireless infrastructure backhaul business from Broadcom. Year-on-year increases in prototype expense, design tools expense, and depreciation expense of $3.2 million were primarily due to a higher number of projects.

Research and development expense increased $28.8 million to $85.4 million for the year ended December 31, 2015, as compared to $56.6 million for the year ended December 31, 2014. The increase was primarily due to an increase in headcount-related items of $16.6 million, and the combined increases in design tools, prototype, compensation to employees in relation to the Physpeed transaction, amortization, travel, and occupancy expenses of $11.9 million. In 2015, headcount-related items increased primarily due to increases in our average full-time-equivalent headcount compared to prior year. The non-headcount related increases are primarily due to increased project related design tools usage.

We expect our research and development expenses to increase as we continue to focus on expanding our product portfolio and enhancing existing products.

Selling, General and Administrative

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
Selling, general and administrative	$64,454	$77,981	$34,191	(17)%	128%
% of net revenue	17 %	26 %	26 %		

Selling, general and administrative expense decreased $13.5 million to $64.5 million for the year ended December 31, 2016, as compared to $78.0 million for the year ended December 31, 2015. The decrease was primarily due to a decrease of $18.0 million in intangible amortization expense related to acquired product backlog and a decrease in legal expense of $3.0 million related to the Entropic acquisition in the prior year. This decrease was partially offset by an increase in headcount-related expense of $3.5 million due to higher average full-time-equivalent headcount compared to prior year as a result of the Entropic acquisition. Commission expense increased $1.0 million due to higher sales and outside services, accounting expense, travel expense, and other expenses increased by $2.9 million.

Selling, general and administrative expense increased $43.8 million to $78.0 million for the year ended December 31, 2015, as compared to $34.2 million for the year ended December 31, 2014. The increase was primarily due to the amortization of purchased intangible assets of $25.0 million and transaction costs of $5.4 million associated with our Entropic acquisition, an increase in headcount-related items (including stock-based compensation) of $5.1 million, and an increase in commission, outside services, professional fees, occupancy, and other expenses of $10.0 million while legal fees decreased $1.7 million. In 2015, headcount-related items increased primarily due to increases in our average full-time-equivalent headcount compared to prior year. The non-headcount related increases are primarily due our facilities expansion efforts.

We expect selling, general and administrative expenses to increase in the future as we expand our sales and marketing organization to enable expansion into existing and new markets and continue to build our international administrative infrastructure.

IPR&D Impairment Losses

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
IPR&D impairment losses	$1,300	$21,600	$ —	(94)%	N/A
% of net revenue	— %	7 %	—%		

IPR&D impairment losses decreased $20.3 million to $1.3 million for the year ended December 31, 2016, compared to $21.6 million for the year ended December 31, 2015. We did not incur impairment losses in the year ended December 31, 2014. IPR&D impairment losses in 2016 consisted of acquired IPR&D technology of the wireless infrastructure access business. IPR&D impairment losses in 2015 consisted of acquired IPR&D technology of Physpeed and Entropic.

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Restructuring charges

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
Restructuring charges	$3,432	$14,086	$ —	(76)%	N/A
% of net revenue	1 %	5 %	—%		

Restructuring charges decreased $10.7 million to $3.4 million for the year ended December 31, 2016, compared to $14.1 million for the year ended December 31, 2015. We did not incur restructuring charges in the year ended December 31, 2014. Restructuring charges in 2016 consisted of employee severance and stock compensation expenses of $1.0 million, lease and leasehold impairment charges of $2.3 million and contract restructuring of $0.1 million. Restructuring charges in 2015 consisted of employee severance and stock compensation expenses of $5.5 million, lease and leasehold impairment charges of $8.2 million and contract restructuring of $0.3 million.

Interest and Other Income (Expense)

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
Interest income	$572	$275	$236	108 %	17 %
Other income (expense), net	59	468	(123)	(87)%	(480)%

Interest income increased $0.3 million to $0.6 million for the year ended December 31, 2016, compared to $0.3 million for the year ended December 31, 2015. The increase was due to higher average cash and investment balances held during the year. The decrease in other income (expense), net was primarily due to fluctuations in foreign currency transactions.

Interest income increased $0.04 million to $0.3 million for the year ended December 31, 2015 from $0.2 million for the year ended December 31, 2014 due to higher average cash and investment balances held during the period. The increase in other income (expense), net was primarily due to fluctuations in foreign currency transactions.

Provision (Benefit) for Income Taxes

	Years Ended December 31,			% Change	
	2016	2015	2014	2016	2015
	(dollars in thousands)				
Provision (benefit) for income taxes	$2,398	$(575)	$(1,704)	(517)%	(66)%

The provision for income taxes for the year ended December 31, 2016 was $2.4 million or approximately 4% of pre-tax income compared to a benefit for income taxes of $0.6 million or approximately 1% of pre-tax loss for the year ended December 31, 2015. The benefit for income taxes in the year ended December 31, 2014 was $1.7 million or approximately 19% of pre-tax loss.

The provision for income taxes for the year ended December 31, 2016 primarily relates to federal alternative minimum tax due to our limitation on use of net operating losses, credit carryforwards, state income taxes, and income taxes in certain foreign jurisdictions. Certain significant or unusual items are separately recognized in the quarter during which they occur and can be a source of variability in the effective tax rates from quarter to quarter. During the quarter ended June 30, 2016, we adopted ASU No. 2016-09, Improvements to Share-Based Compensation, which resulted in the recognition of net excess tax benefits on share-based awards within the provision for income taxes in the consolidated statement of operations. For the year ended December 31, 2016, the impact of including net excess tax benefits was to reduce the provision for income taxes by $8.3 million in the consolidated statement of operations. The benefit for income taxes for the years ended December 31, 2015 and 2014 primarily relates to the release of valuation allowance in connection with the Entropic and Physpeed acquisitions in 2015 and 2014, respectively, partially offset by income taxes in foreign jurisdictions and accruals for tax contingencies.

We continue to maintain a valuation allowance to offset the federal, California and certain foreign deferred tax assets as realization of such assets does not meet the more-likely-than-not threshold required under accounting guidelines. In making such determination, we consider all available positive and negative evidence quarterly, including scheduled reversals of

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deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance. Based upon our review of all positive and negative evidence, we concluded that a full valuation allowance should continue to be recorded against our U.S. and certain foreign net deferred tax assets at December 31, 2016. We are closely assessing the need for a valuation allowance on the deferred tax assets by evaluating positive and negative evidence that may exist. If we continue to generate taxable income, we could remove some or all of the valuation allowance against federal, California and certain foreign deferred tax assets if we meet the more-likely-than-not threshold. The impact of releasing some or all of such valuation allowance will be material in the period in which such release occurs. Until such time that we remove the valuation allowance against our federal, California and certain foreign deferred tax assets, our provision for income taxes will primarily consist of federal and state current income taxes and income taxes in certain foreign jurisdictions. Furthermore, we do not incur expense or benefit in certain tax free jurisdictions in which we operate.

Liquidity and Capital Resources

As of December 31, 2016, we had cash and cash equivalents of $82.9 million, short- and long-term investments of $53.9 million, and net accounts receivable of $50.5 million. Additionally, as of December 31, 2016, our working capital was $159.5 million.

Our primary uses of cash are to fund operating expenses, purchases of inventory and the acquisition of businesses, property and equipment and intangible assets, and is impacted by the timing of when we pay these expenses as reflected in the change in our outstanding accounts payable and accrued expenses. Cash used to fund operating expenses excludes the impact of non-cash items such as stock-based compensation, depreciation and amortization of acquired intangible assets and step-ups of acquired inventory to fair value.

Our primary sources of cash are cash receipts on accounts receivable from our shipment of products to distributors and direct customers. Aside from the growth in amounts billed to our customers, net cash collections of accounts receivable are impacted by the efficiency of our cash collections process, which can vary from period to period depending on the payment cycles of our major distributor customers.

Following is a summary of our working capital and cash and cash equivalents for the periods indicated:

	December 31,	
	2016	2015
	(in thousands)	
Working capital	$159,500	$134,170
Cash and cash equivalents	$82,896	$67,956
Short-term investments	47,918	43,300
Long-term investments	5,991	19,242
Total cash and cash equivalents and investments	$136,805	$130,498

Following is a summary of our cash flows provided by (used in) operating activities, investing activities and financing activities for the periods indicated:

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Net cash provided by operating activities	$117,317	$55,041	$12,234
Net cash used in investing activities	(101,313)	(11,059)	(17,466)
Net cash provided by (used in) by financing activities	(670)	4,003	(506)
Effect of exchange rates on cash and cash equivalents	(394)	(725)	(16)
Net increase (decrease) in cash and cash equivalents	$14,940	$47,260	$(5,754)

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Cash Flows from Operating Activities

Net cash provided by operating activities was $117.3 million for the year ended December 31, 2016. Net cash provided by operating activities consisted of net income of $61.3 million, $48.2 million in non-cash expenses, and $7.8 million in changes in operating assets and liabilities. Non-cash items included in net income for the year ended December 31, 2016 primarily included depreciation and amortization expense of $26.7 million, stock-based compensation of $21.8 million, amortization of step-up to fair value of acquired inventory of $5.6 million, impairment charges on intangible assets of $1.3 million, and impairment and restructuring on leases of $0.4 million, partially offset by excess tax benefits on stock-based awards of $8.3 million.

Net cash provided by operating activities was $55.0 million for the year ended December 31, 2015. Net cash provided by operating activities consisted of $103.1 million in non-cash operating expenses, partially offset by a net loss of $42.3 million and $5.7 million in changes in operating assets and liabilities. Non-cash items included in net loss for the year ended December 31, 2015 primarily included depreciation and amortization expense of $40.6 million, impairment charges on intangible assets of $21.6 million, stock-based compensation of $19.3 million, amortization of step-up to fair value of acquired inventory of $14.2 million and impairment and restructuring on leases of $8.2 million, partially offset by deferred income taxes of $1.9 million.

Net cash provided by operating activities was $12.2 million for the year ended December 31, 2014. Net cash provided by operating activities consisted of $18.6 million in non-cash operating expenses, partially offset by a net loss of $7.0 million and changes in operating assets and liabilities of $0.7 million. Non-cash items included in net loss for the year ended December 31, 2014 primarily included stock-based compensation of $15.0 million, depreciation and amortization expense of $5.1 million, partially offset by deferred income taxes of $2.3 million.

Cash Flows from Investing Activities

Net cash used in investing activities was $101.3 million for the year ended December 31, 2016. Net cash used in investing activities primarily consisted of $101.0 million used in our acquisitions of the wireless infrastructure access and backhaul businesses, $90.3 million in purchases of securities, and $8.5 million in purchases of property and equipment, partially offset by $98.9 million in maturities of securities.

Net cash used in investing activities was $11.1 million for the year ended December 31, 2015. Net cash used in investing activities primarily consisted of $73.4 million in purchases of securities, $3.6 million cash used in our acquisition of Entropic, and $3.0 million in purchases of property and equipment, partially offset by $69.0 million in maturities of securities.

Net cash used in investing activities was $17.5 million for the year ended December 31, 2014. Net cash used in investing activities consisted of $56.7 million in purchases of securities, $9.1 million used in our acquisition of Physpeed, and $8.8 million in purchases of property and equipment, partially offset by $57.2 million in maturities of securities.

Cash Flows from Financing Activities

Net cash used in financing activities was $0.7 million for the year ended December 31, 2016. Net cash used in financing activities primarily consisted of $7.3 million in minimum tax withholding paid on behalf of employees for restricted stock units, partially offset by $6.6 million in net proceeds from issuance of common stock.

Net cash provided by financing activities was $4.0 million for the year ended December 31, 2015. Net cash provided by financing activities primarily consisted primarily of $10.0 million in net proceeds from issuance of common stock, partially offset by $5.1 million in minimum tax withholding paid on behalf of employees for restricted stock units.

Net cash used in financing activities was $0.5 million for the year ended December 31, 2014. Net cash used in financing activities consisted of $3.8 million in minimum tax withholding paid on behalf of employees for restricted stock units, partially offset by $3.3 million in net proceeds from issuance of common stock.

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We believe that our $82.9 million of cash and cash equivalents and $53.9 million in short- and long-term investments at December 31, 2016 will be sufficient to fund our projected operating requirements for at least the next twelve months. In 2016, we used $101.0 million of cash to purchase the wireless infrastructure access and backhaul businesses of Microsemi and Broadcom, respectively. Our cash and cash equivalents in recent years have been favorably affected by our implementation of an equity-based bonus program for our employees, including executives. In connection with that bonus program, in August 2016, we issued 0.2 million freely-tradable shares of our Class A common stock in settlement of bonus awards for the January 1, 2016 to June 30, 2016 performance period under our bonus plan. In May 2016, we issued 0.2 million shares of our Class A common stock in settlement of bonus awards for the July 1, 2015 to December 31, 2015 performance period. In August 2015, we issued 0.3 million freely-tradable shares of our Class A common stock in settlement of bonus awards for the January 1, 2015 to June 30, 2015 performance period under our bonus plan. In May 2015, we issued 0.2 million freely-tradable shares of our Class A common stock in settlement of bonus awards for the fiscal 2014 performance period under our bonus plan. In May 2014, we issued 0.6 million freely-tradable shares of our Class A common stock in settlement of bonus awards for the fiscal 2013 performance period under our bonus plan. We expect to implement a similar equity-based plan for the second half of fiscal 2016, but our compensation committee retains discretion to effect payment in cash, stock, or a combination of cash and stock.

Notwithstanding the foregoing, we may need to raise additional capital or incur additional indebtedness to continue to fund our operations in the future. Our future capital requirements will depend on many factors, including our rate of revenue growth, the expansion of our engineering, sales and marketing activities, the timing and extent of our expansion into new territories, the timing of introductions of new products and enhancements to existing products, the continuing market acceptance of our products and potential material investments in, or acquisitions of, complementary businesses, services or technologies. Additional funds may not be available on terms favorable to us or at all. If we are unable to raise additional funds when needed, we may not be able to sustain our operations.

Warranties and Indemnifications

In connection with the sale of products in the ordinary course of business, we often make representations affirming, among other things, that our products do not infringe on the intellectual property rights of others, and agree to indemnify customers against third-party claims for such infringement. Further, our certificate of incorporation and bylaws require us to indemnify our officers and directors against any action that may arise out of their services in that capacity, and we have also entered into indemnification agreements with respect to all of our directors and certain controlling persons.

Off-Balance Sheet Arrangements

As part of our ongoing business, we do not participate in transactions that generate relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, or SPEs, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As of December 31, 2016, we were not involved in any unconsolidated SPE transactions.

Contractual Obligations

As of December 31, 2016, future minimum payments under non-cancelable operating leases, other obligations and inventory purchase obligations are as follows:

	Payments due				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
	(in thousands)				
Operating lease obligations	$35,601	$8,123	$13,229	$12,657	$1,592
Inventory purchase obligations	30,464	30,464	—	—	—
Other obligations	5,863	4,939	924	—	—
Total	$71,928	$43,526	$14,153	$12,657	$1,592

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Risk

To date, our international customer and vendor agreements have been denominated mostly in United States dollars. Accordingly, we have limited exposure to foreign currency exchange rates and do not enter into foreign currency hedging transactions. The functional currency of certain foreign subsidiaries is the local currency. Accordingly, the effects of exchange rate fluctuations on the net assets of these foreign subsidiaries' operations are accounted for as translation gains or losses in accumulated other comprehensive income (loss) within stockholders' equity. We do not believe that a change of 10% in such foreign currency exchange rates would have a material impact on our consolidated financial position or results of operations.

Interest Rate Risk

We had cash and cash equivalents of $82.9 million at December 31, 2016 which was held for working capital purposes. We also had short- and long-term investments of $53.9 million at December 31, 2016. We do not enter into investments for trading or speculative purposes. We do not believe that we have any material exposure to changes in the fair value of these investments as a result of changes in interest rates due to their short-term nature.

Investments in fixed rate interest earning instruments carry a degree of interest rate risk. Fixed rate securities may have their market value adversely impacted due to rising interest rates. Due in part to these factors, our future investment income may fall short of expectations due to changes in interest rates.

Investments Risk

We had short- and long-term investments of $53.9 million at December 31, 2016. Our investments, consisting of U.S. Treasury and agency obligations and corporate notes and bonds, are stated at cost, adjusted for amortization of premiums and discounts to maturity. In the event that there are differences between fair value and cost in any of our available-for-sale securities, unrealized gains and losses on these investments are reported as a separate component of accumulated other comprehensive income (loss).

