APPLIED OPTOELECTRONICS, INC. Form S-1/A March 14, 2014

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As filed with the Securities and Exchange Commission on March 14, 2014

Registration Statement No. 333-194379

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# Amendment No. 3 to Form S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

# Applied Optoelectronics, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Classification Code Number)

**Delaware** (State or Other Jurisdiction of Incorporation or Organization) **3674** (Primary Standard Industrial

**76-0533927**(I.R.S. Employer Identification Number)

13115 Jess Pirtle Blvd. Sugar Land, TX 77478 (281) 295-1800

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Chih-Hsiang (Thompson) Lin President and Chief Executive Officer 13115 Jess Pirtle Blvd. Sugar Land, TX 77478 (281) 295-1800

(Name, Address Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

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#### **Copies of All Communications to:**

Frank S. Wu, Esq. Philip Russell, Esq. DLA Piper LLP (US) 1000 Louisiana Street Suite 2800 Houston, TX 77002 (713) 425-8400 David C. Kuo, Esq. General Counsel Applied Optoelectronics, Inc. 13115 Jess Pirtle Blvd. Sugar Land, TX 77478 (281) 295-1800 J. Robert Suffoletta, Esq. Wilson Sonsini Goodrich & Rosati, PC 900 South Capital of Texas Highway Las Cimas IV, Fifth Floor Austin, TX 78746 (512) 338-5400

# Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. o

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

Large accelerated filer o

Accelerated filer o

Non-accelerated filer ý

Smaller reporting company o

(Do not check if a smaller reporting company)

# CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount	Proposed Maximum	Proposed Maximum	Amount of
	to be	Offering Price	Aggregate	Registration
	Registered (1)	Per Share (2)	Offering Price (1)(2)	Fee (3)
Common Stock, \$0.001 par value per share	3,105,000	\$27.095	\$84,129,975	\$10,835.95

- (1) Includes the additional shares that the underwriters have the option to purchase.
- Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended (the "Securities Act") on the basis of the average of the high and low sales price of a share of the registrant's common stock as reported on NASDAQ Global Market on March 11, 2014.
- (3) Previously paid.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. We and the selling stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting any offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated March 14, 2014

#### PRELIMINARY PROSPECTUS

2,700,000 shares

# Common stock

We are offering 1,275,235 shares of common stock and the selling stockholders identified in this prospectus are offering an additional 1,424,765 shares of common stock. We will not receive any of the proceeds from the sale of the shares being sold by the selling stockholders. Our common stock is listed on the NASDAQ Global Market under the symbol "AAOI." On March 13, 2014, the last reported sale price of our common stock on the NASDAQ Global Market was \$26.20 per share.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 11.

	Per sha	are To	otal
Public offering price	\$	\$	
Underwriting discounts and commissions(1)	\$	\$	
Proceeds to us, before expenses(2)	\$	\$	
Proceeds to selling stockholders, before expenses	\$	\$	

(1) We have agreed to reimburse the underwriters for certain expenses. See the section titled "Underwriting."

(2) We have granted the underwriters an option for a period of 30 days to purchase up to 405,000 additional shares of common stock at the public offering price less the underwriting discount.

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the sl	nares of common stock to purchasers on or about March	h , 2014.
RAYMOND JAMES		PIPER JAFFRAY
COWEN AND COMPANY	ROTH CAPITAL PARTNERS The date of this prospectus is March , 2014	CRAIG-HALLUM

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You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us in connection with this offering. We have not, the selling stockholders have not and the underwriters have not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, the selling stockholders are not and the underwriters are not, making an offer to sell these securities in any jurisdiction where an offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus only. Our business, financial condition, results of operations and prospects may have changed since that date.

No action is being taken in any jurisdiction outside the United States of America, or U.S., to permit a public offering of the common stock or possession or distribution of this prospectus in that jurisdiction. Persons who come into possession of this prospectus in jurisdictions

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outside the U.S. are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus applicable to that jurisdiction.
"Applied Optoelectronics, Inc.," "AOI" and our logo are registered trademarks of Applied Optoelectronics, Inc. This prospectus contains additional trade names, trademarks and service marks of ours and of other companies.
Unless the context otherwise requires, we use the terms "AOI," "we," "us" and "our" in this prospectus to refer to Applied Optoelectronics, Inc. and its subsidiaries.
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#### PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes thereto and the information set forth under the sections "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case appearing elsewhere in this prospectus.

#### Overview

We are a leading, vertically integrated provider of fiber-optic networking products, primarily for three networking end-markets: cable television, or CATV, fiber-to-the-home, or FTTH, and internet data center. We design and manufacture a range of optical communications products at varying levels of integration, from components, subassemblies and modules to complete turn-key equipment. In designing products for our customers, we begin with the fundamental building blocks of lasers and laser components. From these foundational products, we design and manufacture a wide range of products to meet our customers' needs and specifications, and such products differ from each other by their end market, intended use and level of integration. We are primarily focused on the higher-performance segments within all three of our target markets, which increasingly demand faster connectivity and innovation.

The three end markets we target are all driven by significant bandwidth demand fueled by the growth of network-connected devices, video traffic, cloud computing and online social networking. To address this increased bandwidth demand, CATV and telecommunications service providers are competing directly against each other by providing bundles of voice, video and data services to their subscribers and investing to enhance the capacity, reliability and capability of their networks. The trend of rising bandwidth consumption also impacts the internet data center market, as reflected in the shift to higher speed server connections. As a result of these trends, fiber-optic networking technology is becoming essential in all three of our target markets, as it is often the only economic way to deliver the desired bandwidth.

The CATV market is our largest and most established market, for which we supply a broad array of products including lasers, transmitters and turn-key equipment. In 2012, we were the leading provider of optical components and the second largest provider of subsystems to the CATV industry, according to research firm Ovum Limited, or Ovum. Sales of headend, node and distribution equipment have contributed significantly to our growth in recent years as a result of our ability to meet the needs of CATV equipment vendors who have begun to outsource both the design and manufacture of this equipment. While equipment vendors have relied upon third parties to assemble portions of their products, within the past four years certain of our customers have accelerated the outsourcing of both the design and manufacturing of both headend equipment and node equipment to third parties. The shift is due in part to the sophisticated engineering expertise needed to perform this work. We believe that our extensive high-speed optical, mixed-signal semiconductor and mechanical engineering capabilities position us well to benefit from these industry dynamics.

Our vertically integrated manufacturing model provides us several advantages, including rapid product development, fast response times to customer requests and control over product quality and manufacturing costs. We design, manufacture and integrate our own analog and digital lasers using a proprietary Molecular Beam Epitaxy, or MBE, fabrication process, which we believe is unique in our industry. We manufacture the majority of the laser chips and optical

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components that are used in our products. The lasers we manufacture are proven to be reliable over time and highly tolerant of changes in temperature and humidity, making them well-suited to the CATV and FTTH markets where networking equipment is often installed outdoors.

In 2013, our revenue was \$78.4 million and our gross margin was 29.4%. We have grown our annual revenue at a CAGR of 33.1% between 2009 and 2013. In the years ended December 31, 2011, 2012, and 2013, we incurred losses of \$5.3 million, \$0.9 million, and \$1.4 million, respectively, and our accumulated deficit at December 31, 2012 and December 31, 2013 was \$81.9 million and \$83.3 million, respectively. In 2013, we earned 60.4% of our total revenue from the CATV market, and 24.7% of our total revenue from the data center market. In 2013, our key customers in the CATV market included Cisco Systems and Biogenomics Corp., a distributor. In 2011, 2012 and 2013, Cisco Systems accounted for 26.8%, 33.2%, and 21.8%, respectively, of our revenue and Biogenomics Corp. accounted for 11.7%, 11.2% and 8.7%, respectively, of our revenue. In 2013, our key customers in the data center market included Amazon and Microsoft. In 2012 and 2013, Amazon accounted for 5.8% and 18.2% of our revenue, respectively, and Microsoft accounted for 2.6% and 6.1% of our revenue, respectively.

# **Industry Background**

Our three target markets of CATV, FTTH and internet data centers share a common trend of a significant growth in bandwidth consumption, and the corresponding need for network infrastructure improvement to support it.

The prevailing themes in our target markets include:

*Trends in the CATV Market.* In recent years, CATV service providers have invested extensively to support high speed, two-way communications, and we expect that they will continue to do so, particularly in countries with less developed CATV networks, such as China.

While equipment vendors have historically only relied upon third parties to assemble portions of their products, within the past four years certain of our customers have accelerated the outsourcing of both the design and manufacturing of both headend equipment and node equipment to third parties. The shift is due in part to the sophisticated engineering expertise needed to perform this work.

*Trends in the FTTH Market*. The FTTH market generally refers to the Passive Optical Networks, or PONs, that telecommunications service providers are deploying. The most commonly deployed PON technology is Gigabit PON, or GPON, which delivers up to 2.5 gigabits per second of data, but due to the splitting of the bandwidth among multiple users, the actual bandwidth delivered to an individual subscriber is far less than 2.5 gigabits per second. One approach that does support true 1 gigabit per second service to the home is wavelength division multiplexing PON, or WDM-PON, a technology that enables the transmission of multiple wavelengths of data over a single fiber-optic strand.

Trends in the Internet Data Center Market. To support the substantial increase in bandwidth consumption, internet data center operators are increasing the scale of their internet data centers and accelerating data transmission rates. As a result, there is an ongoing transition from the use of copper cable, typically at speeds up to 1 gigabit, to optical fiber as a transport medium, typically providing speeds from 10 gigabit to 40 gigabit. In recent years, a number of leading Internet companies have begun to adopt more open internet data center architectures, using a mix of systems and components

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from a variety of vendors, and in some cases designing their own equipment. For these companies, compatibility of new networking equipment with legacy infrastructure is not as important, and as a consequence, these companies are more willing to work with non-traditional equipment vendors, which creates an open and growing opportunity for optical device vendors.

We experience certain challenges within our target markets, including continuous pressure to innovate and deliver highly integrated products that perform reliably in harsh, demanding environments and to produce high-quality devices in large volumes.

#### **Our Solutions**

By addressing the challenges in our target markets, we provide the following benefits to our customers:

**Enable customers to deliver innovative products.** We leverage our deep expertise in high-speed optical, mixed-signal semiconductor and mechanical engineering and our proprietary MBE laser fabrication process to deliver technologically advanced products to our customers.

**Enhance efficiency and cost effectiveness of our customers' supply chain.** We design and sell products at the level of integration desired by a customer, from components to turn-key equipment, providing our customers a dependable, cost-effective and simplified supply chain.

**Deliver high quality, reliable products in high volume.** As a vertically integrated supplier, we are able to monitor and maintain quality control throughout the production process, using our internally produced components where possible for our final products. With manufacturing facilities in the U.S., Taiwan and China, we can support high volume production and timely delivery for our customers around the world.