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements and supplementary data required by this item are included in Part IV, Item 15 of this Report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports filed with the SEC is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and no evaluation of controls and procedures can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected. Management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, prior to filing this Form 10-K, we carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of the end of the period covered by this Form 10-K. Based on their evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Form 10-K.

Management’s Annual Report on Internal Controls over Financial Reporting

Our management, including our principal executive officer and principal financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our management, including our principal executive officer and principal financial officer, evaluated the effectiveness of our internal control over financial reporting based on criteria established in the Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based upon that evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2016. The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by Grant Thornton LLP, an independent registered public accounting firm, and Grant Thornton LLP has issued a report on our internal control over financial reporting, as stated within their report which is included herein.

Changes in Internal Control over Financial Reporting

An evaluation was performed under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, to determine whether any change in our internal control over financial reporting occurred during the fiscal quarter ended December 31, 2016 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. There were no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Rule 13a-15 or Rule 15d-15 of the Securities Exchange Act of 1934, as amended, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
MaxLinear, Inc.

We have audited the internal control over financial reporting of MaxLinear, Inc. (the "Company") as of December 31, 2016, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in the 2013 Internal Control-Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the financial statements and financial statement schedule of the Company as of and for the year ended December 31, 2016 and our report dated February 8, 2017 expressed an unqualified opinion thereon.

/s/ Grant Thornton LLP

Irvine, California
February 8, 2017

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ITEM 9B. OTHER INFORMATION

None.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 10 with respect to our directors and executive officers will be either (i) included in an amendment to this Annual Report on Form 10-K or (ii) incorporated by reference to our Definitive Proxy Statement to be filed in connection with our 2017 Annual Meeting of Stockholders, or the 2017 Proxy Statement. Such amendment in the 2017 Proxy Statement will be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2016.

Item 405 of Regulation S-K calls for disclosure of any known late filing or failure by an insider to file a report required by Section 16(a) of the Exchange Act. This information will be contained under the caption “Related Person Transactions and Section 16(a) Beneficial Ownership Reporting Compliance” in either an amendment to this Annual Report on Form 10-K or the 2017 Proxy Statement and is incorporated herein by reference.

Code of Conduct

We have adopted a code of ethics and employee conduct that applies to our board of directors and all of our employees, including our chief executive officer and principal financial officer.

Our code of conduct is available at our website by visiting www.maxlinear.com and clicking through “Investors,” “Corporate Governance,” and “Code of Conduct.” When required by the rules of the New York Stock Exchange, or NYSE, or the Securities and Exchange Commission, or SEC, we will disclose any future amendment to, or waiver of, any provision of the code of conduct for our chief executive officer and principal financial officer or any member or members of our board of directors on our website within four business days following the date of such amendment or waiver.

The information required by Item 10 with respect to our audit committee is incorporated by reference from the information set forth under the caption “Corporate Governance and Board of Directors — Board Committees” in either an amendment to this Annual Report on Form 10-K or the 2017 Proxy Statement.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated by reference from the information set forth under the captions “Compensation of Non-Employee Directors” and “Executive Compensation" in either an amendment to this Annual Report on Form 10-K or our 2017 Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Item 12 is incorporated by reference from the information set forth under the captions “Executive Compensation — Equity Compensation Plan Information” and “Security Ownership” in either an amendment to this Annual Report on Form 10-K or our 2017 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated by reference from the information set forth under the captions “Corporate Governance and Board of Directors — Director Independence” and “Related Person Transactions and Section 16(a) Beneficial Ownership Reporting Compliance” in either an amendment to this Annual Report on Form 10-K or our 2017 Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 14 is incorporated by reference from the information set forth under the caption “Proposal Number 4 — Ratification of Appointment of Independent Registered Public Accounting Firm” in either an amendment to this Annual Report on Form 10-K or our 2017 Proxy Statement.

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PART IV — FINANCIAL INFORMATION
ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES
a) Documents filed as part of the report
1. Financial Statements
Our consolidated financial statements are attached hereto and listed on the Index to Consolidated Financial Statements set forth on page F-1 of this Annual Report on Form 10-K.
2. Financial Statement Schedules
Schedule II. Valuation and Qualifying Accounts—Years ended December 31, 2016, 2015 and 2014
All other schedules are omitted as the required information is inapplicable, or the information is presented in the financial statements or related notes.
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS (in thousands):

Classification	Balance at beginning of year	Additions charged to expenses	Other Additions	(Deductions)	Balance at end of year
Allowance for doubtful accounts					
2016	$ 236	$ 87	$ —	$ (236)	$ 87
2015	57	179	—	—	236
2014	57	—	—	—	57
Warranty reserves					
2016	$ 157	$ 335	$ 489	$ (121)	$ 860
2015	60	193	37	(133)	157
2014	15	56	—	(11)	60
Valuation allowance for deferred tax assets					
2016	$ 98,535	$ —	$ 8,410	$ (6,661)	$ 100,284
2015	29,399	69,136	—	—	98,535
2014	28,628	3,106	—	(2,335)	29,399

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3. Exhibits

Exhibit Number	Exhibit Title
2.1	Agreement and Plan of Merger and Reorganization, dated as of February 3, 2015, by and among MaxLinear, Inc., a Delaware corporation, Entropic Communications, Inc., a Delaware corporation, Excalibur Acquisition Corporation, a Delaware corporation and a wholly-owned subsidiary of MaxLinear, and Excalibur Subsidiary, LLC, a Delaware limited liability company and wholly-owned subsidiary of MaxLinear (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on February 4, 2015 (File No. 001-34666)).
3.1	Registrant's Amended and Restated Certificate of Incorporation, as filed with the Secretary of State of the State of Delaware on March 29, 2010 (incorporated by reference to Exhibit 3.5 of the Registrant's Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
3.2	Registrant's Amended and Restated Bylaws, as amended to date (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 10, 2015 (File No. 001-34666)).
+4.1	Specimen common stock certificate of Registrant (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
+10.1	Form of Director and Executive Officer Indemnification Agreement (incorporated by reference to Exhibit 10.1 of the Registrant's Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
+10.2	Form of Director and Controlling Person Indemnification Agreement (incorporated by reference to Exhibit 10.2 of the Registrant's Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
+10.3	2004 Stock Plan, as amended (incorporated by reference to Exhibit 10.3 of the Registrant's Annual Report on Form 10-K filed on February 6, 2013 (File No. 001-34666)).
+10.4	Form of Stock Option Agreement under the 2004 Stock Plan (incorporated by reference to Exhibit 10.4 of the Registrant's Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
+10.5	Amendment No. 1 to the form of Stock Option Agreement under the 2004 Stock Plan (incorporated by reference to Exhibit 10.5 of the Registrant's Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
+10.6	2010 Equity Incentive Plan, as amended (incorporated by reference to Exhibit 10.6 of the Registrant's Current Report on Form 8-K filed on August 15, 2016 (File No. 001-34666)).
+10.7	Form of Agreement under the 2010 Equity Incentive (incorporated by reference to Exhibit 10.10 of the Registrant's Quarterly Report on Form 10-Q filed on July 28, 2011 (File No. 001-34666)).
+10.8	2010 Employee Stock Purchase Plan, as amended (incorporated by reference to Exhibit 10.8 of the Registrant's Annual Report on Form 10-K filed on August 15, 2016 (File No. 001-34666)).
+10.9	Employment Offer Letter, dated December 20, 2010, between the Registrant and Adam C. Spice (incorporated by reference to Exhibit 99.2 to the Registrant's Current Report on Form 8-K filed on December 28, 2010).
+10.10	Employment Offer Letter, dated June 24, 2011, between the Registrant and Brian Sprague (incorporated by reference to Exhibit 10.10 of the Registrant's Quarterly Report on Form 10-Q filed on July 28, 2011 (File No. 001-34666)).
+10.11	Employment Offer Letter, dated September 12, 2011, by and between the Registrant and Justin Scarpulla (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on March 15, 2012 (File No. 001-34666)).
+10.12	Form of Change in Control Agreement for Chief Executive Officer and Chief Financial Officer (incorporated herein by reference to Exhibit 10.12 of the Registrant's Annual Report on Form 10-K filed on February 17, 2016).
+10.13	

	Form of Change in Control Agreement for Executive Officers (incorporated herein by reference to Exhibit 10.13 of the Registrant's Annual Report on Form 10-K filed on February 17, 2016).
10.14	Lease Agreement, dated May 18, 2009, between the Registrant and JCCE - Palomar, LLC (incorporated by reference to Exhibit 10.14 of the Registrant’s Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
†10.15	Sublease Agreement, dated May 9, 2009, between the Registrant and CVI Laser, LLC (incorporated by reference to Exhibit 10.15 of the Registrant’s Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).

†10.16	Intellectual Property License Agreement, dated June 18, 2009, between the Registrant and Intel Corporation, (incorporated by reference to Exhibit 10.16 of the Registrant’s Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
†10.17	Employment Offer Letter, dated November 9, 2012, between the Registrant and Will Torgerson (incorporated by reference to Exhibit 10.17 of the Registrant’s Annual Report on Form 10-K filed on February 6, 2013 (File No. 001-34666)).
†10.18	Distributor Agreement, dated June 5, 2009, between the Registrant and Moly Tech Limited (incorporated by reference to Exhibit 10.18 of the Registrant’s Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
†10.19	Distributor Agreement, dated October 3, 2005, between the Registrant and Tomen Electronics Corporation (incorporated by reference to Exhibit 10.19 of the Registrant’s Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
†10.20	Distributor Agreement, dated August 19, 2009, between the Registrant and Lestina International Ltd. (incorporated by reference to Exhibit 10.20 of the Registrant’s Registration Statement on Form S-1 and all amendments thereto (File No. 333-162947)).
+10.21	MaxLinear, Inc. Executive Bonus Plan, as amended (incorporated herein by reference to Exhibit 10.21 of the Registrant’s Annual Report on Form 10-K filed on February 17, 2016).
10.22	Employment Offer Letter, dated April 22, 2011, between the Registrant and Michael LaChance (incorporated by reference to Exhibit 10.22 of the Registrant’s Annual Report on Form 10-K filed on March 14, 2012 (File No. 001-34666)).
10.23	Stock Repurchase Agreement, dated August 21, 2012, by and among the Registrant, Mission Ventures III, L.P., Mission Ventures Affiliates III, L.P., and U.S. Venture Partners VIII, L.P. (incorporated by reference to Exhibit 10.23 of the Registrant’s Current Report on Form 8-K filed on August 22, 2012 (File No. 001-34666)).
+10.24	Stock Repurchase Agreement, dated October 31, 2012, by and among the Registrant, U.S. Venture Partners VIII, L.P, USVP VIII Affiliates Fund, L.P., USVP Entrepreneur Partners VIII-A, L.P. and USVP Entrepreneur Partners VIII-B, L.P. (incorporated by reference to Exhibit 10.24 of the Registrant’s Current Report on Form 8-K filed on October 31, 2012 (File No. 001-34666)).
10.25	Separation Agreement, dated March 15, 2012, by and between the Registrant and Patrick E. McCready (incorporated by reference to Exhibit 10.2 of the Registrant’s Current Report on Form 8-K filed on March 15, 2012 (File No. 001-34666)).
+10.26	Lease Agreement, dated December 17, 2013, between Registrant and The Campus Carlsbad, LLC (incorporated by reference to Exhibit 10.26 of the Registrant’s Annual Report on Form 10-K filed on February 7, 2014 (File No. 001-34666)).
+10.27	Separation Agreement and Release, dated December 15, 2014, by and between the Registrant and Brian J. Sprague (incorporated by reference to Exhibit 10.27 of the Registrant’s Current Report on Form 8-K filed on December 16, 2014 (File No. 001-34666)).
10.28	Form of MaxLinear Voting Agreement (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K filed on February 4, 2015 (File No. 001-34666)).
10.29	Form of Entropic Voting Agreement (incorporated by reference to Exhibit 10.2 to the Registrant’s Current Report on Form 8-K filed on February 4, 2015 (File No. 001-34666)).
10.30	First Amendment to Lease, dated May 6, 2015, between Registrant, on the one hand, and Brookwood CB I, LLC and Brookwood CB II, LLC, as tenants in common and successors-in-interest to The Campus Carlsbad, LLC, on the other hand (incorporated by reference to Exhibit 10.1 of Registrant’s Quarterly Report on Form 10-Q filed on August 10, 2015 (File No. 333-34666)).
+10.31	Entropic Communications, Inc. 2007 Equity Incentive Plan and Form of Option Agreement, Form of Option Grant Notice thereunder and Notice of Exercise (incorporated herein by reference to Entropic Communication, Inc.’s Annual Report on Form 10-K filed on March 3, 2008 (File No. 001-33844)).
+10.32	Entropic Communications, Inc. 2007 Non-Employee Directors’ Stock Option Plan and Form of Option Agreement, Forms of Grant Notice, and Notice of Exercise thereunder (incorporated herein by reference to

	Entropic Communications, Inc.’s Registration Statement on Form S-1 filed on July 27, 2007 (No. 333-144899)).
10.33	Lease Agreement, dated November 11, 2015, between Registrant and The Northwestern Mutual Life Insurance Company (incorporated herein by reference to Exhibit 10.33 of the Registrant’s Annual Report on Form 10-K filed on February 17, 2016).
10.34	Asset Purchase Agreement, by and between the Company and Microsemi, dated as of April 28, 2016 (incorporated herein by reference to Exhibit 10.1 of the Registrant’s Current Report on Form 8-K filed on April 28, 2016).

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10.35	Asset Purchase Agreement, dated as of May 9, 2016, by and between the Registrant and Broadcom (incorporated herein by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on May 9, 2016).
10.36	Employment Offer Letter, dated December 21, 2015, between the Registrant and Dana McCarty (incorporated herein by reference to Exhibit 10.1 of the Registrant's Current Report on Form 10-Q filed on May 9, 2016).
+10.37	Employment Promotion Letter, dated February 11, 2016, between the Registrant and Connie Kwong (incorporated herein by reference to Exhibit 10.1 of the Registrant's Current Report on Form 10-Q filed on May 9, 2016).
*11.1	Statement re computation of income (loss) per share (included on pages F-14 through F-15 of this Form 10-K).
*21.1	Subsidiaries of the Registrant.
*23.1	Consent of Grant Thornton LLP, Independent Registered Public Accounting Firm.
*23.2	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
*24.1	Power of Attorney (included on the signature page of this Form 10-K).
*31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
*31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
#*32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.

In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release No. 33-8238 and 34-47986, Final Rule: Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, the certifications furnished pursuant to this item will not be deemed "filed" for purposes of Section 18 of the Exchange Act (15 U.S.C. 78r), or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

+ Indicates a management contract or compensatory plan.

¢ Confidential treatment has been requested and received for certain portions of these exhibits.

(b) Exhibits

The exhibits filed as part of this report are listed in Item 15(a)(3) of this Form 10-K.

(c) Schedules

The financial statement schedules required by Regulation S-X and Item 8 of this form are listed in Item 15(a)(2) of this Form 10-K.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MAXLINEAR, INC.

(Registrant)

By: /s/ KISHORE SEENDRIPU, PH.D
Kishore Seendripu, Ph.D
President and Chief Executive Officer
(Principal Executive Officer)

Date: February 8, 2017

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POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kishore Seendripu, Ph.D. and Adam C. Spice, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, to sign any and all amendments (including post-effective amendments) to this Annual Report on Form 10-K and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each of said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-facts and agents, or his substitute or substitutes, or any of them, shall do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ KISHORE SEENDRIPU, PH.D Kishore Seendripu, Ph.D	President and Chief Executive Officer (Principal Executive Officer)	February 8, 2017
/s/ ADAM C. SPICE Adam C. Spice	Chief Financial Officer (Principal Financial Officer)	February 8, 2017
/s/ CONNIE KWONG Connie Kwong	Corporate Controller (Principal Accounting Officer)	February 8, 2017
/s/ THOMAS E. PARDUN Thomas E. Pardun	Lead Director	February 8, 2017
/s/ STEVEN C. CRADDOCK Steven C. Craddock	Director	February 8, 2017
/s/ CURTIS LING, PH.D Curtis Ling, Ph.D	Director	February 8, 2017
/s/ ALBERT J. MOYER Albert J. Moyer	Director	February 8, 2017
/s/ DONALD E. SCHROCK Donald E. Schrock	Director	February 8, 2017
/s/ THEODORE TEWSBURY Theodore Tewksbury	Director	February 8, 2017

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MaxLinear, Inc.
Index to Consolidated Financial Statements

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
MaxLinear, Inc.
We have audited the accompanying consolidated balance sheets of MaxLinear, Inc. (the “Company”) as of December 31, 2016, and the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for the year then ended. Our audit also included the financial statement schedule listed in the index appearing under Item 15(a)(2). These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audit.
We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of MaxLinear, Inc. as of December 31, 2016, and the results of its operations and its cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.
As discussed in Note 1 to the consolidated financial statements under Recent Accounting Pronouncements, effective January 1, 2016, the Company adopted the provisions of Accounting Standards Update No. 2016-09, Improvements to Share-Based Compensation related to the accounting for stock-based compensation.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated February 8, 2017 expressed an unqualified opinion thereon.

/s/ Grant Thornton LLP

Irvine, California
February 8, 2017

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of MaxLinear, Inc.
We have audited the accompanying consolidated balance sheet of MaxLinear, Inc. as of December 31, 2015, and the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2015. Our audits also included the financial statement schedule for the two years in the period ended December 31, 2015 listed in the Index at Item 15(a)(2). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.
We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.
In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of MaxLinear, Inc. at December 31, 2015, and the consolidated results of its operations and its cash flows for each of the two years in the period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule for the two years in the period ended December 31, 2015, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ Ernst & Young LLP

Irvine, California
February 17, 2016

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MAXLINEAR, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except par value amounts)

	December 31, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$82,896	$67,956
Short-term investments, available-for-sale	47,918	43,300
Accounts receivable, net	50,487	42,399
Inventory	26,583	32,443
Prepaid expenses and other current assets	6,159	3,904
Total current assets	214,043	190,002
Property and equipment, net	20,549	21,858
Long-term investments, available-for-sale	5,991	19,242
Intangible assets, net	104,261	51,355
Goodwill	76,015	49,779
Other long-term assets	1,793	2,269
Total assets	$422,652	$334,505
Liabilities and stockholders’ equity		
Current liabilities:		
Accounts payable	$6,757	$6,389
Deferred revenue and deferred profit	5,991	4,066
Accrued price protection liability	15,176	20,026
Accrued expenses and other current liabilities	16,358	15,368
Accrued compensation	10,261	9,983
Total current liabilities	54,543	55,832
Deferred rent	9,656	11,427
Other long-term liabilities	6,029	4,322
Total liabilities	70,228	71,581
Commitments and contingencies		
Stockholders’ equity:		
Preferred stock, $0.0001 par value; 25,000 shares authorized, no shares issued or outstanding	—	—
Common stock, $0.0001 par value; 550,000 shares authorized, no shares issued or outstanding	—	—
Class A common stock, $0.0001 par value; 500,000 shares authorized, 58,363 and 55,737 shares issued and outstanding at December 31, 2016 and 2015, respectively	6	5
Class B common stock, $0.0001 par value; 500,000 shares authorized, 6,668 and 6,665 shares issued and outstanding at December 31, 2016 and 2015, respectively	1	1
Additional paid-in capital	413,909	384,961
Accumulated other comprehensive loss	(1,560)	(822)
Accumulated deficit	(59,932)	(121,221)
Total stockholders’ equity	352,424	262,924
Total liabilities and stockholders’ equity	$422,652	$334,505

See accompanying notes.

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MAXLINEAR, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Years Ended December 31,		
	2016	2015	2014
Net revenue	$387,832	$300,360	$133,112
Cost of net revenue	157,842	144,937	51,154
Gross profit	229,990	155,423	81,958
Operating expenses:			
Research and development	97,745	85,405	56,625
Selling, general and administrative	64,454	77,981	34,191
IPR&D impairment losses	1,300	21,600	—
Restructuring charges	3,432	14,086	—
Total operating expenses	166,931	199,072	90,816
Income (loss) from operations	63,059	(43,649)	(8,858)
Interest income	572	275	236
Other income (expense), net	59	468	(123)
Income (loss) before income taxes	63,690	(42,906)	(8,745)
Provision (benefit) for income taxes	2,398	(575)	(1,704)
Net income (loss)	$61,292	$(42,331)	$(7,041)
Net income (loss) per share:			
Basic	$0.96	$(0.79)	$(0.19)
Diluted	$0.91	$(0.79)	$(0.19)
Shares used to compute net income (loss) per share:			
Basic	63,781	53,378	36,472
Diluted	67,653	53,378	36,472

See accompanying notes.

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MAXLINEAR, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	Years Ended December 31,		
	2016	2015	2014
Net income (loss)	$61,292	$(42,331)	$(7,041)
Other comprehensive income (loss), net of tax:			
Unrealized gain (loss) on investments, net of tax $27 in 2016, and $0 in 2015 and 2014	11	(93)	(60)
Less: Reclassification adjustments of unrealized gain, net of tax $0 in 2016, 2015 and 2014	—	21	—
Unrealized gain (loss) on investments, net of tax	11	(72)	(60)
Foreign currency translation adjustments, net of tax benefit of $39 in 2016, $184 in 2015, and $0 in 2014 [(1)]	(749)	(725)	(23)
Foreign currency translation adjustments, net of tax	(749)	(725)	(23)
Other comprehensive loss	(738)	(797)	(83)
Total comprehensive income (loss)	$60,554	$(43,128)	$(7,124)

(1) Tax amount recognized in Other Long-Term Liabilities of the Consolidated Balance Sheets as part of long-term deferred tax liabilities.

See accompanying notes.

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MAXLINEAR, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Class A Common Stock		Class B Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance at December 31, 2013	27,002	$ 3	8,338	$ 1	$ 158,360	$ 58	$ (71,748)	$ 86,674
Conversion of Class B common stock to Class A common stock	1,405	—	(1,405)	—	—	—	—	—
Common stock issued pursuant to equity awards, net	2,043	—	51	—	1,486	—	—	1,486
Employee stock purchase plan	477	—	—	—	3,058	—	—	3,058
Stock-based compensation	—	—	—	—	15,008	—	—	15,008
Other comprehensive loss	—	—	—	—	—	(83)	—	(83)
Net loss	—	—	—	—	—	—	(7,041)	(7,041)
Balance at December 31, 2014	30,927	3	6,984	1	177,912	(25)	(78,789)	99,102
Shares repurchased	—	—	—	—	—	—	(101)	(101)
Conversion of Class B common stock to Class A common stock	500	—	(500)	—	—	—	—	—
Common stock issued pursuant to equity awards, net	3,420	—	181	—	6,603	—	—	6,603
Issuance of common stock for merger with Entropic Communications, Inc.	20,373	2	—	—	177,559	—	—	177,561
Employee stock purchase plan	517	—	—	—	3,619	—	—	3,619
Stock-based compensation	—	—	—	—	19,268	—	—	19,268
Other comprehensive loss	—	—	—	—	—	(797)	—	(797)
Net loss	—	—	—	—	—	—	(42,331)	(42,331)
Balance at December 31, 2015	55,737	5	6,665	1	384,961	(822)	(121,221)	262,924
Shares repurchased	—	—	—	—	—	—	(3)	(3)
Conversion of Class B common stock to Class A common stock	3	—	(3)	—	—	—	—	—
Common stock issued pursuant to equity awards, net	2,344	1	6	—	2,839	—	—	2,840
Employee stock purchase plan	279	—	—	—	4,134	—	—	4,134
Stock-based compensation	—	—	—	—	21,975	—	—	21,975
Other comprehensive loss	—	—	—	—	—	(738)	—	(738)
Net income	—	—	—	—	—	—	61,292	61,292
Balance at December 31, 2016	58,363	$ 6	6,668	$ 1	$ 413,909	$ (1,560)	$ (59,932)	$ 352,424

See accompanying notes.

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MAXLINEAR, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,		
	2016	2015	2014
Operating Activities			
Net income (loss)	$61,292	$(42,331)	$(7,041)
Adjustments to reconcile net income (loss) to cash provided by operating activities:			
Amortization and depreciation	26,703	40,641	5,107
Impairment of IPR&D assets	1,300	21,600	—
Provision for losses on accounts receivable	87	178	—
Amortization of investment premiums, net	169	554	724
Amortization of inventory step-up	5,641	14,244	—
Stock-based compensation	21,765	19,268	15,008
Deferred income taxes	101	(1,906)	(2,281)
Loss on disposal of property and equipment	366	74	—
Gain on sale of available-for-sale securities	(50)	(21)	(3)
Change in fair value of contingent consideration	220	130	—
Impairment of long-lived assets	—	153	29
Impairment of lease	388	8,163	—
Gain on foreign currency	(216)	—	—
Excess tax benefits on stock-based awards	(8,291)	—	—
Changes in operating assets and liabilities, net of acquisitions:			
Accounts receivable	(8,175)	5,160	1,982
Inventory	9,846	(6,247)	(757)
Prepaid expenses and other assets	402	4,495	(752)
Accounts payable, accrued expenses and other current liabilities	3,249	(22,033)	83
Accrued compensation	5,609	5,320	3,911
Deferred revenue and deferred profit	1,925	454	961
Accrued price protection liability	(4,850)	6,522	(4,999)
Other long-term liabilities	(164)	623	262
Net cash provided by operating activities	117,317	55,041	12,234
Investing Activities			
Purchases of property and equipment	(8,512)	(2,996)	(8,800)
Purchases of intangible assets	(390)	(100)	—
Cash used in acquisition, net of cash acquired	(101,000)	(3,615)	(9,136)
Purchases of available-for-sale securities	(90,307)	(73,377)	(56,702)
Maturities of available-for-sale securities	98,896	69,029	57,172
Net cash used in investing activities	(101,313)	(11,059)	(17,466)
Financing Activities			
Repurchases of common stock	(3)	(101)	—
Net proceeds from issuance of common stock	6,649	9,950	3,304
Minimum tax withholding paid on behalf of employees for restricted stock units	(7,316)	(5,141)	(3,810)
Equity issuance costs	—	(705)	—
Net cash provided by (used in) financing activities	(670)	4,003	(506)
Effect of exchange rate changes on cash and cash equivalents	(394)	(725)	(16)
Increase (decrease) in cash and cash equivalents	14,940	47,260	(5,754)
Cash and cash equivalents at beginning of period	67,956	20,696	26,450
Cash and cash equivalents at end of period	$82,896	$67,956	$20,696

Supplemental disclosures of cash flow information:			
Cash paid for income taxes	$1,583	$41	$187
Supplemental disclosures of non-cash investing and financing activities:			
Issuance of accrued share-based bonus plan	$7,649	$5,459	$5,050
Lease incentive for leasehold improvements	$61	$4,255	$2,008
Issuance of restricted stock units to Physpeed continuing employees	$1,061	$—	$—

See accompanying notes.

1. Organization and Summary of Significant Accounting Policies

Description of Business

MaxLinear, Inc. was incorporated in Delaware in September 2003. MaxLinear, Inc., together with its wholly owned subsidiaries, collectively referred to as MaxLinear, or the Company, is a provider of radio-frequency and mixed-signal integrated circuits for cable and satellite broadband communications and the connected home, and wired and wireless infrastructure markets. MaxLinear's customers include module makers, original equipment manufacturers, or OEMs, and original design manufacturers, or ODMs, who incorporate the Company's products in a wide range of electronic devices including Pay-TV operator set-top boxes, DOCSIS data and voice gateways, hybrid analog and digital televisions and consumer terrestrial set-top boxes, Direct Broadcast Satellite outdoor units, optical modules for data center, metro, and long-haul transport network applications, and RF transceivers and modem solutions for wireless carrier infrastructure applications. The Company is a fabless semiconductor company focusing its resources on the design, sales and marketing of its products.

Basis of Presentation and Principles of Consolidation

The consolidated financial statements include the accounts of MaxLinear, Inc. and its wholly owned subsidiaries and have been prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP. All intercompany transactions and investments have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform with the current period presentation.

The functional currency of certain foreign subsidiaries is the local currency. Accordingly, assets and liabilities of these foreign subsidiaries are translated at the current exchange rate at the balance sheet date and historical rates for equity. Revenue and expense components are translated at weighted average exchange rates in effect during the period. Gains and losses resulting from foreign currency translation are included as a component of stockholders' equity. Foreign currency transaction gains and losses are included in the results of operations and, to date, have not been significant.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes of the consolidated financial statements. Actual results could differ from those estimates.

Business Combinations

The Company applies the provisions of ASC 805, Business Combinations, in accounting for its acquisitions. It requires the Company to recognize separately from goodwill the assets acquired and the liabilities assumed, at the acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While the Company uses its best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, its estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company records adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations.

Costs to exit or restructure certain activities of an acquired company or the Company's internal operations are accounted for as termination and exit costs pursuant to ASC 420, Exit or Disposal Cost Obligations, and are accounted for separately from the business combination. A liability for costs associated with an exit or disposal activity is recognized and measured at its fair value in the consolidated statement of operations in the period in which the liability is incurred. When estimating the fair value of facility restructuring activities, assumptions are applied regarding estimated sub-lease payments to be received, which can differ materially from actual results. This may require the Company to revise its initial estimates which may materially affect the results of operations and financial position in the period the revision is made.

For a given acquisition, the Company may identify certain pre-acquisition contingencies as of the acquisition date and may extend its review and evaluation of these pre-acquisition contingencies throughout the measurement period in order to obtain sufficient information to assess whether the Company includes these contingencies as a part of the fair value estimates of assets acquired and liabilities assumed and, if so, to determine their estimated amounts.

If the Company cannot reasonably determine the fair value of a pre-acquisition contingency (non-income tax related) by the end of the measurement period, which is generally the case given the nature of such matters, the Company will recognize an asset or a liability for such pre-acquisition contingency if: (i) it is probable that an asset existed or a liability had been incurred at the acquisition date and (ii) the amount of the asset or liability can be reasonably estimated. Subsequent to the measurement period, changes in estimates of such contingencies will affect earnings and could have a material effect on results of operations and financial position.

In addition, uncertain tax positions and tax related valuation allowances assumed in connection with a business combination are initially estimated as of the acquisition date. The Company reevaluates these items quarterly based upon facts and circumstances that existed as of the acquisition date with any adjustments to the preliminary estimates being recorded to goodwill if identified within the measurement period. Subsequent to the measurement period or final determination of the tax allowance's or contingency's estimated value, whichever comes first, changes to these uncertain tax positions and tax related valuation allowances will affect the provision for income taxes in the consolidated statement of operations and could have a material impact on the results of operations and financial position.

Cash and Cash Equivalents

The Company considers all liquid investments with a maturity of three months or less when purchased to be cash equivalents. Cash equivalents are recorded at cost, which approximates market value.

As of December 31, 2016 and 2015, the Company has restricted cash of $1.8 million and $1.2 million, respectively. The cash is on deposit in connection with a guarantee for certain office leases.

Accounts Receivable

The Company performs ongoing credit evaluations of its customers and assesses each customer's credit worthiness. The Company monitors collections and payments from its customers and maintains an allowance for doubtful accounts based upon its historical experience, its anticipation of uncollectible accounts receivable and any specific customer collection issues that the Company has identified. As of December 31, 2016 and 2015, the Company has an allowance for doubtful accounts of $0.1 million and $0.2 million, respectively.

Inventory

The Company assesses the recoverability of its inventory based on assumptions about demand and market conditions. Forecasted demand is determined based on historical sales and expected future sales. Inventory is stated at the lower of cost or market. Cost approximates actual cost on a first-in, first-out basis and market reflects current replacement cost (e.g. net replacement value) which cannot exceed net realizable value or fall below net realizable value less an allowance for an approximately normal profit margin. The Company reduces its inventory to its lower of cost or market on a part-by-part basis to account for its obsolescence or lack of marketability. Reductions are calculated as the difference between the cost of inventory and its market value based upon assumptions about future demand and market conditions. Once established, these adjustments are considered permanent and are not revised until the related inventory is sold or disposed of.

Investments, Available-for-Sale

The Company classifies all investments as available-for-sale, as the sale of such investments may be required prior to maturity to implement management strategies. These investments are carried at fair value, with unrealized gains and losses reported as accumulated other comprehensive income until realized. The cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion, as well as interest and dividends, are included in interest income. Realized gains and losses from the sale of available-for-sale investments, if any, are determined on a specific identification basis and are also included in interest income.

Fair Value of Financial Instruments

The carrying amount of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses and compensation are considered to be representative of their respective fair value because of the short-term nature of these accounts. Investment securities, available-for-sale, are carried at fair value.