**Provide sophisticated design solutions to our customers.** We believe our in-house expertise in both analog and digital optical engineering enables us to design comprehensive solutions that meet many of the different network architectures and protocols used by our customers.

# **Our Strengths**

Our key competitive strengths include the following:

*Industry-leading position in the CATV market.* We are the leading provider of optical components and the second largest provider of subsystems to the CATV market, according to Ovum.

**Proprietary technological expertise and track record of innovation.** We continue to develop innovative products by leveraging our technological expertise, including our proprietary MBE laser fabrication process.

*Highly customized products.* Most of our products have some level of customization, making it more difficult for our customers to switch rapidly to another supplier. We believe this element of customization contributes to longer product lifecycles and more stable product pricing.

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**Proven system design capabilities.** We have deep expertise and proven design capabilities in high-speed optical, mixed-signal semiconductor and mechanical engineering, which we believe position us to take advantage of the continuing shift to outsourced design and manufacturing among CATV equipment vendors.

Vertically integrated, geographically distributed manufacturing model. Our vertically integrated design and manufacturing process encompasses various steps from laser design and fabrication to complete optical system design and assembly. Furthermore, we have geographically distributed our manufacturing by strategically locating our operations in the U.S., China and Taiwan to reduce development time and production costs, to better support our customers and to help protect our intellectual property.

# **Our Strategy**

We seek to be the leading global provider of optical components, modules and equipment for each of our three target markets, CATV, FTTH and internet data centers. Our strategy includes the following key elements:

**Extend our leadership in CATV networking.** We intend to maintain our position as the leading producer of optical components used in CATV networks, and to capture an increasing share of the CATV equipment market as the major equipment vendors continue to outsource the design and manufacturing of such products.

**Continue to penetrate the FTTH market.** We believe our WDM-PON technology is a cost-effective solution for delivering 1 gigabit bandwidth to a home. Our goal is to capture an increasing share of the FTTH market by delivering 1G asynchronous service to the home through internet service provider customers.

Continue to penetrate the internet data center market. In the internet data center, we target internet data center operators who have adopted an open system architecture one in which the optical connectivity solutions can be provided by a different vendor than the vendor which provides their servers and switches.

*Continue to invest in our capabilities and infrastructure.* We intend to continue to invest in new products, new technology and our production infrastructure and facilities to maintain and strengthen our competitive position.

Selectively pursue other opportunities that leverage our existing expertise. Our expertise in designing and manufacturing outdoor equipment for the CATV industry positions us well to pursue applications that are also characterized by having varying and demanding environments, including wireless and wireline telecom infrastructure, industrial robotics, aerospace and defense, and oil and gas exploration.

**Pursue complementary acquisition and strategic alliance opportunities.** We evaluate and selectively pursue acquisition opportunities or strategic alliances that we believe will enhance or complement our current product offerings, augment our technology roadmap, or diversify our revenue base.

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#### **Risk Factors**

Our business is subject to numerous risks and uncertainties, such as those highlighted in the "Risk Factors" section immediately following this prospectus summary, including:

We are dependent on our key customers for a significant portion of our revenue and the loss of, or a significant reduction in orders from, any of our key customers would adversely impact our revenue and results of operations;

If our customers do not qualify our products for use on a timely basis, our results of operations may suffer;

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

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

If the CATV, FTTH and internet data center markets do not continue to develop as we expect, or if there is any downturn in these markets, our business would be materially adversely affected;

If we encounter manufacturing problems, we may lose sales and damage our customer relationships;

We must continually develop successful new products and enhance existing products, and if we fail to do so or if our release of new or enhanced products is delayed, our business may be harmed;

Given the high fixed costs associated with our vertically integrated business, a reduction in demand for our products could materially adversely impact our gross profits and our results of operations;

We face intense competition which could negatively impact our results of operations and market share; and

We have substantial manufacturing assets in Asia, and in 2013 we derived approximately 27.4% of our revenue from sales in Asia.

#### **Corporate Information**

We were incorporated in the State of Texas in 1997. In March 2013, Applied Optoelectronics, Inc., a Texas corporation, converted into a Delaware corporation. Our principal executive offices are located at 13115 Jess Pirtle Blvd., Sugar Land, TX 77478, and our telephone number is (281) 295-1800. Our website address is www.ao-inc.com. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website as part of this prospectus or in deciding whether to purchase shares of our common stock.

We have registered the trademarks APPLIED OPTOELECTRONICS, INC., AOI and its respective logo with the U.S. Patent and Trademark Office. These marks are also registered in, or have applications for registration pending in, various foreign trademark offices. Other trademarks and trade names appearing in this prospectus are the property of their respective owners.

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#### THE OFFERING

Common stock offered by us

1,275,235 shares

Common stock offered by selling

1,424,765 shares

**AAOI** 

stockholders

Total common stock to be outstanding after

this offering 13,919,189 shares

Use of proceeds We estimate that the net proceeds from the sale of our common stock by us in this offering will

be approximately \$31.0 million, at an assumed offering price of \$26.20 per share. We intend to use the net proceeds from this offering for working capital and other general corporate purposes. Our management will have broad discretion in the application of our net proceeds from this offering, and investors will be relying on management's judgment regarding the

application of these net proceeds. See "Use of Proceeds."

NASDAQ Global Market Symbol

The number of shares of our common stock to be outstanding after this offering is based on 12,643,954 shares of our common stock outstanding as of December 31, 2013. This number of shares does not include:

1,467,902 shares of common stock subject to outstanding options as of December 31, 2013, with a weighted average exercise price of \$8.3794 per share;

32,665 shares of our common stock issuable upon the exercise of outstanding warrants, with a weighted average exercise price of \$9.80 per share; and

567,071 shares of common stock available for future sale or issuance under our 2013 Long-Term Incentive Plan.

Unless otherwise indicated, this prospectus assumes no exercise of the underwriters' option to purchase additional shares.

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# SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables summarize the consolidated financial and operating data for the periods indicated. This summary consolidated financial data should be read together with our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus. The consolidated statements of operations data for the years ended December 31, 2011, 2012 and 2013 are derived from our consolidated financial statements appearing elsewhere in this prospectus. Our historical results are not necessarily indicative of our future results. You should read the summary financial data presented below in conjunction with our consolidated financial statements and related notes and the sections of this prospectus titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

		Year	s en	ded Decem	ber	31,
		(in thousands, except percentages, share and per				
			S	hare data)		
Consolidated statements of operations data: Revenue	\$	47,840	\$	63,421	\$	78,424
Cost of goods sold (1)	φ	34,468	φ	44,492	φ	55,396
Cost of goods sold (1)		34,400		44,472		33,370
Gross profit	\$	13,372	\$	18,929	\$	23,028
Gross margin		28.0%		29.8%		29.4%
Operating expenses:		( 151		7.602		0.512
Research and development (1)		6,451 2,412		7,603 3,135		8,512 4,191
Sales and marketing (1) General and administrative (1)		8,243		8,012		10,632
Asset impairment charges		0,243		8,012		10,032
Total operating expenses	\$	17,106	\$	18,750	\$	23,335
Income (loss) from operations Interest and other income (expense), net		(3,734) (1,594)		179 (1,124)		(307) (1,099)
Loss before income taxes  Benefit from (provision for) income taxes	\$	(5,328)	\$	(945)	\$	(1,406)
Deficit from (provision for) meone taxes						
Net loss	\$	(5,328)	\$	(945)	\$	(1,406)
Net loss attributable to common stockholders	\$	(5,328)	\$	(945)	\$	(1,406)
Net loss per share attributable to common stockholders:  Basic and diluted	\$	(20.21)	\$	(3.56)	\$	(0.14)
Weighted average shares used to compute net loss per share attributable to common stockholders:	Ψ	(20.21)	Ψ	(3.30)	Ψ	(0.1-7)
Basic and diluted		263,658		265,576		9,964,955

Additional Financial Data:			
Non-GAAP gross profit (2)	\$ 13,405 \$	18,936 \$	23,084
Non-GAAP income (loss) from operations (2)	(3,000)	441	864
Non-GAAP net income (loss) (2)	(5,027)	(503)	107
Adjusted EBITDA (2)	(638)	3,734	4,467

(1)

These expenses include share-based compensation expense. Share-based compensation expense is accounted for at fair value, using the Black-Scholes option-pricing model. Share-based compensation expense is recognized over the vesting period of the stock options and was included in cost of goods sold and operating expenses as follows:

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				s end nber		
	20	)11	20	)12	2	2013
Cost of goods sold	\$	35	\$	7	\$	56
Research and development		50		8		53
Sales and marketing		58		9		52
General and administrative		420		137		907
Total share-based compensation expense	\$	563	\$	161	\$	1,068

(2)

We prepare Adjusted EBITDA and our other non-GAAP measures to eliminate the impact of items that we do not consider indicative of our overall operating performance. To arrive at our non-GAAP gross profit, we exclude share-based compensation expense from our GAAP gross profit. To arrive at our non-GAAP income (loss) from operations, we exclude all amortization of intangible assets, share-based compensation expense and non-recurring consulting fees, if any, from our GAAP net income (loss) from operations. To arrive at Adjusted EBITDA, we exclude these same items and, additionally, exclude asset impairment charges, loss (gain) from disposal of idle assets, unrealized exchange loss (gain), interest (income) expense, on a net basis, provision for (benefit from) income taxes and depreciation expense, from our GAAP net income (loss).

We believe that our non-GAAP measures are useful to investors in evaluating our operating performance for the following reasons:

We believe that elimination of items such as share-based compensation expense, depreciation and amortization, income tax expense and other income, net, is appropriate because treatment of these items may vary for reasons unrelated to our overall operating performance;

We use non-GAAP measures in conjunction with our GAAP financial measures for planning purposes, including the preparation of our annual operating budget, as a measure of operating performance and the effectiveness of our business strategies and in communications with our board of directors concerning our financial performance;

We believe that non-GAAP measures provide better comparability with our past financial performance, facilitates better period-to-period comparisons of operational results and also facilitates comparisons with our peer companies, many of which also use similar non-GAAP financial measures to supplement their GAAP reporting; and

We anticipate that, after consummating this offering, our investor presentations and those of securities analyst will include non-GAAP measures to evaluate our overall operating performance.

Adjusted EBITDA and other non-GAAP measures should not be considered as an alternative to gross profit, income (loss) from operations, net income (loss) or any other measure of financial performance calculated and presented in accordance with GAAP. Our Adjusted EBITDA and other non-GAAP measures may not be comparable to similarly titled measures of other organizations because other organizations may not calculate Adjusted EBITDA or such other non-GAAP measures in the same manner. You are encouraged to evaluate these adjustments and the reason we consider them appropriate.