Property and Equipment

Property and equipment is carried at cost and depreciated over the estimated useful lives of the assets, ranging from two to five years, using the straight-line method. Leasehold improvements are stated at cost and amortized over the shorter of the estimated useful lives of the assets or the lease term. Depreciation expense for the years ended December 31, 2016, 2015 and 2014 was $10.6 million, $10.8 million and $4.6 million, respectively.

Production Masks

Production masks with alternative future uses or discernible future benefits are capitalized and amortized over their estimated useful life of two years. To determine if the production mask has alternative future uses or benefits, the Company evaluates risks associated with developing new technologies and capabilities, and the related risks associated with entering new markets. Production masks that do not meet the criteria for capitalization are expensed as research and development costs.

Goodwill and Intangible Assets

Goodwill is recorded as the difference, if any, between the aggregate consideration paid for an acquisition and the fair value of the acquired net tangible and intangible assets. Intangible assets represent purchased intangible assets including developed technology, in-process research and development, or IPR&D, technologies acquired or licensed from other companies, customer relationships, backlog and tradenames. Purchased intangible assets with definitive lives are capitalized and amortized over their estimated useful lives. Technologies acquired or licensed from other companies, customer relationships, backlog and tradenames are capitalized and amortized over the lesser of the terms of the agreement, or estimated useful life. The Company capitalizes IPR&D projects acquired as part of a business combination. On completion of each project, IPR&D assets are reclassified to developed technology and amortized over their estimated useful lives.

Impairment of Goodwill and Long-Lived Assets

Goodwill is the excess of the purchase price over the fair value of identifiable net assets acquired in business combinations accounted for under the acquisition method. Goodwill is not amortized but is tested for impairment using a qualitative assessment, and subsequently the two-step method as needed. Step one is the identification of potential impairment. This involves comparing the fair value of each reporting unit, which the Company has determined to be the entity itself, with its carrying amount, including goodwill. If the fair value of a reporting unit exceeds the carrying amount, the goodwill of the reporting unit is considered not impaired and the second step of the impairment test is unnecessary. If the carrying amount of a reporting unit exceeds its fair value, the second step of the impairment test is performed to measure the amount of impairment loss, if any. The Company tests by reporting unit, goodwill and other indefinite-lived intangible assets for impairment as of October 31 each year or more frequently if it believes indicators of impairment exist.

During development, IPR&D is not subject to amortization and is tested for impairment annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. The Company reviews indefinite-lived intangible assets for impairment using a qualitative assessment, followed by a quantitative assessment, as needed, each year as of October 31, the date of its annual goodwill impairment review, or whenever events or changes in circumstances indicate the carrying value may not be recoverable. Recoverability of indefinite-lived intangible assets is measured by comparing the carrying amount of the asset to its fair value. In certain cases, the Company utilizes the relief-from-royalty method when appropriate, and a fair value will be obtained based on analysis over the costs saved by owning the right instead of leasing it.

Once an IPR&D project is complete, it becomes a finite-lived intangible asset and is evaluated for impairment both immediately prior to its change in classification and thereafter in accordance with the Company's policy for long-lived assets.

The Company regularly reviews the carrying amount of its long-lived assets subject to depreciation and amortization, as well as the useful lives, to determine whether indicators of impairment may exist which warrant adjustments to carrying values or estimated useful lives. An impairment loss would be recognized when the sum of the expected future undiscounted net cash flows is less than the carrying amount of the asset. Should impairment exist, the impairment loss would be measured based on the excess of the carrying amount of the asset over the asset’s fair value.

During 2016 and 2015, the Company identified impairment of IPR&D of $1.3 million and $21.6 million, respectively. Refer to Goodwill and Intangible Assets, Note 5 for more information.

Revenue Recognition

Revenue is generated from sales of the Company’s integrated circuits. The Company recognizes revenue when all of the following criteria are met: 1) there is persuasive evidence that an arrangement exists, 2) delivery of goods has occurred, 3) the sales price is fixed or determinable and 4) collectability is reasonably assured. Title to product transfers to customers either when it is shipped to or received by the customer, based on the terms of the specific agreement with the customer.

Revenue is recorded based on the facts at the time of sale. Transactions for which the Company cannot reliably estimate the amount that will ultimately be collected at the time the product has shipped and title has transferred to the customer are deferred until the amount that is probable of collection can be determined. Items that are considered when determining the amounts that will be ultimately collected are: a customer’s overall creditworthiness and payment history; customer rights to return unsold product; customer rights to price protection; customer payment terms conditioned on sale or use of product by the customer; or extended payment terms granted to a customer.

A portion of the Company’s revenues are generated from sales made through distributors under agreements allowing for pricing credits and/or stock rotation rights of return. Revenues from sales through the Company’s distributors accounted for 19%, 13% and 28% of net revenue for the years ended December 31, 2016, 2015 and 2014, respectively. Pricing credits to the Company’s distributors may result from its price protection and unit rebate provisions, among other factors. These pricing credits and/or stock rotation rights prevent the Company from being able to reliably estimate the final sales price of the inventory sold and the amount of inventory that could be returned pursuant to these agreements. As a result, for sales through distributors, the Company has determined that it does not meet all of the required revenue recognition criteria at the time it delivers its products to distributors as the final sales price is not fixed or determinable.

For these distributor transactions, revenue is not recognized until product is shipped to the end customer and the amount that will ultimately be collected is fixed or determinable. Upon shipment of product to these distributors, title to the inventory transfers to the distributor and the distributor is invoiced, generally with 30 to 60 day terms. On shipments to the Company’s distributors where revenue is not recognized, the Company records a trade receivable for the selling price as there is a legally enforceable right to payment, relieving the inventory for the carrying value of goods shipped since legal title has passed to the distributor, and records the corresponding gross profit in the consolidated balance sheet as a component of deferred revenue and deferred profit, representing the difference between the receivable recorded and the cost of inventory shipped. Future pricing credits and/or stock rotation rights from the Company’s distributors may result in the realization of a different amount of profit included in the Company’s future consolidated statements of operations than the amount recorded as deferred profit in the Company’s consolidated balance sheets.

The Company records reductions in revenue for estimated pricing adjustments related to price protection agreements with the Company’s end customers in the same period that the related revenue is recorded. Price protection pricing adjustments are recorded at the time of sale as a reduction to revenue and an increase in the Company’s accrued liabilities. The amount of these reductions is based on specific criteria included in the agreements and other factors known at the time. The Company accrues 100% of potential price protection adjustments at the time of sale and does not apply a breakage factor. The Company de-recognizes the accrual for unclaimed price protection amounts as specific programs contractually end and when the Company believes unclaimed amounts are no longer subject to payment and will not be paid. See Note 7 for a summary of the Company's price protection activity.

Warranty

The Company generally provides a warranty on its products for a period of one to three years. The Company makes estimates of product return rates and expected costs to replace the products under warranty at the time revenue is recognized based on historical warranty experience and any known product warranty issues. If actual return rates and/or replacement costs differ significantly from these estimates, adjustments to recognize additional cost of net revenue may be required in future periods. As of December 31, 2016 and 2015, the Company has $0.9 million and $0.2 million of warranty reserves based on the Company's analysis.

Segment Information

The Company operates in one segment as it has developed, marketed and sold primarily only one class of similar products, radio frequency and mixed-signal integrated circuits for cable and satellite broadband communications and the connected home, and wired and wireless infrastructure markets.

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker is its Chief Executive Officer. The Company's Chief Executive Officer reviews financial information presented on a consolidated basis for purposes of allocating resources and evaluating financial performance. The Company has one business activity and there are no segment managers who are held accountable for operations, operating results and plans for products or components below the consolidated unit level. Accordingly, the Company reports as a single operating segment.

Stock-based Compensation

The Company measures the cost of employee services received in exchange for equity incentive awards, including stock options, employee stock purchase rights, restricted stock units and restricted stock awards based on the grant date fair value of the award. The Company uses the Black-Scholes valuation model to calculate the fair value of stock options and employee stock purchase rights granted to employees. The Company calculates the fair value of restricted stock units and restricted stock awards based on the fair market value of its Class A common stock on the grant date. Stock-based compensation expense is recognized over the period during which the employee is required to provide services in exchange for the award, which is usually the vesting period. The Company recognizes compensation expense over the vesting period using the straight-line method and classifies these amounts in the statements of operations based on the department to which the related employee reports.

Research and Development

Costs incurred in connection with the development of the Company's technology and future products are charged to research and development expense as incurred.

Income Taxes

The Company provides for income taxes utilizing the asset and liability approach of accounting for income taxes. Under this approach, deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid. Deferred taxes are presented net as noncurrent. The provision for income taxes generally represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Deferred taxes result from the differences between the financial and tax bases of the Company's assets and liabilities and are adjusted for changes in tax rates and tax laws when changes are enacted. Valuation allowances are recorded to reduce deferred tax assets when a judgment is made that is considered more likely than not that a tax benefit will not be realized. A decision to record a valuation allowance results in an increase in income tax expense or a decrease in income tax benefit. If the valuation allowance is released in a future period, income tax expense will be reduced accordingly.

The calculation of tax liabilities involves dealing with uncertainties in the application of complex global tax regulations. The impact of an uncertain income tax position is recognized at the largest amount that is "more likely than not" to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained. If the estimate of tax liabilities proves to be less than the ultimate assessment, a further charge to expense would result.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The Company continually assesses the need for a valuation allowance on the deferred tax asset by evaluating both positive and negative evidence that may exist. Any adjustment to the net deferred tax asset valuation allowance would be recorded in the income statement for the period that the adjustment is determined to be required.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity (net assets) of a business entity during a period from transactions and other events and circumstances from non-owner sources. Other comprehensive income (loss) includes certain changes in equity that are excluded from net income (loss), such as unrealized holding gains and losses on available-for-sale investments, net of tax, and translation gains and losses.

The following table summarizes the balances in accumulated other comprehensive income (loss) by component:

	Available for Sale Investments	Cumulative Translation Adjustments	Total
	(in thousands)		
Balance at December 31, 2015	$45	$ (867)	$(822)
Balance at December 31, 2016	$55	$ (1,615)	$(1,560)

Net Income (Loss) per Share

Basic net income (loss) per share is computed by dividing net income (loss) attributable to the Company by the weighted average number of shares of Class A and Class B common stock outstanding during the period. For diluted net income (loss) per share, net income attributable to the Company is divided by the sum of the weighted average number of shares of Class A and Class B common stock outstanding and the potential number of shares of dilutive Class A and Class B common stock outstanding during the period.

Litigation and Settlement Costs

Legal costs are expensed as incurred. The Company is involved in disputes, litigation and other legal actions in the ordinary course of business. The Company continually evaluates uncertainties associated with litigation and records a charge equal to at least the minimum estimated liability for a loss contingency when both of the following conditions are met: (i) information available prior to issuance of the financial statements indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statements and (ii) the loss or range of loss can be reasonably estimated.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued new accounting guidance related to revenue recognition. This new standard will replace all current U.S. GAAP guidance on this topic and eliminate all industry-specific guidance. The new revenue recognition standard provides a unified model to determine when and how revenue is recognized. The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. This guidance will be effective for the Company beginning in the first quarter of fiscal year 2018 and can be applied either retrospectively to each period presented or as a cumulative-effect adjustment as of the date of adoption. Adoption of the amendments in this guidance is expected to accelerate the timing of the Company’s revenue recognition on products sold via distributors which will change from the sell-through method to the sell-in method. The Company currently has no plans to alter its selling practices or terms of sales through distributors in anticipation of adoption of the amendments in this guidance. The Company has performed a preliminary assessment of the impact of adopting this new accounting standard on its consolidated financial position and results of operations and believes the change would not have a material impact on the Company's revenues for the year ending December 31, 2018 and comparative periods expected to be presented, based on the current volume and amount of distributor transactions. The Company plans to apply the guidance prospectively with an adjustment to retained earnings for the cumulative effect of adoption.

In July 2015, the FASB issued ASU No. 2015-11, Simplifying the Measurement of Inventory, which requires inventory to be subsequently measured using the lower of cost and net realizable value, and thereby eliminating the market value approach. The FASB has defined net realizable value to be the “estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation.” ASU 2015-11 is effective for the Company beginning in the first quarter of fiscal year 2017 and is applied prospectively. The adoption of the amendments in this update are not expected to have a material impact on the Company's consolidated financial position and results of operations.

In September 2015, the FASB issued ASU No. 2015-16, Business Combinations: Simplifying the Accounting for Measurement-Period Adjustments. To simplify the accounting for adjustments made to provisional amounts recognized in a business combination, the amendments in this update eliminate the requirement to retrospectively account for those adjustments and to revise comparative information for prior periods presented as a result of changes made to provisional amounts. Instead, those adjustments are recognized in the reporting period that the adjustments are determined. Those adjustments are required when new information is obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts initially recognized or would have resulted in the recognition of additional assets or liabilities. The amendments in this update also require an entity to present separately on the face of the income statement or disclose in the notes the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. The amendments in this update were effective for the Company beginning in the first quarter of fiscal year 2016, and were applied prospectively. The adoption of ASU No. 2015-16 by the Company in 2016 did not have a material impact on the Company’s consolidated financial position and results of operations.

In January 2016, the FASB issued ASU No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities. The amendments in this update include a requirement to measure equity investments (except equity method investments) at fair value with changes in fair value recognized in net income; previously changes in fair value were recognized in other comprehensive income. The amendments in this update are effective for the Company beginning in the first quarter of fiscal year 2018. The adoption of the amendments in this update are not expected to have a material impact on the Company's consolidated financial position and results of operations.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). The amendments in this update require a lessee to recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term for all leases with terms greater than twelve months. For leases less than twelve months, an entity is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expense for such leases generally on a straight-line basis over the lease term. The amendments in this update are effective for the Company for fiscal years beginning with fiscal year 2019, including interim periods within those years, with early adoption permitted. The Company is currently in the process of evaluating the impact of adoption of the amendments in this update on the Company’s consolidated financial position and results of operations; however, adoption of the amendments in this update is expected to have a material impact on the Company's consolidated financial position.

In March 2016, the FASB issued ASU No. 2016-08, Principal versus Agent Considerations (Reporting Revenue Gross versus Net) to clarify the revenue recognition implementation guidance on principal versus agent considerations. The amendments in this update clarify that when another party is involved in providing goods or services to a customer, an entity that is the principal has obtained control of a good or service before it is transferred to a customer, and provides indicators to assist an entity in determining whether it controls a specified good or service prior to the transfer to the customer. An entity that is the principal recognizes revenue in the gross amount of consideration to which it expects to be entitled in exchange for the specified good or service transferred to the customer, whereas an agent recognizes revenue in the amount of any fee or commission to which it expects to be entitled in exchange for arranging for the specified good or service to be provided by the other party. The amendments in this update are effective for the Company beginning in the first quarter of fiscal year 2018, concurrent with the new revenue recognition standard. The adoption of the amendments in this update are not expected to have a material impact on the Company's consolidated financial position and results of operations.

In March 2016, the FASB issued ASU No. 2016-09, Improvements to Share-Based Compensation to simplify certain aspects of accounting for share-based payment transactions associated with income taxes, classification as equity or liabilities, and classification on the statement of cash flows. The amendments in this update are effective for the Company for fiscal years beginning with fiscal year 2017, including interim periods within those years, with early adoption permitted. Early adoption, if elected, must be completed for all of the amendments in the same period. The new guidance requires, among other things, excess tax benefits and tax deficiencies to be recorded in the income statement in the provision for income taxes when awards vest or are settled. Also, because excess tax benefits are no longer recognized in additional paid-in capital, the assumed proceeds from applying the treasury stock method when computing earnings per share is amended to exclude the amount of excess tax benefits that would be recognized in additional paid-in capital. The Company adopted ASU No. 2016-09 during the quarter ended June 30, 2016, as previously described in the Company's Report on Form 10-Q for the period ended June 30, 2016 filed with the Securities Exchange Commission on August 8, 2016. For the year ended December 31, 2016, the impact of adoption on the Company's results of operations was to reduce the provision for income taxes and increase net income by $8.3 million and increase basic net income per share by $0.13, and increase diluted net income per share by $0.12. The increase to diluted net income per share includes the effect of the reduction of the tax provision and an increase in the number of incremental shares used in computing diluted EPS by 846,000 shares for the year ended December 31, 2016 (Note 2). Also, excess tax benefits have been included on a prospective basis as a non-cash reconciling item in the consolidated statement of operations for the year ended December 31, 2016; prior periods have not been adjusted.

There was no cumulative effect on retained earnings in the consolidated balance sheet since the Company has a full valuation allowance against U.S. deferred tax assets. The Company elected to continue to estimate forfeitures of share-based awards resulting in no impact to stock-based compensation expense, and is also continuing to classify cash paid by the Company when directly withholding shares for tax withholding purposes in cash flows from financing activities.

In August 2016, the FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments to eliminate the diversity in practice regarding the presentation and classification of certain cash receipts and cash payments, including, among other things, contingent consideration payments made following a business combination and proceeds from the settlement of insurance claims in the statement of cash flows. Cash payments not made soon after the acquisition date up to the amount of the contingent consideration liability recognized at the acquisition date should be classified as financing activities, with any excess payments classified as operating activities, whereas cash payments made soon after the acquisition date to settle the contingent consideration should be classified as investing activities. Cash proceeds received from settlement of insurance claims should be classified on the basis of the nature of the related losses. The amendments in this update are effective for the Company in fiscal years beginning with fiscal year 2017, including interim periods within those years, with early adoption permitted. The Company does not expect the adoption of the amendments in this update to have a material impact on its consolidated statement of cash flows.

In October 2016, the FASB issued ASU No. 2016-16, Income Taxes (Topic 740) to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. Current GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. The Board decided that an entity should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amendments in this update are effective for the Company beginning in the first quarter of fiscal 2018. The impact of adoption of the amendments in this update could be material depending on the size of any intra-entity transfers the Company may implement in 2018 and future periods.

2. Net Income (Loss) Per Share

Net income (loss) per share is computed as required by the accounting standard for earnings per share, or EPS. Basic EPS is calculated by dividing net income (loss) by the weighted-average number of common shares outstanding for the period, without consideration for common stock equivalents. Diluted EPS is computed by dividing net income (loss) by the weighted-average number of common shares outstanding for the period and the weighted-average number of dilutive common stock equivalents outstanding for the period determined using the treasury-stock method. For purposes of this calculation, common stock options, restricted stock units and restricted stock awards are considered to be common stock equivalents and are only included in the calculation of diluted EPS when their effect is dilutive.

As a result of the Company's adoption of ASU No. 2016-09 in the second quarter 2016, excess tax benefits and tax deficiencies are no longer recognized in additional paid-in capital. As a result, when computing diluted EPS using the treasury stock method, fewer hypothetical shares can be repurchased resulting in a greater number of incremental shares being issued upon the exercise of share-based payment awards. The impact of adoption of ASU No. 2016-09 for the year ended December 31, 2016 on diluted income (loss) per share (Note 1) is to increase net income by $8.3 million due to the inclusion of excess tax benefits in the provision for income taxes, and to increase the number of incremental shares used in computing diluted EPS by 846,000 shares, or an increase to diluted net income per share of $0.12 per share.

The Company has two classes of stock outstanding, Class A common stock and Class B common stock. The economic rights of the Class A common stock and Class B common stock, including rights in connection with dividends and payments upon a liquidation or merger are identical, and the Class A common stock and Class B common stock will be treated equally, identically and ratably, unless differential treatment is approved by the Class A common stock and Class B common stock, each voting separately as a class. The Company computes basic earnings per share by dividing net income (loss) by the weighted average number of shares of Class A and Class B common stock outstanding during the period. For diluted earnings per share, the Company divides net income (loss) by the sum of the weighted average number of shares of Class A and Class B common stock outstanding and the potential number of shares of dilutive Class A and Class B common stock outstanding during the period.

	Years Ended December 31,		
	2016	2015	2014
	(in thousands, except per share amounts)		
Numerator:			
Net income (loss)	$61,292	$(42,331)	$(7,041)
Denominator:			
Weighted average common shares outstanding—basic	63,781	53,378	36,472
Dilutive common stock equivalents	3,872	—	—
Weighted average common shares outstanding—diluted	67,653	53,378	36,472
Net income (loss) per share:			
Basic	$0.96	$(0.79)	$(0.19)
Diluted	$0.91	$(0.79)	$(0.19)

The Company excluded 0.8 million, 3.0 million and 3.1 million common stock equivalents resulting from outstanding equity awards for the year ended December 31, 2016, 2015 and 2014, respectively, from the calculation of diluted net income (loss) per share due to their anti-dilutive nature.

3. Business Combinations

Acquisition of Certain Assets and Assumption of Certain Liabilities of the Wireless Infrastructure Backhaul Business of Broadcom Corporation

On July 1, 2016, the Company consummated the transactions contemplated by an asset purchase agreement entered into with Broadcom Corporation. The Company paid cash consideration of $80.0 million for the purchase of certain assets of Broadcom's wireless infrastructure backhaul business, and the assumption of certain liabilities. The assets acquired include, among other things, digital baseband, radio frequency, or RF, and analog/mixed signal patents and other intellectual property, in-production and next-generation digital baseband and RF transceiver integrated circuit and reference platform designs, a workforce-in-place, and other intangible assets, as well as tangible assets that include but are not limited to production masks and other production related assets, inventory, and other property and equipment. The liabilities assumed include, among other things, product warranty obligations, liabilities related to technologies acquired, and a payable to Broadcom as reimbursement of costs associated with the termination of those employees of the wireless infrastructure backhaul business who were not hired by MaxLinear upon the closing of the acquisition. The acquired assets and assumed liabilities, together with the rehired employees, represent a business as defined in ASC 805, Business Combinations. The Company has integrated the acquired assets and rehired employees into the Company's existing business. The asset purchase agreement also contains customary representations, warranties and covenants, including non-competition, non-solicitation, and indemnification provisions.

The following is a preliminary allocation of purchase price as of the July 1, 2016 closing date based upon an estimate of the fair value of the assets acquired and the liabilities assumed by the Company in the acquisition:

Description	Amount (in thousands)
Fair value of consideration transferred:	
Cash	$ 80,000
Preliminary purchase price allocation:	
Inventory	$ 8,715
Other current assets	2,181
Property and equipment, net	1,616
Identifiable intangible assets	56,300
Accrued expenses and other current liabilities	(5,911)
Accrued compensation	(2,202)
Identifiable net assets acquired	60,699
Goodwill	19,301
Total purchase price	$ 80,000

The estimated fair value of assets acquired and liabilities assumed performed for the purposes of these consolidated financial statements was primarily limited to the preliminary identification and valuation of intangible assets and inventory by independent valuation specialists. Estimates of fair value require management to make significant estimates and assumptions that are preliminary and subject to change upon finalization of the valuation analysis. Although final determination may result in different asset and liability fair values, it is not expected that such differences will be material to understanding the impact of the transaction on the financial results of MaxLinear. The goodwill recognized is attributable primarily to the acquired workforce, expected synergies, and other benefits that MaxLinear believes will result from integrating the operations of the wireless infrastructure backhaul business with the operations of MaxLinear.

The fair value of inventories acquired included an acquisition accounting fair market value step-up of $5.3 million, which was fully amortized as of December 31, 2016. The Company recognized the $5.3 million amortization of inventory step-up in cost of sales in the consolidated statement of operations for the year ended December 31, 2016. The following table presents details of the identified intangible assets acquired of the wireless infrastructure backhaul business:

	Estimated Useful Life (in years)	Fair Value (in thousands)
Developed technology	7	$ 19,100
Customer relationships	2.5	12,200
Backlog	0.5	1,900
Covenants not-to-compete	3	800
Total finite-lived intangible assets	4.9	34,000
In-process research and development	n/a	22,300
Total intangible assets		$ 56,300

The Company used cash and cash equivalents on hand of $80.0 million to fund the acquisition.

Acquisition of Certain Assets and Assumption of Certain Liabilities of the Wireless Infrastructure Access Business of Microsemi Storage Solutions, Inc. (formerly known as PMC-Sierra, Inc.)

On April 28, 2016, the Company entered into an asset purchase agreement with Microsemi Storage Solutions, Inc., formerly known as PMC-Sierra, Inc., or Microsemi, and consummated the transactions contemplated by the asset purchase agreement. The Company paid cash consideration of $21.0 million for the purchase of certain wireless access assets of Microsemi's wireless infrastructure access business, and assumed certain liabilities. The assets acquired include, among other things, radio frequency and analog/mixed signal patents and other intellectual property, in-production and next-generation RF transceiver designs, a workforce-in-place, and other intangible assets, as well as tangible assets that include but are not limited to production masks and other production related assets, inventory, and other property, plant, and equipment. The liabilities assumed include, product warranty obligations, accrued vacation and severance obligations for employees of the wireless infrastructure access business that were hired by the Company upon close of the acquisition. The acquired assets and assumed liabilities, together with the rehired employees, represent a business as defined in ASC 805, Business Combinations. The Company has integrated the acquired assets and rehired employees into the Company's existing business. The asset purchase agreement also contains customary representations, warranties and covenants, including non-competition, non-solicitation, and indemnification provisions.

The following allocation of purchase price as of the April 28, 2016 closing date was based upon an estimate of the fair value of the assets acquired and the liabilities assumed by the Company in the acquisition:

Description	Amount (in thousands)
Fair value of consideration transferred:	
Cash	$ 21,000
Purchase price allocation:	
Inventory	$ 912
Property and equipment	21
Identifiable intangible assets	13,600
Warranty obligations	(12)
Accrued expenses	(456)
Identifiable net assets acquired	14,065
Goodwill	6,935
Total purchase price	$ 21,000

The fair value of assets acquired and liabilities assumed performed for the purposes of these consolidated financial statements was primarily limited to the identification and valuation of intangible assets and inventory by independent valuation specialists. The valuation analysis performed by independent valuation specialists was finalized during the period ended September 30, 2016. The goodwill recognized is attributable primarily to the acquired workforce, expected synergies, and other benefits that MaxLinear believes will result from integrating the operations of the wireless infrastructure access business with the operations of MaxLinear.

The fair value of inventories acquired included an acquisition accounting fair market value step-up of $0.3 million, which was fully amortized as of December 31, 2016. The Company recognized the $0.3 million amortization of inventory step-up in cost of sales in the consolidated statement of operations for the year ended December 31, 2016.

The following table presents details of the identified intangible assets acquired of the wireless infrastructure access business:

	Estimated Useful Life (in years)	Fair Value (in thousands)
Developed technology	7	$ 8,600
Customer relationships	2.7	3,100
Backlog	0.5	500
Covenants not-to-compete	3	100
Total finite-lived intangible assets	5.6	12,300
In-process research and development	n/a	1,300
Total intangible assets		$ 13,600

The Company used cash and cash equivalents on hand of $21.0 million to fund the acquisition.
The fair value of the identified intangible assets acquired from the wireless infrastructure access and backhaul businesses was estimated using an income approach. Under the income approach, an intangible asset's fair value is equal to the present value of future economic benefits to be derived from ownership of the asset. Indications of value are developed by discounting future net cash flows to their present value at market-based rates of return. More specifically, the fair value of the developed technology, IPR&D and backlog assets was determined using the multi-period excess earnings method, or MPEEM. MPEEM is an income approach to fair value measurement attributable to a specific intangible asset being valued from the asset grouping's overall cash-flow stream. MPEEM isolates the expected future discounted cash-flow stream to its net present value. Significant factors considered in the calculation of the developed technology and IPR&D intangible assets were the risks inherent in the development process, including the likelihood of achieving technological success and market acceptance. Each project was analyzed to determine the unique technological innovations, the existence and reliance on core technology, the existence of any alternative future use or current technological feasibility and the complexity, cost, and time to complete the remaining development. Future cash flows for each project were estimated based on forecasted revenue and costs, taking into account the expected product life cycles, market penetration, and growth rates. Developed technology will begin amortization immediately and IPR&D will begin amortization upon the completion of each project. If any of the projects are abandoned, the Company will be required to impair the related IPR&D asset.
In connection with the acquisition of the wireless infrastructure access and backhaul businesses, the Company has assumed liabilities related to product quality issues, warranty claims and contract obligations which are included in accrued expenses and other current liabilities in the purchase price allocations above.

The total goodwill recorded in connection with the acquisitions of the wireless infrastructure access and backhaul businesses was $6.9 million and $19.3 million, respectively. The Company does not expect to deduct any of the acquired goodwill for tax purposes.

The following table presents unaudited pro forma combined financial information for each of the periods presented, as if the acquisitions had occurred at the beginning of fiscal year 2015:

	Years Ended December 31,	
	2016	2015
	(in thousands)	
Net revenue – proforma combined	$398,845	$333,885
Net income (loss) – proforma combined	$58,189	$(85,908)

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MAXLINEAR, INC.
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(in thousands, except per share amounts and percentage data)

The following adjustments were included in the unaudited pro forma combined net revenues:

	Years Ended December 31,	
	2016	2015
	(in thousands)	
Net revenue	$387,832	$300,360
Add: Net revenue – acquired businesses	11,013	33,525
Net revenues – proforma combined	$398,845	$333,885

The following adjustments were included in the unaudited pro forma combined net income (loss):

	Years Ended December 31,	
	2016	2015
	(in thousands)	
Net income (loss)	$61,292	$(42,331)
Add: Results of operations – acquired businesses	(8,822)	(22,227)
Less: Proforma adjustments		
Depreciation of property and equipment	(397)	(797)
Amortization of intangible assets	(2,346)	(12,701)
Amortization of inventory step-up	5,641	(5,641)
Impairment of intangible assets	1,300	(1,300)
Acquisition and integration expenses	2,141	—
Income taxes	(620)	(911)
Net income (loss) – proforma combined	$58,189	$(85,908)
Net income (loss) per share – proforma combined:		
Basic	$0.91	$(1.61)
Diluted	$0.86	$(1.61)
Shares used to compute net income (loss) per share – proforma combined:		
Basic	63,781	53,378
Diluted	67,653	53,378

The pro forma combined financial information for the year ended December 31, 2015 includes aggregate non-recurring adjustments of $8.0 million consisting of amortization of inventory step-up and intangible assets of $5.6 million and $2.4 million, respectively, for which the related assets have useful lives of less than one year, and impairment of intangible assets of $1.3 million. The pro forma combined financial information is presented for illustrative purposes only and is not necessarily indicative of the consolidated results of operations of the consolidated business had the acquisitions actually occurred at the beginning of fiscal year 2015 or of the results of future operations of the consolidated business. The unaudited pro forma financial information does not reflect any operating efficiencies and cost saving that may be realized from the integration of the acquisitions in the Company's unaudited consolidated statements of operations.

For the year ended December 31, 2016, $15.4 million of revenue and $11.2 million of gross profit, excluding $7.8 million of amortization of acquired intangible assets and the inventory fair-value step-up of the wireless infrastructure access and backhaul businesses since the acquisition dates are included in the Company's consolidated statements of operations.

Acquisition and integration-related costs of $2.1 million related to the acquisitions of the wireless infrastructure access and backhaul businesses were included in selling, general, and administrative expenses in the Company's statement of operations for the year ended December 31, 2016.

Acquisition of Entropic Communications, Inc.
On April 30, 2015, the Company completed its acquisition of Entropic Communications, Inc., or Entropic, for aggregate consideration of $289.4 million, which was comprised of the equity value of shares of the Company's common stock that were issued in the transaction of $173.8 million, the portion of outstanding equity awards deemed to have been earned as of April 30, 2015 of $4.5 million and cash of $111.1 million.
In connection with the Company’s acquisition of Entropic and to address issues primarily relating to the integration of the Company and Entropic businesses, the Company entered into a restructuring plan. See Note 4.
Acquisition of Physpeed, Co., Ltd.
On October 31, 2014, the Company acquired 100% of the outstanding common shares of Physpeed Co., Ltd., or Physpeed, a privately held developer of high-speed physical layer interconnect products addressing enterprise and telecommunications infrastructure market applications. The Company paid $9.3 million in cash in exchange for all outstanding shares of capital stock and equity of Physpeed. Consideration payable of $1.1 million to the former shareholders of Physpeed was placed into escrow pursuant to the terms of the definitive merger agreement and was paid out as of December 31, 2015.
The following disclosures regarding this acquisition are for the years ended December 31, 2016 and 2015.
Compensation Arrangements
In connection with the acquisition of Physpeed, the Company has agreed to pay additional consideration in future periods. The definitive merger agreement provided for potential consideration of $1.7 million of held back merger proceeds for the former principal shareholders of Physpeed, which were paid over a two year period which ended October 2016 contingent upon continued employment. Certain employees of Physpeed were paid a total of $0.1 million of which $0.07 million was paid in 2015 and $0.05 million was paid in 2016. These payments were accounted for as transactions separate from the business combination as the payments are contingent upon continued employment and were recorded as post-combination compensation expense in the Company's financial statements during the service period.
Earn-Out
The definitive merger agreement also provides for potential earn-out consideration of up to $0.75 million to the former shareholders of Physpeed for the achievement of certain 2015 and 2016 revenue milestones. The contingent earn-out consideration had an estimated fair value of $0.3 million at the date of acquisition. The 2015 earn-out is determined by multiplying $0.375 million by a 2015 revenue percentage that is defined in the definitive merger agreement. The 2016 earn-out is determined by multiplying $0.375 million by a 2016 revenue percentage that is defined in the definitive merger agreement and was fully earned as of December 31, 2016. The fair value of the earn-out was $0.4 million and $0.4 million at December 31, 2016 and 2015, respectively. During the year ended December 31, 2016, the Company paid $0.2 million for the 2015 earn out (Note 6).
RSU Awards
The Company agreed to grant restricted stock units, or RSUs, under its equity incentive plan to Physpeed continuing employees if certain 2015 and 2016 revenue targets were met contingent upon continued employment. Qualifying revenues are the net revenues directly attributable to sales of Physpeed products or the Company’s provision of non-recurring engineering services exclusively with respect to the Physpeed products.
4. Restructuring Activity

During 2016, the Company approved and implemented a plan to restructure its internal operations including exiting certain leases and terminating 24 employees. Pursuant to the restructuring plan, the Company ceased use of certain offices. Accordingly, the Company recognized lease impairment charges of $0.2 million based on the adjustment to the net present value of the remaining lease obligations on the cease use date. The Company also recorded leasehold improvements and other property write offs of $0.1 million in connection with the office closures. The Company recognized associated employee separation charges of approximately $1.0 million in the year ended December 31, 2016 related to these terminations.