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Interest (income) expense, net

Provision for (benefit from) income taxes

The following table reflects the reconciliation of U.S. GAAP financial measures to non-GAAP financial measures:

	Years	end	ed Decembe	er 31,	,
	2011		2012		2013
Gross profit	\$ 13,372	\$	18,929	\$	23,028
Non-GAAP adjustment:					
Share-based compensation expense	35		7		56
Non-GAAP income from gross profit	\$ 13,405	\$	18,936	\$	23,084
	(a = a t)		1-0	•	<b>400-</b> 7
Income (loss) from operations	\$ (3,734)	\$	179	\$	(307)
Non-GAAP adjustments:	10		(0		<b>(</b> 0
Amortization of intangible assets	46		60		68
Share-based compensation expense	563 125		161 41		1,068 35
Non-recurring consultant fee  Non-GAAP income (loss) from operations	\$ (3,000)	\$	441	\$	864
Net loss Non-GAAP adjustments:	\$ (5,328)	\$	(945)	\$	(1,406)
Amortization of intangible assets	46		60		68
Share-based compensation expense	563		161		1,068
Non-recurring consultant fee	125		41		35
Loss (gain) from disposal of idle assets	(80)		(37)		
Unrealized exchange loss (gain)	(352)		217		342
Non-GAAP net income (loss)	\$ (5,027)	\$	(503)	\$	107
Net loss	\$ (5,328)	\$	(945)	\$	(1,406)
Non-GAAP adjustments:					
Amortization of intangible assets	46		60		68
Share-based compensation expense	563		161		1,068
Asset impairment charges	2.066		2 002		2 220
Depreciation expense Non-recurring consultant fee	3,066 125		2,882 41		3,339 35
Loss (gain) from disposal of idle assets	(80)		(37)		33
Unrealized exchange loss (gain)	(352)		217		342
Interest (income) expense net	1 323		1 355		1 021

1,355

1,323

1,021

Adjusted EBITDA \$ (638) \$ 3,734 \$ 4,467

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Dece	mber 31, 2013
ctual	As Adjusted (3)
(in	thousands)

	(in th	housands)	
Consolidated Balance Sheet Data:			
Total cash, cash equivalents and short-term investments	\$ 30,751	\$	61,717
Working capital (1)	38,879		69,845
Total assets	111,057		142,023
Total debt (2)	28,455		28,455
Convertible preferred stock			
Common stock and additional paid-in capital	144,036		175,002
Total stockholders' equity	63,077		94,043

- (1) Working capital is defined as total current assets less total current liabilities.
- (2) Total debt is defined as short-term loans, notes payable and total long-term debt.
- On an as adjusted basis to reflect the sale by us of 1,275,235 shares of common stock in this offering, at an assumed public offering price of \$26.20 per share, after deducting underwriting discounts and commissions and estimated offering expenses.

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#### RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors and all other information contained in this prospectus before purchasing our common stock. If any of the following risks actually occur, we may be unable to conduct our business as currently planned and our financial condition and results of operations could be seriously harmed. In addition, the trading price of our common stock could decline due to the occurrence of any of these risks, and you may lose all or part of your investment.

## **Risks Inherent in Our Business**

We are dependent on our key customers for a significant portion of our revenue and the loss of, or a significant reduction in orders from, any of our key customers would adversely impact our revenue and results of operations.

We generate much of our revenue from a limited number of customers. In 2011, 2012 and 2013, our top ten customers represented 76.6%, 77.6%, and 76.9% of our revenue, respectively. In 2013, Cisco Systems, Inc. represented 21.8% of our revenue, Amazon represented 18.2% of our revenue and Biogenomics Corp., a distributor, represented 8.7% of our total revenue. As a result, the loss of, or a significant reduction in orders from any of our key customers would materially and adversely affect our revenue and results of operations. We typically do not have long-term contracts with our customers and instead rely on recurring purchase orders. If our key customers do not continue to purchase our existing products or fail to purchase additional products from us, our revenue would decline and our results of operations would be adversely affected.

Adverse events affecting our key customers could also negatively affect our ability to retain their business and obtain new purchase orders, which could adversely affect our revenue and results of operations. For example, in recent years, there has been consolidation among various network equipment manufacturers and this trend is expected to continue. We are unable to predict the impact that industry consolidation would have on our existing or potential customers. We may not be able to offset any potential decline in revenue arising from the consolidation of our existing customers with revenue from new customers or additional revenue from the merged company.

If our customers do not qualify our products for use on a timely basis, our results of operations may suffer.

Prior to the sale of new products, our customers typically require us to obtain their approval and qualify our products for use in their applications. Additionally, new customers often audit our manufacturing facilities and perform other evaluations during this process. The qualification process involves product sampling and reliability testing and collaboration with our product management and engineering teams in the design and manufacturing stages. If we are unable to accurately predict the amount of time required to qualify our products with customers, or are unable to qualify our products with certain customers at all, then our ability to generate revenue could be delayed or our revenue would be lower than expected and we may not be able to recover the costs associated with the qualification process or with our product development efforts, which would have an adverse effect on our results of operations.

In addition, due to rapid technological changes in our markets, a customer may cancel or modify a design project before we have qualified our product or begun volume manufacturing of a qualified product. It is unlikely that we would be able to recover the expenses for cancelled or

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unutilized custom design projects. It is difficult to predict with any certainty whether our customers will delay or terminate product qualification or the frequency with which customers will cancel or modify their projects, but any such delay, cancellation or modification would have a negative effect on our results of operations.

Our ability to successfully qualify and scale capacity for new technologies and products is important to our ability to grow our business and market presence. If we are unable to qualify and sell any of our new products in volume, on time, or at all, our results of operations may be adversely affected.

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

We make planning and spending decisions, including determining the levels of business that we will seek and accept, production schedules, component procurement commitments, personnel needs and other resource requirements, based on our estimates of product demand and customer requirements. Our products are typically purchased pursuant to individual purchase orders. While our customers may provide us with their demand forecasts, they are typically not contractually committed to buy any quantity of products beyond firm purchase orders. Furthermore, many of our customers may increase, decrease, cancel or delay purchase orders already in place without significant penalty. The short-term nature of commitments by our customers and the possibility of unexpected changes in demand for their products reduce our ability to accurately estimate future customer requirements. On occasion, customers may require rapid increases in production, which can strain our resources, cause our manufacturing to be negatively impacted by materials shortages, necessitate more onerous procurement commitments and reduce our gross margin. We may not have sufficient capacity at any given time to meet the volume demands of our customers, or one or more of our suppliers may not have sufficient capacity at any given time to meet our volume demands. If any of our major customers decrease, stop or delay purchasing our products for any reason, we will likely have excess manufacturing capacity or inventory and our business and results of operations would be harmed.

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

In each of our target markets, including the CATV market, our sales depend on the aggregate capital expenditures of service providers as they build out and upgrade their network infrastructure. These markets are highly cyclical and characterized by constant and rapid technological change, price erosion, evolving standards and wide fluctuations in product supply and demand. In the past, these markets have experienced significant downturns, often connected with, or in anticipation of, the maturation of product cycles. These downturns have been characterized by diminished product demand, production overcapacity, high inventory levels and accelerated erosion of average selling prices. Our historical results of operations have been subject to these cyclical fluctuations, and we may experience substantial period-to-period fluctuations in our future results of operations. Any future downturn in any of the markets in which we compete could significantly reduce the demand for our products and therefore may result in a significant reduction in our revenue. Our revenue and results of operations may be materially and adversely affected in the future due to changes in demand from individual customers or cyclical changes in any of the markets utilizing our products. We may not be able to accurately predict these cyclical fluctuations and the impact of these fluctuations may have on our revenue and operating results.

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# If the CATV market does not continue to develop as we expect, or if there is any downturn in this market, our business would be adversely affected.

Historically, we have generated much of our revenue from the CATV market. In 2011, 2012, and 2013 the CATV market represented 81.4%, 78.6% and 60.4% of our revenue, respectively. In the CATV market, we are relying on expected increasing demand for bandwidth-intensive services and applications such as on-demand television programs, high-definition television channels, or HDTV, social media, peer-to-peer file sharing and online video creation and viewing from network service providers. Without network and bandwidth growth, the need for our products will not increase and may decline, adversely affecting our financial condition and results of operations. Although demand for broadband access is increasing, network and bandwidth growth may be limited by several factors, including an uncertain regulatory environment, high infrastructure costs to purchase and install equipment and uncertainty as to which competing content delivery solution, such as telecommunications, wireless or satellite, will gain the most widespread acceptance. CATV network operators may reduce or forego equipment purchases in anticipation of the availability of next generation DOCSIS3.1 solutions that are expected to be available soon, which may adversely affect our sales. If the trend of outsourcing for the design and manufacture of CATV equipment does not continue, or continues at a slower pace than currently expected, our customers' demand for our design and manufacturing services may not grow as quickly as expected. If expectations for the growth of the CATV market are not realized, our financial condition or results of operations will be adversely affected. In addition, if the CATV market is adversely impacted, whether due to competitive pressure from telecommunication service providers, regulatory changes, or otherwise, our business would be adversely affected. In February 2014, Time Warner and Comcast, the two largest CATV providers in the U.S., announced that they had agreed to merge. We are unable to predict what impact this transaction, if completed, would have on the CATV market or on our business. We may not be able to offset any potential decline in revenue from the CATV market with revenue from new customers in other markets.

# We have limited operating history in the FTTH and internet data center markets, and our business could be harmed if these markets do not develop as we expect.

We have only recently begun offering products to the FTTH and internet data center markets. Our business in these markets is dependent on the deployment of our optical components, modules and subassemblies. In the FTTH market, we are relying on increasing demand for bandwidth-intensive services and telecommunications service providers' acceptance and deployment of WDM-PON as a technology supporting 1 gigabit per second service to the home. In the internet data center market, we are relying on the emergence of new internet data center providers and their adoption of open internet data center architectures that use a mix of systems and components from a variety of vendors, including non-traditional equipment vendors. Without network and bandwidth growth and adoption of our solutions by operators in these markets, we will not be able to sell our products in these markets in high volume or at our targeted margins, which would adversely affect our financial condition and results of operations. For example, WDM-PON technology may not be adopted by equipment and service providers in the FTTH market as rapidly as we expect or in the volumes we need to achieve acceptable margins, and internet data centers may elect to use larger vendors that require internet data center operators to purchase the optical modules for their systems from such larger vendors. Also, internet data centers may not expand as much or as quickly as expected and any slow-down in expansion could adversely impact our business and growth prospects. Network and bandwidth growth may be limited by several factors, including an uncertain regulatory environment, high infrastructure costs to purchase and install equipment and uncertainty as to which competing content delivery solution, such as CATV, will gain the most widespread

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acceptance. In addition, as we enter new markets or expand our product offerings in existing markets, our margins may be adversely affected due to competition in those markets and commoditization of competing products. If our expectations for the growth of these markets are not realized, our financial condition or results of operations will be adversely affected.