In connection with the Company's acquisition of Entropic, the Company approved and implemented a restructuring plan to address matters primarily relating to the integration of the Company and Entropic businesses. In connection with this plan, the Company terminated the employment of 87 Entropic employees during the year ended December 31, 2015. The Company recognized associated employee separation charges of approximately $5.5 million in the year ended December 31, 2015 related to these terminations. Included in these employee separation charges is $1.5 million of stock compensation for accelerated stock options and RSUs vesting due to double trigger change of control agreements and other special agreements in effect with certain Entropic employees.

Additionally, in connection with the restructuring plan, the Company ceased use of the majority of Entropic's former headquarters. Accordingly, the Company recognized lease impairment charges of $2.7 million in the year ended December 31, 2015 based on the net present value of the remaining lease obligation on the cease use date. The Company also recorded impairment charges of $5.2 million in the year ended December 31, 2015 related to leasehold improvements on the unused premises. During the year ended December 31, 2016, the Company recorded additional lease impairment charges of $2.0 million. This included adjustments to the estimates of net present value of the remaining lease obligation for actual sublease income and period costs associated with the Entropic lease, including commissions to brokers involved in subleasing property. Total sublease income for the year ended December 31, 2016 was approximately $1.3 million and related to leased facilities the Company ceased using as part of the Entropic restructuring plan.

The following table presents the activity related to the plans, which is included in restructuring charges in the consolidated statements of operations:

	Year Ended December 31, 2016	Year Ended December 31, 2015
	(in thousands)	
Employee separation expenses	$1,038	$ 5,533
Lease related impairment	2,264	8,163
Other	130	390
	$3,432	$ 14,086

The Company does not expect to incur additional material costs related to these restructuring plans.

The following table presents a roll-forward of the Company's restructuring liability for the years ended December 31, 2016 and 2015, which is included in accrued expenses and other current liabilities in the consolidated balance sheets:

	Employee Separation Expenses	Lease Related Impairment	Other	Total
	(in thousands)			
Liability as of December 31, 2014	$—	$ —	$ —	$ —
Acquisition	—	984	1,479	2,463
Restructuring charges	5,533	8,163	390	14,086
Cash payments	(3,913)	(1,645)	(284)	(5,842)
Non-cash charges	(1,545)	(5,472)	(274)	(7,291)
Liability as of December 31, 2015	75	2,030	1,311	3,416
Restructuring charges	1,038	2,264	130	3,432
Cash payments	(1,047)	(4,039)	(1,338)	(6,424)
Non-cash charges	(66)	244	(66)	112
Liability as of December 31, 2016	$—	$ 499	$ 37	$ 536

5. Goodwill and Intangible Assets

Goodwill

Goodwill arises from the acquisition method of accounting for business combinations and represents the excess of the purchase price over the fair value of the net assets and other identifiable intangible assets acquired. The fair values of net tangible assets and intangible assets acquired are based upon preliminary valuations and the Company's estimates and assumptions are subject to change within the measurement period (potentially up to one year from the acquisition date). As of December 31, 2016, the Company completed its purchase price allocation for the acquisition of the wireless infrastructure access business.

The following table presents the changes in the carrying amount of goodwill for the periods indicated:

	Years Ended December 31,	
	2016	2015
	(in thousands)	
Beginning balance	$49,779	$1,201
Acquisition of wireless infrastructure access business	6,935	—
Acquisition of wireless infrastructure backhaul business	19,301	—
Acquisition of Entropic	—	48,578
Ending balance	$76,015	$49,779

The Company performs an annual impairment assessment on October 31st each year. In evaluating goodwill, the Company utilizes a qualitative assessment, i.e., the “Step 0 Test,” as a precursor to the two-step quantitative process. If the Company fails the Step 0 Test, it proceeds to test for impairment using the two-step method. Step one is the identification of potential impairment. This involves comparing the fair value of each reporting unit, which the Company has determined to be the entity itself, with its carrying amount, including goodwill. If the fair value of a reporting unit exceeds the carrying amount, the goodwill of the reporting unit is considered not impaired and the second step of the impairment test is unnecessary. If the carrying amount of a reporting unit exceeds its fair value, the second step of the impairment test is performed to measure the amount of impairment loss, if any.

Using the Step 0 Test, the Company assessed qualitative factors to determine that it is more likely than not that the fair value of the reporting unit is not less than its carrying value. Based on our review of these qualitative factors and their respective weightings, we determined there were no indications of impairment associated with goodwill. As a result, no goodwill impairment was recognized as of October 31, 2016. In addition to its annual review, the Company performs a test of impairment when indicators of impairment are present. As of December 31, 2016, there were no indications of impairment of the Company's goodwill balances.

Acquired Intangibles

Finite-lived Intangible Assets

The following table sets forth the Company's finite-lived intangible assets resulting from business acquisitions and technology licenses purchased, which continue to be amortized:

		December 31, 2016			December 31, 2015		
	Weighted Average Useful Life (in Years)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Value	Accumulated Amortization	Net Carrying Amount
		(in thousands)					
Licensed technology	3	$3,311	$ (2,957)	$ 354	$2,921	$ (2,725)	$ 196
Developed technology	7	77,800	(13,550)	64,250	47,000	(4,652)	42,348
Trademarks and trade names	7	1,700	(405)	1,295	1,700	(162)	1,538
Customer relationships	3.7	20,000	(4,782)	15,218	4,700	(627)	4,073
Covenants non-compete	3	900	(156)	744	—	—	—
Backlog	0.5	26,600	(26,600)	—	24,200	(24,200)	—
		$130,311	$ (48,450)	$ 81,861	$80,521	$ (32,366)	$ 48,155

The amortization expense related to intangible assets for the years ended December 31, 2016, 2015 and 2014 was $16.1 million, $29.9 million and $0.4 million, respectively.

The following table sets forth the Company's activities related to finite-lived intangible assets resulting from acquisitions, other additions, transfers to developed technology from IPR&D, and the related amortization of acquired finite-lived intangible assets:

	Years Ended December 31,	
	2016	2015
	(in thousands)	
Beginning balance	$48,155	$3,086
Acquisition of Entropic	—	74,200
Acquisition of wireless infrastructure access business	12,300	—
Acquisition of wireless infrastructure backhaul business	34,000	—
Other additions	390	100
Transfers to developed technology from IPR&D	3,100	700
Amortization	(16,084)	(29,931)
Ending balance	$81,861	$48,155

The Company regularly reviews the carrying amount of its long-lived assets subject to depreciation and amortization, as well as the useful lives, to determine whether indicators of impairment may exist which warrant adjustments to carrying values or estimated useful lives. An impairment loss would be recognized when the sum of the expected future undiscounted net cash flows is less than the carrying amount of the asset. Should impairment exist, the impairment loss would be measured based on the excess of the carrying amount of the asset over the asset's fair value. During the year ended December 31, 2016, no impairment losses related to finite-lived intangible assets were recognized.

The following table presents future amortization of the Company's finite-lived intangible assets at December 31, 2016:

	Amortization (in thousands)
2017	$ 18,803
2018	18,786
2019	12,485
2020	11,670
2021	11,293
Thereafter	8,824
Total	$ 81,861

Indefinite-lived Intangible Assets

The following table sets forth the Company's activities related to the indefinite-lived intangible assets resulting from additions to IPR&D through acquisitions, transfers to developed technology from IPR&D and impairment losses:

	Years Ended December 31,	
	2016	2015
	(in thousands)	
Beginning balance	$3,200	$7,300
Acquisition of Entropic	—	18,200
Acquisition of wireless infrastructure access business	1,300	—
Acquisition of wireless infrastructure backhaul business	22,300	—
Transfers to developed technology from IPR&D	(3,100)	(700)
Impairment losses	$(1,300)	$(21,600)
Ending balance	$22,400	$3,200

Impairment losses from indefinite lived intangible assets of $1.3 million for the year ended December 31, 2016 are related to the Company's abandonment of IPR&D of the wireless infrastructure access business and were recognized in the quarter ended September 30, 2016. The Company performs its annual assessment of indefinite-lived intangible assets on October 31 each year, utilizing a qualitative test as a precursor to the quantitative test comparing the fair value of the assets with their carrying amount. Based on the qualitative test, if it is more likely than not that indicators of impairment exists, the Company proceeds to perform a quantitative analysis. Based on the Company's assessment as of October 31, 2016, no additional impairment of indefinite-lived intangible assets was recorded during the year ended December 31, 2016.

The Company recorded $21.6 million in IPR&D impairment losses during the year ended December 31, 2015. The Company recorded a $17.8 million impairment loss for its CSS/FBC IPR&D asset, which was transferred to developed technology on October 31, 2015. This intangible asset was obtained through the Entropic acquisition, having an initial fair value of $18.1 million. Due to updated customer demand information obtained in the fourth quarter, the Company revised its net revenue forecast and utilized the relief-from-royalty method to determine the fair value of the asset. In addition, the Company fully impaired its CDR IPR&D asset, which contributed to a $3.8 million impairment loss. This asset was obtained as part of the Physpeed acquisition with an initial fair value of $3.8 million.

6. Financial Instruments

The composition of financial instruments is as follows:

	December 31, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(in thousands)			
Assets				
Money market funds	$39,181	$ —	$ —	$39,181
Government debt securities	28,025	—	(32)	27,993
Corporate debt securities	25,923	—	(7)	25,916
	93,129	—	(39)	93,090
Less amounts included in cash and cash equivalents	(39,181)	—	—	(39,181)
	$53,948	$ —	$ (39)	$53,909

	Fair Value at December 31, 2016 (in thousands)
Liabilities	
Contingent consideration	$ 375

	December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(in thousands)			
Assets				
Money market funds	$17,144	$ —	$ —	$17,144
Government debt securities	17,303	—	(30)	17,273
Corporate debt securities	45,353	—	(84)	45,269
	79,800	—	(114)	79,686
Less amounts included in cash and cash equivalents	(17,144)	—	—	(17,144)
	$62,656	$ —	$ (114)	$62,542

	Fair Value at December 31, 2015 (in thousands)
Liabilities	
Contingent consideration	$ 395

As of December 31, 2016, the Company held 25 government and corporate debt securities with an aggregate fair value of $42.2 million that were in an unrealized loss position for less than 12 months. The gross unrealized losses of $0.04 million at December 31, 2016 represent temporary impairments on government and corporate debt securities related to multiple issuers, and were primarily caused by fluctuations in U.S. interest rates. The Company evaluates securities for other-than-temporary impairment on a quarterly basis. Impairment is evaluated considering numerous factors, and their relative significance varies depending on the situation. Factors considered include the length of time and extent to which fair value has been less than the cost basis, the financial condition and near-term prospects of the issuer;

including changes in the financial condition of the security's underlying collateral; any downgrades of the security by a rating agency; nonpayment of scheduled interest, or the reduction or elimination of dividends; as well as our intent and ability to hold the security in order to allow for an anticipated recovery in fair value.

All of the Company's long-term available-for-sale securities were due between 1 and 2 years as of December 31, 2016.
The fair values of the Company's financial instruments are the amounts that would be received in an asset sale or paid to transfer a liability in an orderly transaction between unaffiliated market participants and are recorded using a hierarchal disclosure framework based upon the level of subjectivity of the inputs used in measuring assets and liabilities. The levels are described below:
Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities.
Level 2: Observable prices that are based on inputs not quoted on active markets, but corroborated by market data.
Level 3: Unobservable inputs are used when little or no market data is available.
The Company classifies its financial instruments within Level 1 or Level 2 of the fair value hierarchy on the basis of valuations using quoted market prices or alternate pricing sources and models utilizing market observable inputs, respectively. The Company's money market funds were valued based on quoted prices for the specific securities in an active market and were therefore classified as Level 1. The government and corporate debt securities have been valued on the basis of valuations provided by third-party pricing services, as derived from such services' pricing models. The pricing services may use a consensus price which is a weighted average price based on multiple sources or mathematical calculations to determine the valuation for a security, and have been classified as Level 2. The Company reviews Level 2 inputs and fair value for reasonableness and the values may be further validated by comparison to independent pricing sources. In addition, the Company reviews third-party pricing provider models, key inputs and assumptions and understands the pricing processes at its third-party providers in determining the overall reasonableness of the fair value of its Level 2 financial instruments. As of December 31, 2016 and 2015, the Company has not made any adjustments to the prices obtained from its third party pricing providers. The contingent liability is classified as Level 3 as of December 31, 2016 and 2015 and is valued using an internal rate of return model. The assumptions used in preparing the internal rate of return model include estimates for future revenues related to Physpeed products and services and a discount factor of 1 at December 31, 2016 and 0.41 at December 31, 2015. The assumptions used in preparing the internal rate of return model include estimates for outcome if milestone goals are achieved, the probability of achieving each outcome and discount rates. Significant changes in any of the unobservable inputs used in the fair value measurement of contingent consideration in isolation could result in a significantly lower or higher fair value. A change in estimated future revenues would be accompanied by a directionally similar change in fair value.
The following table presents a summary of the Company's financial instruments that are measured on a recurring basis:

		Fair Value Measurements at December 31, 2016		
	Balance at December 31, 2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in thousands)			
Assets				
Money market funds	$39,181	$39,181	$ —	$ —
Government debt securities	27,993	—	27,993	—
Corporate debt securities	25,916	—	25,916	—
	$93,090	$39,181	$ 53,909	$ —
Liabilities				

Contingent consideration	$375	$—	$ —	$ 375
	$375	$—	$ —	$ 375

	Fair Value Measurements at December 31, 2015			
	Balance at December 31, 2015	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in thousands)			
Assets				
Money market funds	$17,144	$17,144	$ —	$ —
Government debt securities	17,273	—	17,273	—
Corporate debt securities	45,269	—	45,269	—
	$79,686	$17,144	$ 62,542	$ —
Liabilities				
Contingent consideration	$395	$—	$ —	$ 395
	$395	$—	$ —	$ 395

The following summarizes the activity in Level 3 financial instruments:

	Fair Value at December 31,	
	2016	2015
	(in thousands)	
Contingent Consideration [1]		
Beginning balance	$395	$265
Physpeed earn-out payment	(240)	—
Loss recognized in earnings [2]	220	130
Ending balance	$375	$395
Net loss for the period included in earnings attributable to contingent consideration held at the end of the period:	$220	$130

(1) In connection with the acquisition of Physpeed, the Company recorded contingent consideration based upon the expected achievement of certain 2015 and 2016 revenue milestones. Changes to the fair value of contingent consideration due to changes in assumptions used in preparing the valuation model are recorded in selling, general and administrative expense in the statements of operations.

(2) Changes to the estimated fair value of contingent consideration were primarily due to revisions to the Company's expectations of earn-out achievement.

There were no transfers between Level 1, Level 2 or Level 3 securities in the years ended December 31, 2016 and 2015.