## If we encounter manufacturing problems, we may lose sales and damage our customer relationships.

We may experience delays, disruptions or quality control problems in our manufacturing operations. These and other factors may cause less than acceptable yields at our wafer fabrication facility. Manufacturing yields depend on a number of factors, including the quality of available raw materials, the degradation or change in equipment calibration and the rate and timing of the introduction of new products. Changes in manufacturing processes required as a result of changes in product specifications, changing customer needs and the introduction of new product lines may significantly reduce our manufacturing yields, resulting in low or negative margins on those products. In addition, we use an MBE fabrication process to make our lasers, rather than Metal Organic Chemical Vapor Deposition, or MOCVD, the technique most commonly used in optical manufacturing by communications optics vendors, and our MBE fabrication process relies on custom-manufactured equipment. If our MBE fabrication facility in Sugar Land, Texas were to be damaged or destroyed for any reason, our manufacturing process would be severely disrupted. Any such manufacturing problems would likely delay product shipments to our customers, which would negatively affect our sales, competitive position and reputation. We may also experience delays in production, typically in February, during the Chinese New Year holiday when our facilities in China and Taiwan are closed.

We must continually develop successful new products and enhance existing products, and if we fail to do so or if our release of new or enhanced products is delayed, our business may be harmed.

The markets for our products are characterized by frequent new product introductions, changes in customer requirements and evolving industry standards, all with an underlying pressure to reduce cost and meet stringent reliability and qualification requirements. Our future performance will depend on our successful development, introduction and market acceptance of new and enhanced products that address these challenges. If we are unable to make our new or enhanced products commercially available on a timely basis, we may lose existing and potential customers and our financial results would suffer.

In addition, due to the costs and length of research, development and manufacturing process cycles, we may not recognize revenue from new products until long after such expenditures, if at all, and our margins may decrease if our costs are higher than expected, adversely affecting our financial condition and results of operation.

Although the length of our product development cycle varies widely by product and customer, it may take 18 months or longer before we receive our first order. As a result, we may incur significant expenses long before customers accept and purchase our products.

Product development delays may result from numerous factors, including:

modification of product specifications and customer requirements;

unanticipated engineering complexities;

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difficulties in reallocating engineering resources and overcoming resource limitations; and

rapidly changing technology or competitive product requirements.

The introduction of new products by us or our competitors could result in a slowdown in demand for our existing products and could result in a write-down in the value of our inventory. We have in the past experienced a slowdown in demand for existing products and delays in new product development, and such delays will likely occur in the future. To the extent we experience product development delays for any reason or we fail to qualify our products and obtain their approval for use, which we refer to as a design win, our competitive position would be adversely affected and our ability to grow our revenue would be impaired.

Furthermore, our ability to enter a market with new products in a timely manner can be critical to our success because it is difficult to displace an existing supplier for a particular type of product once a customer has chosen a supplier, even if a later-to-market product provides better performance or cost efficiency.

The development of new, technologically advanced products is a complex and uncertain process requiring frequent innovation, highly-skilled engineering and development personnel and significant capital, as well as the accurate anticipation of technological and market trends. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully or on a timely basis. Further, we cannot assure you that our new products will gain market acceptance or that we will be able to respond effectively to product introductions by competitors, technological changes or emerging industry standards. We also may not be able to develop the underlying core technologies necessary to create new products and enhancements, license these technologies from third parties, or remain competitive in our markets.

#### Increasing costs and shifts in product mix may adversely impact our gross margins.

Our gross margins on individual products and among products fluctuate over each product's life cycle. Our overall gross margins have fluctuated from period to period as a result of shifts in product mix, the introduction of new products, decreases in average selling prices and our ability to reduce product costs, and these fluctuations are expected to continue in the future. We may not be able to accurately predict our product mix from period to period, and as a result we may not be able to forecast accurately our overall gross margins. The rate of increase in our costs and expenses may exceed the rate of increase in our revenue, either of which would materially and adversely affect our business, our results of operations and our financial condition.

Given the high fixed costs associated with our vertically integrated business, a reduction in demand for our products will likely adversely impact our gross profits and our results of operations.

We have a high fixed cost base due to our vertically integrated business model, including the fact that 938 of our employees as of December 31, 2013 were employed in manufacturing and research and development operations. We may not be able to adjust these fixed costs quickly to adapt to rapidly changing market conditions. Our gross profit and gross margin are greatly affected by our sales volume and volatility on a quarterly basis and the corresponding absorption of fixed manufacturing overhead expenses. In addition, because we are a vertically integrated manufacturer, insufficient demand for our products may subject us to the risk of high inventory carrying costs and increased inventory obsolescence. Given our vertical integration, the rate at

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which we turn inventory has historically been low when compared to our cost of sales. We do not expect this to change significantly in the future and believe that we will have to maintain a relatively high level of inventory compared to our cost of sales. As a result, we continue to expect to have a significant amount of working capital invested in inventory. We may be required to write down inventory costs in the future and our high inventory costs may have an adverse effect on our gross profits and our results of operations.

## We have a history of losses which may continue in the future.

We have a history of losses and we may incur additional losses in future periods. In the years ended December 31, 2011, 2012 and 2013, we experienced net losses of \$5.3 million, \$0.9 million and \$1.4 million, respectively. As of December 31, 2012 and December 31, 2013, our accumulated deficit was \$81.9 million and \$83.3 million, respectively. These losses were due to expenditures made to expand our business, including expenditures for hiring additional research and development and sales and marketing personnel, and expenditures to expand and maintain our manufacturing facilities and research and development operations. We expect to continue to make significant expenditures related to our business, including expenditures for hiring additional research and development and sales and marketing personnel, and expenditures to maintain and expand our manufacturing facilities and research and development operations. In addition, we have incurred significant additional time demands and legal, accounting and other expenses since we became a public company in September 2013. Our management and other personnel devote a substantial amount of time to complying with the applicable rules and requirements of being a public company.

Our financial results may vary significantly from quarter-to-quarter due to a number of factors, which may lead to volatility in our stock price.

Our quarterly revenue and operating results have varied in the past and will likely continue to vary significantly from quarter to quarter. This variability may lead to volatility in our stock price as research analysts and investors respond to these quarterly fluctuations. These fluctuations are due to numerous factors, including:

the timing, size and mix of sales of our products;
fluctuations in demand for our products, including the increase, decrease, rescheduling or cancellation of significant customer orders;
our ability to design, manufacture and deliver products to our customers in a timely and cost-effective manner and that mee customer requirements;
new product introductions and enhancements by us or our competitors;
the gain or loss of key customers;
the rate at which our present and potential customers and end users adopt our technologies;
changes in our pricing and sales policies or the pricing and sales policies of our competitors;
quality control or yield problems in our manufacturing operations;
length and variability of the sales cycles of our products;
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unanticipated increases in costs or expenses;
the loss of key employees;
different capital expenditure and budget cycles for our customers, affecting the timing of their spending for our products;
political stability in the areas of the world in which we operate;
fluctuations in foreign currency exchange rates;
changes in accounting rules;
the evolving and unpredictable nature of the markets for products incorporating our solutions; and
general economic conditions and changes in such conditions specific to our target markets.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly and annual operating results. In addition, a significant amount of our operating expenses is relatively fixed in nature due to our internal manufacturing, research and development, sales and general administrative efforts. Any failure to adjust spending quickly enough to compensate for a revenue shortfall could magnify the adverse impact of such revenue shortfall on our results of operations. For these reasons, you should not rely on quarter-to-quarter comparisons of our results of operations as an indicator of future performance. Moreover, our operating results may not meet our announced guidance or the expectations of research analysts or investors, in which case the price of our common stock could decrease significantly. There can be no assurance that we will be able to successfully address these risks.

## We face intense competition which could negatively impact our results of operations and market share.

The markets into which we sell our products are highly competitive. Our competitors range from large, international companies offering a wide range of products to smaller companies specializing in niche markets. Current and potential competitors may have substantially greater name recognition, financial, marketing, research and manufacturing resources than we do, and there can be no assurance that our current and future competitors will not be more successful than us in specific product lines or markets. Certain of our competitors may also have better-established relationships with our current or potential customers. Some of our competitors have more resources to develop or acquire new products and technologies and create market awareness for their products and technologies. In addition, some of our competitors have the financial resources to offer competitive products at below-market pricing levels that could prevent us from competing effectively and result in a loss of sales or market share or cause us to lower prices for our products. In recent years, there has been consolidation in our industry and we expect such consolidation to continue. Consolidation involving our competitors could result in even more intense competition. Network equipment manufacturers, who are our customers, and network service providers may decide to manufacture the optical subsystems incorporated into their network systems in-house instead of outsourcing such products to companies such as us. We also encounter potential customers that, because of existing relationships with our competitors, are committed to the products offered by our competitors.

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# We depend on key personnel to develop and maintain our technology and manage our business in a rapidly changing market.

The continued services of our executive officers and other key engineering, sales, marketing, manufacturing and support personnel is essential to our success. For example, our ability to achieve new design wins depends upon the experience and expertise of our engineers. Any of our key employees, including our Chief Executive Officer, Chief Financial Officer, Chief Strategy Officer, Senior Vice President of Network Equipment Module Business Unit and Asia General Manager, may resign at any time. We do not have key person life insurance policies covering any of our employees. To implement our business plan, we also intend to hire additional employees, particularly in the areas of engineering and manufacturing. Our ability to continue to attract and retain highly skilled employees is a critical factor in our success. Competition for highly skilled personnel is intense. We may not be successful in attracting, assimilating or retaining qualified personnel to satisfy our current or future needs. Our ability to develop, manufacture and sell our products, and thus our financial condition and results of operations, would be adversely affected if we are unable to retain existing personnel or hire additional qualified personnel.

# We depend on a limited number of suppliers and any supply interruption could have an adverse effect on our business.

We depend on a limited number of suppliers for certain raw materials and components used in our products. Some of these suppliers could disrupt our business if they stop, decrease or delay shipments or if the materials or components they ship have quality or reliability issues. Some of the raw materials and components we use in our products are available only from a sole source or have been qualified only from a single supplier. Furthermore, other than our current suppliers, there are a limited number of entities from whom we could obtain certain materials and components. We may also face shortages if we experience increased demand for materials or components beyond what our qualified suppliers can deliver. Our inability to obtain sufficient quantities of critical materials or components could adversely affect our ability to meet demand for our products, adversely affecting our financial condition and results of operation.

We typically have not entered into long-term agreements with our suppliers and, therefore, our suppliers could stop supplying materials and components to us at any time or fail to supply adequate quantities of materials or components to us on a timely basis. It is difficult, costly, time consuming and, on short notice, sometimes impossible for us to identify and qualify new suppliers. Our customers generally restrict our ability to change the components in our products. For more critical components, any changes may require repeating the entire qualification process. Our reliance on a limited number of suppliers or a single qualified vendor may result in delivery and quality problems, and reduced control over product pricing, reliability and performance.

## Our products could contain defects that may cause us to incur significant costs or result in a loss of customers.

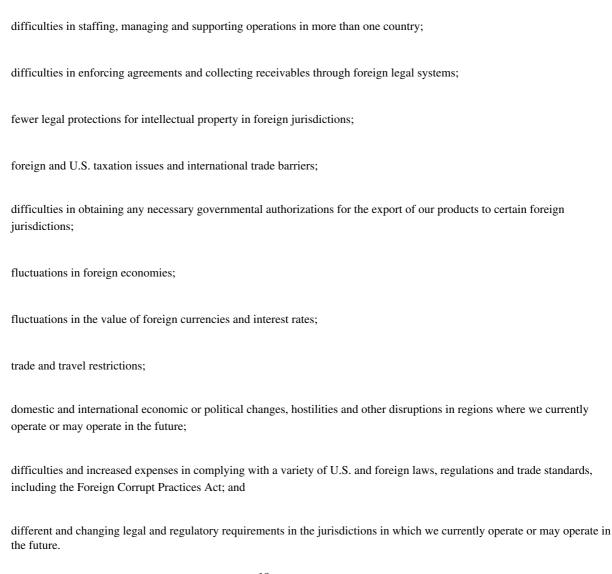
Our products are complex and undergo quality testing as well as formal qualification by our customers. Our customers' testing procedures are limited to evaluating our products under likely and foreseeable failure scenarios and over varying amounts of time. For various reasons, such as the occurrence of performance problems that are unforeseeable in testing or that are detected only when products age or are operated under peak stress conditions, our products may fail to perform as expected long after customer acceptance. Failures could result from faulty components or design, problems in manufacturing or other unforeseen reasons. As a result, we could incur significant costs to repair or replace defective products under warranty, particularly

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when such failures occur in installed systems. Our products are typically embedded in, or deployed in conjunction with, our customers' products, which incorporate a variety of components, modules and subsystems and may be expected to interoperate with modules produced by third parties. As a result, not all defects are immediately detectable and when problems occur, it may be difficult to identify the source of the problem. While we have not experienced material failures in the past, we will continue to face this risk going forward because our products are widely deployed in many demanding environments and applications worldwide. In addition, we may in certain circumstances honor warranty claims after the warranty has expired or for problems not covered by warranty to maintain customer relationships. Any significant product failure could result in litigation, damages, repair costs and lost future sales of the affected product and other products, divert the attention of our engineering personnel from our product development efforts and cause significant customer relations problems, all of which would harm our business. Although we carry product liability insurance, this insurance may not adequately cover our costs arising from defects in our products or otherwise.

# We face a variety of risks associated with our international sales and operations.

We currently derive, and expect to continue to derive, a significant portion of our revenue from sales to international customers. In 2011, 2012 and 2013, 52.2%, 55.7% and 41.0% of our revenue was derived from sales that occurred outside of North America, respectively. In addition, a significant portion of our manufacturing operations is based in Ningbo, China and Taipei, Taiwan. Our international revenue and operations are subject to a number of material risks, including:



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Negative developments in any of these factors in China or Taiwan or other countries could result in a reduction in demand for our products, the cancellation or delay of orders already placed, difficulties in producing and delivering our products, threats to our intellectual property, difficulty in collecting receivables, and a higher cost of doing business. Although we maintain certain compliance programs throughout the company, violations of U.S. and foreign laws and regulations may result in criminal or civil sanctions, including material monetary fines, penalties and other costs against us or our employees, and may have a material adverse effect on our business.

Our business operations conducted in China and Taiwan are important to our success. A substantial portion of our property, plant and equipment is located in China and Taiwan. We expect to make further investments in China and Taiwan in the future. Therefore, our business, financial condition, results of operations and prospects are subject to economic, political, legal, and social events and developments in China and Taiwan. China does not recognize the sovereignty of Taiwan. Although significant economic and cultural relations have been established during recent years between China and Taiwan, relations have often been strained and the government of China has previously threatened to use military force to gain control over Taiwan. Factors affecting military, political or economic conditions in China and Taiwan could have a material adverse effect on our financial condition and results of operations, as well as the market price and the liquidity of our common shares.

In some instances, we rely on third parties to assist in selling our products, and the failure of those parties to perform as expected could reduce our future revenue.

Although we primarily sell our products through direct sales, we also sell our products to some of our customers through third party sales representatives and distributors. Many of such third parties also market and sell products from our competitors. Our third party sales representatives and distributors may terminate their relationships with us at any time, or with short notice. Our future performance will also depend, in part, on our ability to attract additional third party sales representatives and distributors that will be able to market and support our products effectively, especially in markets in which we have not previously distributed our products. If our current third party sales representatives and distributors fail to perform as expected, our revenue and results of operations could be harmed.

# Failure to manage our growth effectively may adversely affect our financial condition and results of operations.

Successful implementation of our business plan in our target markets requires effective planning and management. Our production volumes are increasing significantly and we have announced plans to increase our production capacity in response to demand for our products, adding both personnel as well as expanding our physical manufacturing facilities. We currently operate facilities in Sugar Land, Texas, Ningbo, China and Taipei, Taiwan. We currently manufacture our lasers using a proprietary process and customized equipment located only in our Sugar Land, Texas facility, and it will be costly to duplicate that facility to scale our laser manufacturing capacity or to mitigate the risks associated with operating a single facility. The challenges of managing our geographically dispersed operations have increased and will continue to increase the demand on our management systems and resources. Moreover, we are continuing to improve our financial and managerial controls, reporting systems and procedures. Any failure to manage our expansion and the resulting demands on our management systems and resources effectively may adversely affect our financial condition and results of operations.

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# Our loan agreements contain restrictive covenants that may adversely affect our ability to conduct our business.

We have lending arrangements with several financial institutions, including loan agreements with East West Bank in the U.S., and our China subsidiary has a line of credit arrangement. Our loan agreements governing our long-term debt obligations in the U.S. contain certain financial and operating covenants that limit our management's discretion with respect to certain business matters. Among other things, these covenants require us to maintain certain financial ratios and restrict our ability to incur additional debt, create liens or other encumbrances, change the nature of our business, pay dividends, sell or otherwise dispose of assets and merge or consolidate with other entities. These restrictions may limit our flexibility in responding to business opportunities, competitive developments and adverse economic or industry conditions. Any failure by us or our subsidiaries to comply with these agreements could harm our business, financial condition and operating results. In addition, our obligations under our U.S. loan agreements with East West Bank are secured by substantially all of our U.S. assets, including our intellectual property assets, our Sugar Land facility and our equity interests in our subsidiaries, which limits our ability to provide collateral for additional financing. A breach of any of covenants under our loan agreements, or a failure to pay interest or indebtedness when due under any of our credit facilities, could result in a variety of adverse consequences, including the acceleration of our indebtedness.

#### We may not be able to obtain additional capital when desired, on favorable terms or at all.

We anticipate that the net proceeds we receive from this offering, together with our current cash and short-term investments, cash provided by operating activities and funds available through our bank loans and credit facilities, will be sufficient to meet our current and anticipated needs for general corporate purposes for the next 12 to 24 months. We operate in a market, however, that makes our prospects difficult to evaluate and, to remain competitive, we will be required to make continued investments in capital equipment, facilities and technological improvements. We expect that substantial capital will be required to expand our manufacturing capacity and fund working capital for anticipated growth. If we do not generate sufficient cash flow from operations or otherwise have the capital resources to meet our future capital needs, we may need additional financing to implement our business strategy, which includes:

expansion of research and development;
expansion of manufacturing capabilities;
hiring of additional technical, sales and other personnel; and
acquisitions of complementary businesses.

If we raise additional funds through the issuance of our common stock or convertible securities, the ownership interests of our stockholders could be significantly diluted. These newly issued securities may have rights, preferences or privileges senior to those of existing stockholders acquiring shares of our common stock in this offering. Additional financing may not, however, be available on terms favorable to us, or at all, if and when needed, and our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our infrastructure or respond to competitive pressures could be significantly limited. If we cannot raise required capital when needed, we may be unable to meet the demands of existing and

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prospective customers, adversely affecting our sales and market opportunities and consequently our business, financial condition and results of operations.

# Future acquisitions may adversely affect our financial condition and results of operations.

As part of our business strategy, we may pursue acquisitions of companies that we believe could enhance or complement our current product portfolio, augment our technology roadmap or diversify our revenue base. Acquisitions involve numerous risks, any of which could harm our business, including:

difficulties integrating the acquired business;

unanticipated costs, capital expenditures or liabilities or changes related to research in progress and product development;

diversion of financial and management resources from our existing business;

difficulties integrating the business relationships with suppliers and customers of the acquired business with our existing business relationships;

risks associated with entering markets in which we have little or no prior experience; and

potential loss of key employees, particularly those of the acquired organizations.

Acquisitions may also result in the recording of goodwill and other intangible assets subject to potential impairment in the future, adversely affecting our operating results. We may not achieve the anticipated benefits of an acquisition if we fail to evaluate it properly, and we may incur costs in excess of what we anticipate. A failure to evaluate and execute an acquisition appropriately or otherwise adequately address these risks may adversely affect our financial condition and results of operations.

# Our future results of operations may be subject to volatility as a result of exposure to fluctuations in currency exchange rates.

We have significant foreign currency exposure, and are affected by fluctuations among the U.S. dollar, the Chinese renminbi, or RMB, and the New Taiwan, or NT, dollar because a substantial portion of our business is conducted in China and Taiwan. Our sales, raw materials, components and capital expenditures are denominated in U.S. dollars, RMB and NT dollars in varying amounts.

Foreign currency fluctuations may adversely affect our revenue and our costs and expenses, and hence our results of operations. The value of the NT dollar or the RMB against the U.S. dollar and other currencies may fluctuate and be affected by, among other things, changes in political and economic conditions. The RMB currency is no longer being pegged solely to the value of the U.S. dollar. While the international reaction to the RMB revaluation has generally been positive, there remains significant international pressure on the Chinese government to adopt an even more flexible currency policy, which may result in a further and more significant appreciation of the RMB against the U.S. dollar. In the long term, the RMB may appreciate or depreciate significantly in value against the U.S. dollar, depending upon the fluctuation of the basket of currencies against which it is currently valued, or it may be permitted to enter into a full float, which may also result in a significant appreciation or depreciation of the RMB against

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the U.S. dollar. In addition, our currency exchange variations may be magnified by Chinese exchange control regulations that restrict our ability to convert RMB into foreign currency.

Our sales in Europe are denominated in U.S. dollars, and fluctuations in the Euro or our customers' other local currencies relative to the U.S. dollar may impact our customers and affect our financial performance. If our customers' local currencies weaken against the U.S. dollar, we may need to lower our prices to remain competitive in our international markets which could have a material adverse effect on our margins. If our customers' local currencies strengthen against the U.S. dollar and if the local sales prices cannot be raised due to competitive pressures, we will experience a deterioration of our margins.