7. Balance Sheet Details

Cash and cash equivalents and investments consist of the following:

	December 31, 2016	December 31, 2015
	(in thousands)	
Cash and cash equivalents	$82,896	$67,956

Short-term investments	47,918	43,300
Long-term investments	5,991	19,242
	$136,805	$130,498

Inventory consists of the following:

	December 31, 2016	December 31, 2015
	(in thousands)	
Work-in-process	$13,947	$ 15,713
Finished goods	12,636	16,730
	$26,583	$ 32,443

Property and equipment consist of the following:

	Useful Life (in Years)	December 31, 2016	December 31, 2015
		(in thousands)	
Furniture and fixtures	5	$1,983	$2,458
Machinery and equipment	3 -5	27,028	23,679
Masks and production equipment	2	9,153	8,062
Software	3	3,625	3,017
Leasehold improvements	1 -5	11,635	9,573
Construction in progress	N/A	39	62
		53,463	46,851
Less accumulated depreciation and amortization		(32,914)	(24,993)
		$20,549	$21,858

Deferred revenue and deferred profit consist of the following:

	December 31, 2016	December 31, 2015
	(in thousands)	
Deferred revenue—rebates	$464	$ 118
Deferred revenue—distributor transactions	7,987	5,695
Deferred cost of net revenue—distributor transactions	(2,460)	(1,747)
	$5,991	$ 4,066

Accrued price protection liability consists of the following activity:

	Years Ended December 31, 2016	2015
	(in thousands)	
Beginning balance	$20,026	$10,018
Additional liability from acquisition	—	3,486
Charged as a reduction of revenue	43,931	39,304
Reversal of unclaimed rebates	(1,303)	(158)
Payments	(47,478)	(32,624)
Ending balance	$15,176	$20,026

Accrued expenses and other current liabilities consist of the following:

	December 31, 2016	December 31, 2015
	(in thousands)	
Accrued technology license payments	$5,850	$ 3,000
Accrued professional fees	1,620	1,196
Accrued engineering and production costs	1,232	826
Accrued restructuring	536	3,416
Accrued royalty	846	2,042
Accrued leases	1,560	—
Accrued customer credits	1,207	951
Other	3,507	3,937
	$16,358	$ 15,368

8. Stock-Based Compensation and Employee Benefit Plans

Common Stock

At December 31, 2016, the Company had 500 million authorized shares of Class A common stock and 500 million authorized shares of Class B common stock. Holders of the Company's Class A and Class B common stock have identical voting rights, except that holders of Class A common stock are entitled to one vote per share and holders of Class B common stock are entitled to ten votes per share with respect to transactions that would result in a change of control of the Company or that relate to the Company's equity incentive plans. In addition, holders of Class B common stock have the exclusive right to elect two members of the Company's Board of Directors, each referred to as a Class B Director. The shares of Class B common stock are not publicly traded. Each share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock and in most instances automatically converts upon sale or other transfer. On March 29, 2017, each share of the Company's then outstanding Class A common stock and Class B common stock will convert automatically into a single class of common stock pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation. Following the conversion, each share of common stock will be entitled to one vote per share and otherwise have the same designations, rights, powers and preferences as the Class A common stock prior to the conversion. In addition, holders of the common stock will vote as a single class of stock on any matter that is submitted to a vote of stockholders.

Employee Benefit Plans

At December 31, 2016, the Company had stock-based compensation awards outstanding under the following plans: the 2004 Stock Plan, the 2010 Equity Incentive Plan, as amended, or 2010 Plan, and the 2010 Employee Stock Purchase Plan, or ESPP, as well as the following former Entropic plans: the RF Magic 2000 Incentive Stock Plan, the 2001 Stock Option Plan, the 2007 Equity Incentive Plan, the 2007 Non-Employee Director's Plan and the 2012 Inducement Award Plan. All current stock awards are issued under the 2010 Plan and ESPP.

2010 Equity Incentive Plan

The 2010 Plan provides for the grant of incentive stock options, non-statutory stock options, restricted stock awards, restricted stock unit awards, stock appreciation rights, performance-based stock awards, and other forms of equity compensation, or collectively, stock awards. The aggregate number of shares of Class A common stock that may be issued pursuant to stock awards under the 2010 Plan will increase by any shares subject to stock options or other awards granted under the 2004 Stock Plan that expire or otherwise terminate without having been exercised in full and shares issued pursuant to awards granted under the 2004 Stock Plan that are forfeited to or repurchased by the Company. In addition, the number of shares of common stock reserved for issuance will automatically increase on the first day of each fiscal year, equal to the lesser of: 2,583,311 shares of the Company's Class A common stock; four percent (4%) of the outstanding shares of the Company's Class A common stock and Class B common stock on the last day of the immediately preceding fiscal year; or such lesser amount as the Company's board of directors may determine. Options granted will generally vest over a four year period and the term can be from seven to ten years. As of December 31, 2016, the number of shares reserved for issuance under the 2010 Plan is 10,689,175 shares.

2010 Employee Stock Purchase Plan

The ESPP authorizes the issuance of shares of the Company's Class A common stock pursuant to purchase rights granted to the Company's employees. The number of shares of the Company's common stock reserved for issuance will automatically increase on the first day of each fiscal year, equal to the least of: 968,741 shares of the Company's Class A common stock; one and a quarter percent (1.25%) of the outstanding shares of the Company's Class A common stock and Class B common stock on the first day of the fiscal year; or such lesser amount as may be determined by the Company's board of directors or a committee appointed by the Company's board of directors to administer the ESPP. The ESPP is implemented through a series of offerings of purchase rights to eligible employees. Under the ESPP, the Company may specify offerings with a duration of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of the Company's common stock will be purchased for employees participating in the offering. An offering may be terminated under certain circumstances. Generally, all regular employees, including executive officers, employed by the Company may participate in the ESPP and may contribute up to 15% of their earnings for the purchase of the Company's common stock under the ESPP. Unless otherwise determined by the Company's board of directors, Class A common stock will be purchased for accounts of employees participating in the ESPP at a price per share equal to the lower of (a) 85% of the fair market value of a share of the Company's Class A common stock on the first date of an offering or (b) 85% of the fair market value of a share of the Company's Class A common stock on the date of purchase. As of December 31, 2016, the number of shares of common stock reserved for issuance under the ESPP is 967,545 shares.

Employee Incentive Bonus

In April 2012, the Company's compensation committee amended its Executive Incentive Bonus Plan to, among other things, permit the settlement of awards under the plan in the form of shares of its Class A common stock. In May 2013, the Company's compensation committee amended its Executive Incentive Bonus Plan to permit the settlement of awards under the plan in any combination of cash or shares of its Class A common stock. Additionally, the Company settles a majority of bonus awards for all other employees in Class A common stock. When awards under the Executive Incentive Bonus Plan are settled in Class A common stock issued under the 2010 Equity Incentive Plan, the number of shares issuable to plan participants is determined based on the closing sales price of the Company's Class A common stock as determined in trading on the New York Stock Exchange on the date approved by the Board of Directors. In August 2016, the Company issued 0.2 million freely-tradable shares of its Class A common stock in settlement of bonus awards to employees, including executives, for the January 1, 2016 to June 30, 2016 performance period. In May 2016, the Company issued 0.2 million shares of its Class A common stock in settlement of bonus awards to employees, including executives, for the July 1, 2015 to December 31, 2015 performance period. In August 2015, the Company issued 0.3 million freely-tradable shares of our Class A common stock in settlement of bonus awards to employees, including executives, for the January 1, 2015 to June 30, 2015 performance period. In May 2015, the Company issued 0.2 million freely-tradable shares of our Class A common stock in settlement of bonus awards to employees, including executives, for the fiscal 2014 performance period. At December 31, 2016, an accrual of $3.8 million was recorded for bonus awards for employees for the July 1, 2016 to December 31, 2016 performance period, which the Company intends to settle in shares of its Class A common stock to be issued under its 2010 Equity Incentive Plan, as amended, with the number of shares issuable to plan participants determined based on the closing sales price of the Company's Class A common stock as determined in trading on the New York Stock Exchange at a date to be determined. The Company's compensation committee retains discretion to effect payment in cash, stock, or a combination of cash and stock.

Stock-Based Compensation

Stock-based compensation expense is classified in the consolidated statements of operations based on the department to which the related employee reports. The Company recognized stock-based compensation in the statements of operations as follows:

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Cost of net revenue	$210	$213	$131
Research and development	14,403	13,205	9,686
Selling, general and administrative	7,152	5,850	5,191
	$21,765	$19,268	$15,008

The total unrecognized compensation cost related to unvested stock options as of December 31, 2016 was $0.7 million, and the weighted average period over which these equity awards are expected to vest is 0.90 years. The total unrecognized compensation cost related to unvested restricted stock units and restricted stock awards as of December 31, 2016 was $44.1 million, and the weighted average period over which these equity awards are expected to vest is 2.67 years.

Stock Options

The Company uses the Black-Scholes valuation model to calculate the fair value of stock options and employee stock purchase rights granted to employees. Stock-based compensation expense is recognized over the vesting period using the straight-line method.

The fair values of stock options and employee stock purchase rights (related to the Company's ESPP) were estimated at their respective grant date using the following assumptions:

Stock Options

	Years Ended December 31,		
	2016 [1]	2015 [1]	2014
Weighted-average grant date fair value per share	N/A	N/A	$4.03
Risk-free interest rate	N/A	N/A	1.70 %
Dividend yield	N/A	N/A	— %
Expected life (in years)	N/A	N/A	4.56
Volatility	N/A	N/A	51.00 %

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[1] No options were granted during the years ended December 31, 2016 and 2015.

Cash received from exercise of stock options was $3.6 million, $8.2 million and $0.3 million during the year ended December 31, 2016, 2015 and 2014, respectively. The tax benefit from stock options exercised was $5.7 million, $6.1 million and $0.4 million during the year ended December 31, 2016, 2015 and 2014, respectively.

Employee Stock Purchase Rights

	Years Ended December 31,		
	2016	2015	2014
Weighted-average grant date fair value per share	$5.85 - $6.20	$2.25 - $5.02	$2.03 - $2.47
Risk-free interest rate	0.38 - 0.6%	0.09 - 0.33%	0.05 - 0.07%
Dividend yield	— %	— %	— %
Expected life (in years)	0.50	0.50	0.50
Volatility	49.94 - 53.94%	32.65 - 59.14%	47.75 - 46.82%

The risk-free interest rate assumption was based on the United States Treasury's rates for U.S. Treasury zero-coupon bonds with maturities similar to those of the expected term of the award being valued. The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. The weighted-average expected life of options was calculated using the simplified method as prescribed by guidance provided by the SEC. This decision was based on the lack of historical data due to the Company's limited number of stock option exercises under the 2010 Equity Incentive Plan.

A summary of the Company's stock option activity is as follows:

	Number of Options (in thousands)	Weighted-Average Exercise Price	Weighted-Average Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2015	3,572	$ 6.83		
Granted [1]	—	N/A		
Exercised	(492)	5.13		
Canceled	(55)	24.15		
Outstanding at December 31, 2016	3,025	$ 6.78	2.73	$ 45,603
Vested and expected to vest at December 31, 2016	3,018	$ 6.78	2.73	$ 45,522
Exercisable at December 31, 2016	2,760	$ 6.65	2.62	$ 41,991

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[1] No options were granted during 2016.

The intrinsic value of stock options exercised during 2016, 2015 and 2014 was $6.5 million, $6.6 million and $0.6 million, respectively.

Restricted Stock Units and Restricted Stock Awards

The Company calculates the fair value of restricted stock units and restricted stock awards based on the fair market value of the Company's Class A common stock on the grant date. Stock-based compensation expense is recognized over the vesting period using the straight-line method.

A summary of the Company's restricted stock unit and restricted stock award activity is as follows:

	Number of Shares (in thousands)	Weighted-Average Grant-Date Fair Value per Share
Outstanding at December 31, 2015	3,642	$ 9.19
Granted	2,932	18.83
Vested	(2,308)	11.32
Canceled	(596)	13.55
Outstanding at December 31, 2016	3,670	14.67

9. Income Taxes

The domestic and international components of income (loss) before provision (benefit) from income taxes are presented as follows:

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Domestic	$75,778	$(44,094)	$(9,631)
Foreign	(12,088)	1,188	886
Income (loss) before income taxes	$63,690	$(42,906)	$(8,745)

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(in thousands, except per share amounts and percentage data)

The provision (benefit) for income taxes consists of the following:

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Current:			
Federal	$1,216	$—	$—
State	(11)	16	1
Foreign	1,092	942	577
Total current	2,297	958	578
Deferred:			
Federal	17,492	(13,759)	(3,341)
State	(8,271)	(1,034)	253
Foreign	(2,459)	126	54
Valuation allowance release due to acquisition	—	(1,757)	(2,335)
Change in valuation allowance	(6,661)	14,891	3,087
Total deferred	101	(1,533)	(2,282)
Total income tax provision (benefit)	$2,398	$(575)	$(1,704)

The actual provision (benefit) for income taxes differs from the amount computed using the federal statutory rate as follows:

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Provision (benefit) at statutory rate	$22,294	$(14,588)	$(2,973)
State income taxes (net of federal benefit)	(13)	275	(391)
Research and development credits	(9,076)	(2,083)	(66)
Foreign rate differential	2,888	(62)	(31)
Stock compensation	(5,756)	549	609
Foreign deemed dividend	51	279	—
Transaction costs	749	1,329	—
Uncertain tax positions	(1,204)	600	304
Foreign tax credits	(72)	(144)	—
Permanent and other	(802)	96	92
Valuation allowance release due to acquisition	—	(1,757)	(2,335)
Valuation allowance	(6,661)	14,931	3,087
Total provision (benefit) for income taxes	$2,398	$(575)	$(1,704)

The components of the deferred income tax assets are as follows:

	December 31,	
	2016	2015
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$19,524	$27,996
Research and development credits	58,170	48,531
Accrued expenses and other	13,387	13,654
Accrued compensation	2,073	1,747
Stock-based compensation	3,451	4,245
Intangible assets	8,575	7,198
	105,180	103,371
Less valuation allowance	(100,284)	(98,535)
	4,896	4,836
Deferred tax liabilities:		
Fixed assets	(2,202)	(2,322)
Unremitted foreign earnings	(2,909)	(2,628)
Net deferred tax liabilities	$(215)	$(114)

At December 31, 2016, the Company had federal, state and foreign tax net operating loss carryforwards of approximately $38.1 million, $39.3 million and $14.7 million, respectively. The federal and state tax loss carryforwards will begin to expire in 2020 and 2019, respectively, unless previously utilized. The foreign net operating loss carryforwards may be carried forward indefinitely provided certain requirements are met.

At December 31, 2016, the Company had federal and state tax credit carryforwards of approximately $33.6 million and $43.5 million, respectively. The federal tax credit carryforward will begin to expire in 2020, unless previously utilized. The state tax credits do not expire. In addition, the Company has federal alternative minimum tax credit carryforwards of $1.0 million that can be carried forward indefinitely.

The Company evaluated its net deferred income taxes, which included an assessment of the cumulative income or loss over the prior three-year period and future periods, to determine if a valuation allowance is required. After considering its recent history of losses, the Company recorded a valuation allowance on its net federal deferred tax assets. During 2016, the Company maintained a valuation allowance against all of its federal and state deferred tax assets as realization of such assets does not meet the more-likely-than-not threshold required under accounting guidelines. The Company also placed a valuation allowance on the foreign deferred tax assets of a newly formed entity. The Company will continue to assess the need for a valuation allowance on the deferred tax assets by evaluating positive and negative evidence that may exist. The valuation allowance during 2016 related to operations decreased by $6.7 million.

The Company adopted ASU No. 2016-09 in the second quarter of 2016, which is more fully described in Note 1. The new guidance requires, among other things, excess tax benefits and tax deficiencies to be recorded in the income statement in the provision for income taxes when awards vest or are settled. For the year ended December 31, 2016, the impact of adoption on the Company's results of operations was to reduce the provision for income taxes and increase net income by $8.3 million. Upon adoption, the Company had excess tax benefits for which a benefit could not be previously recognized of approximately $8.1 million; however, there was no cumulative effect on retained earnings in the consolidated balance sheet since the Company has a full valuation allowance against U.S. deferred tax assets.

At December 31, 2016, the Company’s unrecognized tax benefits totaled $23.4 million, $17.1 million of which, if recognized at a time when the valuation allowance no longer exists, would affect the effective tax rate. The Company will recognize interest and penalties related to unrecognized tax benefits as a component of income tax expense. At December 31, 2016, the Company had accrued approximately $0.2 million of interest and penalties. The Company expects decreases to its unrecognized tax benefits of $0.2 million within the next twelve months.

The following table summarizes the changes to the unrecognized tax benefits during 2016, 2015 and 2014:

	(in thousands)
Balance as of December 31, 2013	$ 5,462
Additions based on tax positions related to the current year	3,158
Additions based on tax positions of prior years	2,188
Balance as of December 31, 2014	10,808
Additions based on tax positions related to the current year	2,585
Additions related to acquisition	13,733
Decreases based on tax positions of prior year	(1,073)
Balance as of December 31, 2015	$ 26,053
Additions based on tax positions related to the current year	2,025
Decreases based on tax positions of prior year	(4,661)
Balance as of December 31, 2016	$ 23,417

The Company is subject to federal and state income tax in the United States and is also subject to income tax in certain other foreign tax jurisdictions. At December 31, 2016, the Company is no longer subject to federal, state or foreign income tax examinations for the years before 2013, 2012 and 2009, respectively. However, to the extent allowed by law, the tax authorities may have the right to examine prior periods where net operating losses or tax credits were generated and carried forward, and make adjustments up to the amount of the net operating loss or credit carryforward amount.

At December 31, 2013, the Company was under examination by the federal tax authorities for the tax years 2010 and 2011. This examination closed in January 2014. The impact of any adjustments was reflected in 2013. The Company is not currently under federal, state or foreign examination.

On January 2, 2013, the American Taxpayer Relief Act of 2012 was enacted. The Act included several provisions related to corporate income tax including the reinstatement of the credit for qualified research and development. The credit was reinstated for years beginning after January 1, 2012. On December 19, 2014, the Tax Increase Prevention Act was enacted. The Act included several business tax provisions including the extension of the credit for qualified research and development through 2014. On December 18, 2015, the Protecting Americans from Tax Hikes Act of 2015 was enacted. The Act included several business tax provisions including the permanent extension of the credit for qualified research and development.

10. Employee Retirement Plan

The Company has a 401(k) defined contribution retirement plan (the 401(k) Plan) covering all eligible employees. Participants may voluntarily contribute on a pre-tax basis an amount not to exceed a maximum contribution amount pursuant to Section 401(k) of the Internal Revenue Code. The Company is not required to contribute, nor has it contributed, to the 401(k) Plan for any of the periods presented.

11. Commitments and Contingencies

Lease Commitments and Other Contractual Obligations

The Company leases facilities and certain equipment under operating lease arrangements expiring at various years through fiscal 2022. As of December 31, 2016, future minimum payments under non-cancelable operating leases, other obligations and inventory purchase obligations are as follows:

	Operating Leases	Inventory Purchase Obligations	Other Obligations	Total
	(in thousands)			
2017	$8,123	$ 30,464	$ 4,939	$43,526
2018	6,268	—	910	7,178
2019	6,961	—	14	6,975
2020	6,357	—	—	6,357
2021	6,300	—	—	6,300
Thereafter	1,592	—	—	1,592
Total minimum payments	$35,601	$ 30,464	$ 5,863	$71,928

The total rental expense for all operating leases was $2.9 million, $2.4 million and $1.7 million for the years ended December 31, 2016, 2015 and 2014, respectively.

The Company has subleased certain facilities that it ceased using in connection with a restructuring plan (Note 4). Such subleases expire at various years through fiscal 2022. As of December 31, 2016, future minimum rental income under no-cancelable subleases are as follows:

	Amount (in thousands)
2017	$ 2,144
2018	2,362
2019	2,927
2020	3,392
2021	3,511
Thereafter	293
Total minimum rental income	$ 14,629

CrestaTech Litigation

On January 21, 2014, CrestaTech Technology Corporation, or CrestaTech, filed a complaint for patent infringement against the Company in the United States District Court of Delaware, or the District Court Litigation. In its complaint, CrestaTech alleges that the Company infringes U.S. Patent Nos. 7,075,585, or the '585 Patent and 7,265,792, or the '792 Patent. In addition to asking for compensatory damages, CrestaTech alleges willful infringement and seeks a permanent injunction. CrestaTech also names Sharp Corporation, Sharp Electronics Corp. and VIZIO, Inc. as defendants based upon their alleged use of the Company's television tuners.

On January 28, 2014, CrestaTech filed a complaint with the U.S. International Trade Commission, or ITC, again naming, among others, MaxLinear, Sharp, Sharp Electronics, and VIZIO, or the ITC Investigation. On May 16, 2014, the ITC granted CrestaTech’s motion to file an amended complaint adding six OEM Respondents, namely, SIO International, Inc., Hon Hai Precision Industry Co., Ltd., Wistron Corp., Wistron Infocomm Technology (America) Corp., Top Victory Investments Ltd. and TPV International (USA), Inc. which are collectively referred to with MaxLinear, Sharp and VIZIO as the Company Respondents. CrestaTech’s ITC complaint alleged a violation of 19 U.S.C. § 1337 through the importation into the United States, the sale for importation, or the sale within the United

States after importation of MaxLinear’s accused products that CrestaTech alleged infringe the same two patents asserted in the Delaware action. Through its ITC complaint, CrestaTech sought an exclusion order preventing entry into the United States of certain of the Company's television tuners and televisions containing such tuners from Sharp, Sharp Electronics, and VIZIO. CrestaTech also sought a cease and desist order prohibiting the Company Respondents from engaging in the importation into, sale for importation into, the sale after importation of, or otherwise transferring within the United States certain of the Company's television tuners or televisions containing such tuners.

On March 10, 2014, the court stayed the District Court Litigation pending resolution of the ITC Investigation.

On December 15, 2014, the ITC held a trial in the ITC Investigation. On February 27, 2015, the Administrative Law Judge, or the ALJ, issued a written Initial Determination, or ID, ruling that the Company Respondents do not violate Section 1337 in connection with CrestaTech's asserted patents because CrestaTech failed to satisfy the economic prong of the domestic industry requirement pursuant to Section 1337(a)(2). In addition, the ID stated that certain of the Company's television tuners and televisions incorporating those tuners manufactured and sold by certain customers infringe three claims of the '585 Patent, and these three claims were not determined to be invalid. On April 30, 2015, the ITC issued a notice indicating that it intended to review portions of the ID finding no violation of Section 1337, including the ID's findings of infringement with respect to, and validity of, the '585 Patent, and the ID's finding that CrestaTech failed to establish the existence of a domestic industry within the meaning of Section 1337.

The ITC has subsequently issued its opinion, which terminated its investigation. The opinion affirmed the findings of the ALJ that no violation of Section 1337 had occurred because CrestaTech had failed to establish the economic prong of the domestic industry requirement. The ITC also affirmed the ALJ's finding of infringement with respect to the three claims of the '585 Patent that were not held to be invalid.

On November 30, 2015, CrestaTech filed an appeal of the ITC decision with the United States Court of Appeals for the Federal Circuit, or the Federal Circuit. On March 7, 2016, CrestaTech voluntarily dismissed its appeal, resulting in a final determination of the ITC Investigation in the Company's favor.

In addition, the Company has filed four petitions for inter partes review, or IPR, by the US Patent Office, two for each of the CrestaTech patents asserted against the Company. The Patent Trial and Appeal Board, or the PTAB, did not institute two of these IPRs as being redundant to IPRs filed by another party that were already underway for the same CrestaTech patent. The remaining two petitions were instituted or instituted-in-part and, together with the IPRs filed by third parties, there are currently six pending IPR proceedings involving the two CrestaTech patents asserted against the Company.

In October 2015, the PTAB issued final decisions in two of the six pending IPR proceedings (one for each of the two asserted patents), holding that all of the reviewed claims are unpatentable. Included in these decisions was one of the three claims of the '585 Patent mentioned above in connection with the ITC's final decision. CrestaTech appealed the PTAB's decisions at the Federal Circuit. On November 8, 2016, the Federal Circuit issued an opinion affirming the PTAB's finding of unpatentability.

In August 2016, the PTAB issued final written decisions in the remaining four pending IPR proceedings (two for each of the asserted patents), holding that many of the reviewed claims - including the two remaining claims of the '585 Patent which the ITC held were infringed - are unpatentable. As a result of these IPR decisions, all 13 claims that CrestaTech asserted against the Company in the ITC Investigation have been found to be unpatentable by the PTAB. The parties have filed notices to appeal the two decisions related to the '585 Patent. Opening briefs are currently due in late January - early February 2017. CrestaTech, however, did not appeal the PTAB's rulings related to the '792 Patent.

On March 18, 2016, CrestaTech filed a petition for Chapter 7 bankruptcy in the Northern District of California. As a result of this proceeding, all rights in the CrestaTech asserted patents, including the right to control the pending litigation, were assigned to CF Crespe LLC, or CF Crespe. CF Crespe is now the named party in the pending IPRs, the Federal Circuit appeal and District Court Litigation. CF Crespe has not sought to lift the stay in the District Court Litigation given the resolution of the ITC Investigation.

The Company cannot predict the outcome of any appeal by CF Crespe, CrestaTech, the District Court Litigation, or the IPRs. Any adverse determination in the District Court Litigation could have a material adverse effect on the Company's business and operating results.

Trango Systems, Inc. Litigation

On or about August 2, 2016, Trango Systems, Inc., or Trango, filed a complaint in the Superior Court of California, County of San Diego, Central Division, against defendants Broadcom Corporation, Inc., or Broadcom, and the Company, collectively, Defendants. On or about December 6, 2016, Trango filed its second amended complaint. Trango is a purchaser that alleges various fraud, breach of contract, and interference with economic relations claims in connection with the discontinuance of a chip line the Company recently acquired from Broadcom. Trango seeks unspecified general and special damages, pre-judgment interest, expenses and costs, statutory penalties, attorneys' fees, punitive damages, and unspecified injunctive and equitable relief. The Company intends to vigorously defend against the lawsuit. On January 11, 2017, the Company filed its demurrer to each cause of action in the second amended complaint.

(in thousands, except per share amounts and percentage data)

The Company cannot predict the outcome of the Trango Systems, Inc. litigation. Any adverse determination in the Trango Systems, Inc. litigation could have a material adverse effect on the Company's business and operating results.

Other Matters

In addition, from time to time, the Company is subject to threats of litigation or actual litigation in the ordinary course of business, some of which may be material. Other than the CrestaTech and Trango litigation described above, the Company believes that there are no other currently pending litigation matters that, if determined adversely by the Company, would have a material effect on the Company's business or that would not be covered by the Company's existing liability insurance.

12. Concentration of Credit Risk, Significant Customers and Geographic Information

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist primarily of cash and cash equivalents, accounts receivable and inventory. Collateral is generally not required for customer receivables. The Company limits its exposure to credit loss by placing its cash with high credit quality financial institutions. At times, such deposits may be in excess of insured limits. The Company has not experienced any losses on its deposits of cash and cash equivalents.

Significant Customers

The Company markets its products and services to manufacturers of a wide range of electronic devices, including cable and terrestrial and satellite set-top boxes and gates, DOCSIS data and voice gateways, hybrid analog and digital televisions, satellite low-noise blocker transponders or outdoor units, physical medium devices that go into optical modules for data center, metro, and long-haul transport network applications, and RF transceiver and modem devices for wireless access and backhaul applications. The Company makes periodic evaluations of the credit worthiness of its customers.

Customers comprising greater than 10% of net revenues for each of the periods presented are as follows:

	Years Ended December 31,		
	2016	2015	2014
Percentage of total net revenue			
Arris[1]	27%	28%	31%
Technicolor[2]	10%	13%	*

* Represents less than 10% of the net revenue for the respective period.

[1] In January 2016, Arris completed its acquisition of Pace. The revenue percentage attributed to Arris includes sales made to Pace in the year ended December 31, 2016.

[2] In November 2015, Technicolor completed its purchase of Cisco's connected devices business. The revenue percentage for fiscal year 2015 did not include 1% revenue for Technicolor.

Balances greater than 10% of accounts receivable, based on the Company's billings to the contract manufacturer customers, are as follows:

	December 31,	
	2016	2015
Percentage of gross accounts receivable		
Pegatron Corporation	17%	17%
Sernet Technologies Corporation	15%	14%
WNC Corporation	12%	16%
MTI Jupiter Technologies	*	13%

* Represents less than 10% of the gross accounts receivable for the respective period end.

Suppliers comprising greater than 10% of total inventory purchases are as follows:

	Years ended December 31,		
	2016	2015	2014
Globalfoundries	18%	22%	16%
United Microelectronics Corporation	16%	12%	23%
Taiwan Semiconductor Manufacturing Company	13%	14%	*
Tower-Jazz Semiconductor	12%	11%	*
Semiconductor Manufacturing International Corp	11%	11%	27%
Advanced Semiconductor Engineering	11%	11%	20%

* Represents less than 10% of the inventory purchases for the respective period.

Geographic Information

The Company's consolidated net revenues by geographic area based on ship-to location are as follows (in thousands):

	Years Ended December 31,					
	2016		2015		2014	
	Amount	% of total net revenue	Amount	% of total net revenue	Amount	% of total net revenue
Asia	$360,325	93 %	$274,169	91 %	$125,122	94 %
United States	9,181	2 %	10,819	4 %	567	— %
Rest of world	18,326	5 %	15,372	5 %	7,423	6 %
Total	$387,832	100 %	$300,360	100 %	$133,112	100 %

The products shipped to individual countries representing greater than 10% of net revenue for each of the periods presented are as follows:

	Years Ended December 31,		
	2016	2015	2014
Percentage of total net revenue			
China	78%	77%	71%

The determination of which country a particular sale is allocated to is based on the destination of the product shipment. No other individual country in Asia Pacific, United States, or the rest of the world accounted for more than 10% of net revenue during these periods.

Long-lived assets, which consists of property and equipment, intangible assets, and goodwill by geographic area are as follows (in thousands):

	As of December 31,			
	2016		2015	
	Amount	% of total	Amount	% of total
United States	$111,336	55 %	$121,697	99 %
Singapore	78,318	39 %	26	— %
Rest of world	11,171	6 %	1,269	1 %
Total	$200,825	100%	$122,992	100%

13. Selected Quarterly Financial Data (Unaudited)

The following table presents the Company’s unaudited quarterly financial data for each of the eight quarters in the period ended December 31, 2016. In management’s opinion, this information has been presented on the same basis as the audited consolidated financial statements included in a separate section of this report, and all necessary adjustments, consisting only of normal recurring adjustments, have been included in the amounts below to present fairly the unaudited quarterly results when read in conjunction with the audited consolidated financial statements and related notes. The operating results for any quarter should not be relied upon as necessarily indicative of results for any future period.

	Year Ended December 31, 2016[(1)]			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(in thousands, except per share amounts)			
Net revenue	$102,685	$101,687	$96,324	$87,136
Gross profit	$61,170	$62,913	$55,504	$50,403
Net income	$20,681	$22,584	$9,679	$8,348
Net income per share:				
Basic	$0.33	$0.36	$0.15	$0.13
Diluted	$0.31	$0.33	$0.14	$0.12

(1) Includes impact of adoption of ASU 2016-09, Improvements to Share Based Compensation as described in Note 1. The impact of adoption by quarter was to increase net income and reduce the provision for income taxes, and to increase basic and diluted net income per share by the following amounts:

	Year Ended December 31, 2016			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(in thousands, except per share amounts)			
Increase to net income	$1,565	$3,549	$928	$2,249
Reduction to income tax provision	$(1,565)	$(3,549)	$(928)	$(2,249)
Increase to net income per share:				
Basic	$0.02	$0.06	$0.01	$0.04
Diluted	$0.02	$0.04	$0.01	$0.05

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(in thousands, except per share amounts and percentage data)

	Year Ended December 31, 2015			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(in thousands, except per share amounts)			
Net revenue	$35,396	$70,824	$95,191	$98,949
Gross profit	$21,671	$26,942	$51,050	$55,760
Net income (loss)	$(4,722)	$(30,647)	$1,582	$(8,544)
Net income (loss) per share:				
Basic	$(0.12)	$(0.58)	$0.03	$(0.14)
Diluted	$(0.12)	$(0.58)	$0.03	$(0.14)

14. Subsequent Events

On February 8, 2017, the Company entered into a definitive agreement to acquire all of the stock in the Spain entity of Marvell Technology Group Ltd, or Marvell, along with acquiring certain other assets and liabilities related to Marvell’s G.hn business for $21.0 million in cash. The acquisition is currently expected to close in the second quarter of 2017.