To date, we have not entered into any hedging transactions in an effort to reduce our exposure to foreign currency exchange risk. While we may decide to enter into hedging transactions in the future, the availability and effectiveness of these hedging transactions may be limited and we may not be able to successfully hedge our exposure.

# Natural disasters or other catastrophic events could harm our operations.

Our operations in the U.S., China and Taiwan could be subject to significant risk of natural disasters, including earthquakes, hurricanes, typhoons, flooding and tornadoes, as well as other catastrophic events, such as epidemics, terrorist attacks or wars. For example, our corporate headquarters and wafer fabrication facility in Sugar Land, Texas, is located near Gulf of Mexico, an area that is susceptible to hurricanes. We use a proprietary MBE laser manufacturing process that requires customized equipment, and this process is currently conducted and located solely at our wafer fabrication facility in Sugar Land, Texas, such that a natural disaster, terrorist attack or other catastrophic event that affects that facility would materially harm our operations. In addition, our manufacturing facility in Taipei, Taiwan, is susceptible to typhoons, and our manufacturing facility in Ningbo, China, has from time to time, suffered electrical outages. Any disruption in our manufacturing facilities arising from these and other natural disasters or other catastrophic events could cause significant delays in the production or shipment of our products until we are able to shift production to different facilities or arrange for third parties to manufacture our products. We may not be able to obtain alternate capacity on favorable terms or at all. Our property insurance coverage with respect to natural disaster is limited and is subject to deductible and coverage limits. Such coverage may not be adequate or continue to be available at commercially reasonable rates and terms. The occurrence of any of these circumstances may adversely affect our financial condition and results of operation.

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

Our success depends on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patent, trademark, copyright, trade secret and unfair competition laws, as well as license agreements and other contractual provisions, to establish and protect our intellectual property and other proprietary rights. We have applied for patent registrations in the U.S. and in other foreign countries, some of which have been issued. In addition, we have registered certain trademarks in the U.S. We cannot guarantee that our pending applications will be approved by the applicable governmental authorities. Moreover, our existing and future patents and trademarks may not be sufficiently broad to protect our proprietary rights or may be held invalid or unenforceable in court. A failure to obtain patents or trademark registrations or a successful challenge to our registrations in the U.S. or other foreign countries may limit our ability to protect the intellectual property rights that these applications and registrations intended to cover.

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

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

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

We may be involved in intellectual property disputes in the future, which could divert management's attention, cause us to incur significant costs and prevent us from selling or using the challenged technology.

Participants in the markets in which we sell our products have experienced frequent litigation regarding patent and other intellectual property rights. While we have a policy in place that is designed to reduce the risk of infringement of intellectual property rights of others and we have conducted a limited review of other companies' relevant patents, there can be no assurance that third parties will not assert infringement claims against us. We cannot be certain that our products would not be found infringing the intellectual property rights of others. Regardless of their merit, responding to such claims can be time consuming, divert management's attention and resources and may cause us to incur significant expenses. Intellectual property claims against us could force us to do one or more of the following:

obtain from a third party claiming infringement a license to the relevant technology, which may not be available on reasonable terms, or at all;

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stop manufacturing, selling, incorporating or using our products that use the challenged intellectual property;

pay substantial monetary damages; or

expend significant resources to redesign the products that use the technology and to develop non-infringing technology.

Any of these actions could result in a substantial reduction in our revenue and could result in losses over an extended period of time.

In any potential intellectual property dispute, our customers could also become the target of litigation. Because we often indemnify our customers for intellectual property claims made against them with respect to our products, any claims against our customers could trigger indemnification claims against us. These obligations could result in substantial expenses such as legal expenses, damages for past infringement or royalties for future use. Any indemnity claim could also adversely affect our relationships with our customers and result in substantial costs to us.

If we fail to obtain the right to use the intellectual property rights of others that are necessary to operate our business, and to protect their intellectual property, our business and results of operations will be adversely affected.

From time to time we may choose to or be required to license technology or intellectual property from third parties in connection with the development of our products. We cannot assure you that third party licenses will be available to us on commercially reasonable terms, if at all. Generally, a license, if granted, would include payments of up-front fees, ongoing royalties or both. These payments or other terms could have a significant adverse impact on our results of operations. Our inability to obtain a necessary third party license required for our product offerings or to develop new products and product enhancements could require us to substitute technology of lower quality or performance standards, or of greater cost, either of which could adversely affect our business. If we are not able to obtain licenses from third parties, if necessary, then we may also be subject to litigation to defend against infringement claims from these third parties. Our competitors may be able to obtain licenses or cross-license their technology on better terms than we can, which could put us at a competitive disadvantage.

If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected.

Preparing our consolidated financial statements involves a number of complex manual and automated processes, which are dependent upon individual data input or review and require significant management judgment. One or more of these elements may result in errors that may not be detected and could result in a material misstatement of our consolidated financial statements. We have not performed an evaluation of our internal control over financial reporting, such as would be required by Section 404 of the Sarbanes-Oxley Act, nor have we engaged our independent registered public accounting firm to perform an audit of our internal control over financial reporting. In addition, for so long as we qualify as an "emerging growth company" under the JOBS Act, which may be up to five years following our initial public offering in September 2013, we will not have to provide an auditor's attestation report on our internal controls in future annual reports on Form 10-K as otherwise required by Section 404(b) of the Sarbanes-Oxley Act. During the course of any evaluation, documentation or attestation, we or our independent registered public accounting firm may identify weaknesses and deficiencies that

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we may not otherwise identify in a timely manner or at all as a result of the deferred implementation of this additional level of review. In connection with the audit of our financial statements for the period ended December 31, 2012, we identified a material weakness related to the inappropriate recording of certain inventory returned for re-work in China as a reduction in cost of sales. We remediated this material weakness in 2013 and we did not identify any material weaknesses in connection with the audit of our financial statements for the period ended December 31, 2013.

We have implemented internal controls that we believe provide reasonable assurance that we will be able to avoid accounting errors or material weaknesses in future periods. However, our internal controls cannot guarantee that no accounting errors exist or that all accounting errors, no matter how immaterial, will be detected because a control system, no matter how well designed and operated, can provide only reasonable, but not absolute assurance that the control system's objectives will be met. If we are unable to implement and maintain effective internal control over financial reporting, our ability to accurately and timely report our financial results could be adversely impacted. This could result in late filings of our annual and quarterly reports under the Securities Exchange Act of 1934, or the Exchange Act, restatements of our consolidated financial statements, a decline in our stock price, suspension or delisting of our common stock by NASDAQ, or other material adverse effects on our business, reputation, results of operations or financial condition.

#### Our ability to use our net operating losses and certain other tax attributes may be limited.

As of December 31, 2013, we had U.S. accumulated net operating losses, or NOLs, of approximately \$65.7 million for U.S. federal income tax purposes. We also had research and development credit carry forwards totaling \$1.6 million as of December 31, 2013, which begin to expire in 2020. Under Section 382 of the Internal Revenue Code of 1986, as amended, the Code, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change NOLs, capital loss carry forwards and other pre-change tax attributes to offset its post-change income may be limited. An ownership change is generally defined as a greater than 50% change in equity ownership by value over a 3-year period. Based upon an analysis of our equity ownership, we have experienced an ownership change and our NOL carry forwards are limited in dollar amount. As of December 31, 2013, of the total accumulated NOL, only \$40.3 million is available for utilization in 2014 and thereafter to shelter federal taxable income. Each year after 2014, an additional \$0.3 million is added to the total available NOL, until a maximum of \$43.9 million is reached. The amount of NOL available each year may decrease by the amount of NOL utilized and may increase by the amount of any operating losses incurred. Should we experience additional ownership changes, our NOL carry forwards may be further limited.

## Changes in our effective tax rate may adversely affect our results of operation and our business.

We are subject to income taxes in the U.S. and other foreign jurisdictions, including China. We base our tax position on the anticipated nature and conduct of our business and our understanding of the tax laws of the countries in which we have assets or conduct activities. Our tax position may be reviewed or challenged by tax authorities. Moreover, the tax laws currently in effect may change, and such changes may have retroactive effect. We have inter-company arrangements in place providing for administrative and financing services and transfer pricing, which involve a significant degree of judgment and are often subject to close review by tax authorities. The tax authorities may challenge our positions related to these agreements. If the tax authorities successfully challenge our positions, our effective tax rate may increase, adversely affecting our results of operation and our business.

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Our manufacturing operations are subject to environmental regulation that could limit our growth or impose substantial costs, adversely affecting our financial condition and results of operations.

Our properties, operations and products are subject to the environmental laws and regulations of the jurisdictions in which we operate and sell products. These laws and regulations govern, among other things, air emissions, wastewater discharges, the management and disposal of hazardous materials, the contamination of soil and groundwater, employee health and safety and the content, performance, packaging and disposal of products. Our failure to comply with current and future environmental laws and regulations, or the identification of contamination for which we are liable, could subject us to substantial costs, including fines, clean-up costs, third-party property damages or personal injury claims, and make significant investments to upgrade our facilities or curtail our operations. Liability under environmental, health and safety laws can be joint and several and without regard to fault or negligence. For example, pursuant to environmental laws and regulations, including but not limited to the Comprehensive Environmental Response Compensation and Liability Act, or CERCLA, we may be liable for the full amount of any remediation-related costs at properties we currently own or formerly owned, such as our currently owned Sugar Land, Texas facility, or at properties at which we operated, as well as at properties we will own or operate in the future, and properties to which we have sent hazardous substances, whether or not we caused the contamination. Identification of presently unidentified environmental conditions, more vigorous enforcement by a governmental authority, enactment of more stringent legal requirements or other unanticipated events could give rise to adverse publicity, restrict our operations, affect the design or marketability of our products or otherwise cause us to incur material environmental costs, adversely affecting our financial condition and results of operations.

## Failure to comply with the U.S. Foreign Corrupt Practices Act could subject us to penalties and other adverse consequences.

We are subject to the U.S. Foreign Corrupt Practices Act which generally prohibits U.S. companies from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. In addition, we are required to maintain records that accurately and fairly represent our transactions and have an adequate system of internal accounting controls. Foreign companies, including some that may compete with us, may not be subject to these prohibitions, and therefore may have a competitive advantage over us. If we are not successful in implementing and maintaining adequate preventative measures, we may be responsible for acts of our employees or other agents engaging in such conduct. We could suffer severe penalties and other consequences that may have a material adverse effect on our financial condition and results of operations.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets.

We are subject to export and import control laws, trade regulations and other trade requirements that limit which products we sell and where and to whom we sell our products. Specifically, the Bureau of Industry and Security of the U.S. Department of Commerce is responsible for regulating the export of most commercial items that are so called dual-use goods that may have both commercial and military applications. A limited number of our products are exported by license under the Export Control Classification Number, or ECCN, of 5A991. Export Control Classification requirements are dependent upon an item's technical characteristics, the destination, the end-use, and the end-user, and other activities of the end-user. Should the regulations applicable to our products change, or the restrictions applicable to countries to

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which we ship our products change, then the export of our products to such countries could be restricted. As a result, our ability to export or sell our products to certain countries could be restricted, which could adversely affect our business, financial condition and results of operations. Changes in our products or any change in export or import regulations or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons or technologies targeted by such regulations, could result in delayed or decreased sales of our products to existing or potential customers. In such event, our business and results of operations could be adversely affected.

Rapidly changing standards and regulations could make our products obsolete, which would cause our revenue and results of operations to suffer.

We design our products to conform to regulations established by governments and to standards set by industry standards bodies worldwide, such as The American National Standards Institute, the European Telecommunications Standards Institute, the International Telecommunications Union and the Institute of Electrical and Electronics Engineers, Inc. Various industry organizations are currently considering whether and to what extent to create standards applicable to our products. Because certain of our products are designed to conform to current specific industry standards, if competing or new standards emerge that are preferred by our customers, we would have to make significant expenditures to develop new products. If our customers adopt new or competing industry standards with which our products are not compatible, or the industry groups adopt standards or governments issue regulations with which our products are not compatible, our existing products would become less desirable to our customers and our revenue and results of operations would suffer.

#### Customer demands and new regulations related to conflict-free minerals may adversely affect us.

The Dodd-Frank Wall Street Reform and Consumer Protection Act imposes new disclosure requirements regarding the use of "conflict" minerals mined from the Democratic Republic of Congo and adjoining countries in products, whether or not these products are manufactured by third parties. These new requirements could affect the pricing, sourcing and availability of minerals used in the manufacture of our products. Certain of our customers are requiring additional information from us regarding the origin of our raw materials, and complying with these customer requirements may cause us to incur additional costs, such as costs related to determining the origin of any minerals used in our products. Our supply chain is complex and we may be unable to verify the origins for all metals used in our products. We may also encounter challenges with our customers and stockholders if we are unable to certify that our products are conflict free.

## Risks Related to Our Operations in China

Adverse changes in economic and political policies in China, or Chinese laws or regulations could have a material adverse effect on business conditions and the overall economic growth of China, which could adversely affect our business.

The Chinese economy differs from the economies of most developed countries in many respects, including the level of government involvement, level of development, growth rate, control of foreign exchange and allocation of resources. The Chinese economy has been transitioning from a planned economy to a more market-oriented economy. Despite reforms, the government continues to exercise significant control over China's economic growth by way of the allocation of resources, control over foreign currency-denominated obligations and monetary policy and provision of preferential treatment to particular industries or companies.

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In addition, the laws, regulations and legal requirements in China, including the laws that apply to foreign-invested enterprises, or FIEs, are subject to frequent changes. The interpretation and enforcement of such laws is uncertain. Protections of intellectual property rights and confidentiality in China may not be as effective as in the U.S. or other countries or regions with more developed legal systems. Any litigation in China may be protracted and result in substantial costs and diversion of resources and management attention. Any adverse changes to these laws, regulations and legal requirements or their interpretation or enforcement could have a material adverse effect on our business.

Furthermore, while China's economy has experienced rapid growth in the past 20 years, growth has been uneven across different regions, among various economic sectors and over time. China has also in the past and may in the future experience economic downturns due to, for example, government austerity measures, changes in government policies relating to capital spending, limitations placed on the ability of commercial banks to make loans, reduced levels of exports and international trade, inflation, lack of financial liquidity, stock market volatility and global economic conditions. Any of these developments could contribute to a decline in business and consumer spending in addition to other adverse market conditions, which could adversely affect our business.

The termination and expiration or unavailability of our preferential tax treatments in China may have a material adverse effect on our operating results.

Prior to January 1, 2008, entities established in China were generally subject to a 30% state and 3% local enterprise income tax rate. In accordance with the China Income Tax Law for Enterprises with Foreign Investment and Foreign Enterprises, effective through December 31, 2007, our China subsidiary enjoyed preferential income tax rates. Effective January 1, 2008, the China Enterprise Income Tax Law, or the EIT law, imposes a single uniform income tax rate of 25% on all Chinese enterprises, including FIEs, and eliminates or modifies most of the tax exemptions, reductions and preferential treatment available under the previous tax laws and regulations. As a result, our China subsidiary may be subject to the uniform income tax rate of 25% unless we are able to qualify for preferential status. Currently, we have qualified for a preferential 15% tax rate that is available for new and high technology enterprises. The preferential rate applies to calendar years 2012, 2013 and 2014. We have not yet realized benefits from this reduction in tax rate because we have not yet generated taxable income in China. Any future increase in the enterprise income tax rate applicable to us or the expiration or other limitation of preferential tax rates available to us could increase our tax liabilities and reduce our net income.

China regulation of loans and direct investment by offshore holding companies to China entities may delay or prevent us from using the proceeds we receive from this offering to make loans or additional capital contributions to our China subsidiary.

In utilizing the proceeds we receive from this offering, we may make loans or additional capital contributions to our China subsidiary. Any loans to our China subsidiary are subject to China regulations and approvals. For example, any loans to our China subsidiary to finance their activities cannot exceed statutory limits, must be registered with State Administration of Foreign Exchange, or SAFE, or its local counterpart, and must be approved by the relevant government authorities. Any capital contributions to our China subsidiary must be approved by the Ministry of Commerce or its local counterpart. In addition, under Circular 142, our China subsidiary, as a FIE, may not be able to convert our capital contributions to them into RMB for equity investments or acquisitions in China.

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We cannot assure you that we will be able to obtain these government registrations or approvals on a timely basis, if at all, with respect to our future loans or capital contributions to our China subsidiary. If we fail to receive such registrations or approvals, our ability to use the proceeds of this offering and to capitalize our China subsidiary may be negatively affected, which could materially and adversely affect our liquidity and ability to fund and expand our business.

## Our China subsidiary is subject to Chinese labor laws and regulations and Chinese labor laws may increase our operating costs in China.

The China Labor Contract Law, together with its implementing rules, provides increased rights to Chinese employees. Previously, an employer had discretionary power in deciding the probation period, not to exceed six months. Additionally, the employment contract could only be terminated for cause. Under these rules, the probation period varies depending on contract terms and the employment contract can only be terminated during the probation period for cause upon three days' notice. Additionally, an employer may not be able to terminate a contract during the probation period on the grounds of a material change of circumstances or a mass layoff. The new law also has specific provisions on conditions when an employer has to sign an employment contract with open-ended terms. If an employer fails to enter into an open-ended contract in certain circumstances, the employer must pay the employee twice their monthly wage beginning from the time the employer should have executed an open-ended contract. Additionally an employer must pay severance for nearly all terminations, including when an employer decides not to renew a fixed-term contract. These laws may increase our costs and reduce our flexibility.

# The turnover of direct labor in manufacturing industries in China is high, which could adversely affect our production, shipments and results of operations.

Employee turnover of direct labor in the manufacturing sector in China is high and retention of such personnel is a challenge to companies located in or with operations in China. Although direct labor costs do not represent a high proportion of our overall manufacturing costs, direct labor is required for the manufacture of our products. If our direct labor turnover rates are higher than we expect, or we otherwise fail to adequately manage our direct labor turnover rates, then our results of operations could be adversely affected.

#### An increase in our labor costs in China may adversely affect our business and our profitability.

A significant portion of our workforce is located in China. Labor costs in China have been increasing recently due to labor unrest, strikes and changes in employment laws. If labor costs in China continue to increase, our costs will increase. If we are not able to pass these increases on to our customers, our business, profitability and results of operations may be adversely affected.

## We may have difficulty establishing and maintaining adequate management and financial controls over our China operations.

Businesses in China have historically not adopted a western style of management and financial reporting concepts and practices, which includes strong corporate governance, internal controls and computer, financial and other control systems. Moreover, familiarity with U.S. GAAP principles and reporting procedures is less common in China. As a consequence, we may have difficulty finding accounting personnel experienced with U.S. GAAP, and we may have difficulty training and integrating our China-based accounting staff with our U.S.-based

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finance organization. As a result of these factors, we may experience difficulty in establishing management and financial controls over our China operations. These difficulties include collecting financial data and preparing financial statements, books of account and corporate records and instituting business practices that meet U.S. public-company reporting requirements. We may, in turn, experience difficulties in implementing and maintaining adequate internal controls as required under Section 404 of the Sarbanes-Oxley Act.

## Risks Related to This Offering and Our Common Stock

Our principal stockholders, executive officers and directors own a significant percentage of our stock and have significant control of our management and affairs, and they can take actions that may be against your best interests.

Following the completion of this offering, our executive officers and directors, and entities that are affiliated with them, will beneficially own an aggregate of approximately 4.6% of our outstanding common stock. As a result, these stockholders, acting together, may have significant influence over our management and affairs and matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, such as mergers, consolidations or the sale of substantially all of our assets. Consequently, this concentration of ownership may have the effect of delaying or preventing a change in control, including a merger, consolidation or other business combination involving us, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control, even if such a change in control would benefit our other stockholders.

## Our stock price could decline due to the large number of outstanding shares of our common stock eligible for future sale.

Sales of substantial amounts of our common stock in the public market, or the perception that these sales could occur, could cause the market price of our common stock to decline. These sales could also make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate. Upon completion of this offering, we will have an aggregate of 13,919,189 shares of common stock outstanding based on shares outstanding as of December 31, 2013 and assuming no exercise of options or warrants after such date. The 2,700,000 shares sold pursuant to this offering will be, and the 4,140,000 shares sold in our initial public offering are, immediately tradable without restriction. Of the remaining shares,

approximately 0.2 million shares are eligible for immediate sale;

approximately 6.0 million shares are expected to become eligible for sale on March 25, 2014 upon the expiration of lock-up agreements executed in connection with our initial public offering, subject in some cases to volume and other restrictions of Rules 144 and 701 under the Securities Act of 1933, as amended, or the Securities Act, and various vesting agreements; and

approximately 0.9 million shares are expected to become eligible for sale upon the expiration of 90-day lock-up agreements entered into in connection with this offering, subject in some cases to volume and other restrictions of Rules 144 and 701 under the Securities Act, or the Securities Act, and various vesting agreements.

The lock-up agreements entered into in connection with this offering expire 90 days after the date of this prospectus, subject to potential extensions in the event we release earning results

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or material news or a material event relating to us occurs near the end of the lock-up period and in the event that we cease to be an emerging growth company. Raymond James & Associates, Inc. and Piper Jaffray & Co., as representatives of the underwriters may, in their sole discretion and at any time without notice, release all or any portion of the securities subject to lock-up agreements.

On November 19, 2013, we registered 2,600,000 shares of our common stock under our equity plans, which shares will be eligible for sale upon the expiration of lock-up agreements (which expiration is expected to occur on March 25, 2014), subject in some cases to volume and other restrictions under Rules 144 and 701 under the Securities Act, and various vesting agreements.

Because our offering price is substantially higher than the as adjusted net tangible book value per share of our outstanding common stock, investors participating in this offering will incur immediate and substantial dilution.

The offering price is substantially higher than the as adjusted net tangible book value per share of our common stock based on the expected total value of our total assets, less our goodwill and other intangible assets, less our total liabilities immediately following this offering. Therefore, if you purchase shares of our common stock in this offering, you will experience immediate and substantial dilution of \$19.57 per share in the price you pay for our common stock compared to the as adjusted net tangible book value as of December 31, 2013, based on the assumed offering price of \$26.20 per share. Furthermore, investors purchasing our common stock in this offering will own only 9.2% of our shares outstanding even though they will have contributed 19.5% of the total consideration received by us in connection with our sales of common stock, based on the assumed offering price of \$26.20 per share. To the extent outstanding options to purchase common stock are exercised, there will be further dilution. For a further description of the dilution that you will experience immediately after this offering, see the section titled "Dilution."

We currently do not intend to pay dividends on our common stock and, consequently, your only opportunity to achieve a return on your investment is if the price of our common stock appreciates.

We currently do not plan to declare or pay dividends on shares of our common stock in the foreseeable future. In addition, the terms of our loan and security agreement with East West Bank restrict our ability to pay dividends. See "Dividend Policy" for more information. Consequently, your only opportunity to achieve a return on the shares you purchase in this offering will be if the market price of our common stock appreciates and you sell your shares at a profit. There is no guarantee that the price of our common stock in the market after this offering will ever exceed the price that you pay.

Our charter documents, stock incentive plans and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws and our stock incentive plans contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

providing for a classified board of directors with staggered, three-year terms;

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not providing for cumulative voting in the election of directors;

authorizing our board of directors to issue, without stockholder approval, preferred stock rights senior to those of common stock:

prohibiting stockholder action by written consent;

limiting the persons who may call special meetings of stockholders;

requiring advance notification of stockholder nominations and proposals; and

change of control provisions in our stock incentive plans, and the individual stock option agreements, which provide that a change of control may accelerate the vesting of the stock options issued under such plans.

In addition, the provisions of Section 203 of the Delaware General Corporate Law governs us. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding common stock, from engaging in certain business combinations without the approval of substantially all of our stockholders for a certain period of time.

These and other provisions in our amended and restated certificate of incorporation, our amended and restated bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would be without these provisions. See "Description of Capital Stock Preferred stock" and "Description of Capital Stock Anti-takeover effects of Delaware law."

Some provisions of our named executive officers' agreements regarding change of control or separation of service contain obligations for us to make separation payments to them upon their termination.

Certain provisions contained in our employment agreements with our named executive officers regarding change of control or separation of service may obligate us to make lump sum severance payments and related payments upon the termination of their employment with us, other than such executive officer's resignation without good reason or our termination of their employment as a result of their disability or for cause. In the event we are required to make these separation payments, it could have a material adverse effect on our results of operations for the fiscal period in which such payments are made. For a further description of the separation benefits that we may be obligated to pay upon such termination of these executives, see the section titled "Management Agreements with Executive Officers."

Our stock price has been and is likely to be volatile and you may be unable to sell your shares at or above the offering price.

The market price of our common stock has been and is likely to be subject to wide fluctuations in response to, among other things, the risk factors described in this section of this prospectus, and other factors beyond our control, such as fluctuations in the valuation of companies perceived by investors to be comparable to us.

Furthermore, the stock markets have experienced 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

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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 affect the market price of our common stock.

In the past, many companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may become 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.

As an "emerging growth company" within the meaning of the Securities Act, we will utilize certain modified disclosure requirements, and we cannot be certain if these reduced requirements will make our common stock less attractive to investors.

We are an emerging growth company within the meaning of the rules under the Securities Act. We have in this prospectus utilized, and we plan in future filings with the SEC to continue to utilize, the modified disclosure requirements available to emerging growth companies, including reduced disclosure about our executive compensation and omission of compensation discussion and analysis, and an exemption from the requirement of holding a nonbinding advisory vote on executive compensation and an exemption from the requirement that outside auditors attest as to our internal control over financial reporting. As a result, our stockholders may not have access to certain information they may deem important.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can utilize the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to utilize this extended transition period. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards as they become applicable to public companies.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We could remain an "emerging growth company" for up to five years, or until the earliest of (i) the last day of the first fiscal year in which our annual gross revenue exceed \$1 billion, (ii) the date that we become a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter or (iii) the date on which we have issued more than \$1 billion in non-convertible debt during the preceding three-year period.

If research analysts do not publish research about our business or if they issue unfavorable commentary or downgrade our common stock, our stock price and trading volume could decline.

The trading market for our common stock will depend on the research and reports that research analysts publish about us and our business. The price of our common stock could decline if one or more research analysts downgrade our common stock or if those analysts issue other unfavorable commentary or cease publishing reports about us or our business. If one or more of the research analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price or trading volume to decline.

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## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This prospectus contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. All statements other than statements of historical facts contained in this prospectus are forward-looking statements, including statements regarding our future financial position, sources of revenue, business strategy and plans, prospective products, product approvals or products under development, costs, timing and likelihood of success, gross margins, and objectives of management for future operations. In particular, many of the statements under the headings "Prospectus summary," "Risk Factors," "Management's discussion and analysis of financial condition and results of operations" and "Business" constitute forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue," the negative of these terms, or by other similar expressions that convey uncertainty of future events or outcomes to identify these forward-looking statements. These statements are only predictions, involving known and unknown risks, uncertainties and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. We discuss many of these factors, risks and uncertainties in greater detail under the heading "Risk Factors" and elsewhere in this prospectus. These factors expressly qualify all oral and written forward-looking statements attributable to us or persons acting on our behalf.

You should not rely on forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Actual results may differ materially from those suggested by the forward-looking statements for various reasons, including those discussed under "Risk Factors" in this prospectus. Except as required by law, we assume no obligation to update forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

This prospectus contains market data and certain other statistical information based on independent industry publications, governmental publications, reports by market research firms or other independent sources, including those generated by Akamai, Cisco, Infonetics and Ovum Limited, as well as our internal research. Some data is also based on our internal estimates. Industry publications, surveys and market research reports generally state that the information contained in them has been obtained from sources believed by the sources' authors to be reliable, but we have not independently verified any of the data from third party sources nor have we investigated the underlying economic assumptions on which such data are based. We commissioned certain Ovum research referenced in the sections "Prospectus Summary" and "Business" in this prospectus and contributed to its preparation. This information involves a number of assumptions and limitations. The markets in which we operate are subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section of this prospectus titled "Risk Factors."

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## **USE OF PROCEEDS**

We estimate that the net proceeds of the sale by us of our common stock in this offering will be approximately \$31.0 million, based on an assumed public offering price of \$26.20 per share, which was the closing price of our common stock as reported on the NASDAQ Global Market on March 13, 2014, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We will not receive any proceeds from the sale of shares by the selling stockholders.

We do not have current specific plans for the use of the net proceeds from this offering. We generally intend to use the net proceeds of this offering for working capital and other general corporate purposes, including developing new technologies, funding capital expenditures or making investments in or acquisitions of other businesses, solutions or technologies. Pending any use above, we plan to invest the net proceeds in investment-grade, short-term, interest-bearing securities. Management will have significant flexibility in applying the net proceeds of the offering. The amount and timing of our actual spending for these purposes may vary significantly from our plans and will depend on a number of factors, including our future revenues, cash generated by operations and other factors described under the heading "Risk Factors." We may find it necessary or advisable to use portions of the proceeds for other purposes.

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## MARKET PRICE OF COMMON STOCK

Our common stock has been listed on the NASDAQ Global Market under the symbol "AAOI" since September 26, 2013. Prior to that date, there was no public trading market for our common stock. Our common stock was priced at \$10.00 per share in our initial public offering on September 25, 2013. The following table sets forth for the periods indicated the high and low intra-day sale prices per share of our common stock as reported on the NASDAQ Global Market:

	]	High	Low
Fiscal Year 2013:			
Third Quarter (from September 26, 2013)	\$	10.44	\$ 9.37
Fourth Quarter	\$	16.61	\$ 9.07
Fiscal Year 2014:			
First Quarter (through March 13, 2014)	\$	28.01	\$ 11.19

On March 13, 2014, the last reported sale price of our common stock on the NASDAQ Global Market was \$26.20 per share. As of January 31, 2014, we had 359 holders of record of our common stock. The actual number of holders of our common stock is greater than these numbers of record holders and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and nominees. The number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

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## DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock, and we do not anticipate paying any cash dividends on our common stock for the foreseeable future. We currently intend to retain all available funds and future earnings for use in the operation and expansion of our business. Any future determination to pay cash dividends will be at the discretion of our board of directors and will depend upon our financial condition, results of operations, terms of financing arrangements, applicable Delaware law, capital requirements and such other factors as our board of directors deems relevant. In addition, the terms of our loan agreements governing our long-term debt obligations prohibit us from paying dividends.

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## **CAPITALIZATION**

The following table sets forth our consolidated cash and cash equivalents and capitalization as of December 31, 2013 on:

an actual basis; and

an adjusted basis giving effect to the sale by us of 1,275,235 shares of common stock in this offering, at an assumed public offering price of 26.20 per share, which was the closing price of our common stock as reported on the NASDAQ Global Market on March 13, 2014, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read the information in this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the accompanying notes appearing elsewhere in this prospectus.

	As of December 31, 2013						
(in thousands, except share data)		Actual	As	Adjusted			
Cash, cash equivalents and short-term investments	\$	30,751	\$	61,717			
Total debt		28,455		28,455			
Stockholders' equity (deficit)							
Common stock, no par value: 45,000,000 shares authorized; 12,643,954 shares outstanding		13		14			
Additional paid-in capital		144,023		174,988			
Accumulated other comprehensive income		2,364		2,364			
Accumulated deficit		(83,323)		(83,323)			
Total stockholders' equity (deficit)	\$	63,077	\$	94,043			
Total capitalization	\$	91,532	\$	122,498			

The number of shares of our common stock to be outstanding after this offering is based on 12,643,954 shares of our common stock outstanding as of December 31, 2013. This number of shares does not include:

1,467,902 shares of common stock subject to outstanding options as of December 31, 2013, with a weighted average exercise price of \$8.3794 per share;

32,665 shares of our common stock issuable upon the exercise of outstanding warrants, with a weighted average exercise price of \$9.80 per share; and

567,071 shares of common stock available for future sale or issuance under our 2013 Long-Term Incentive Plan.

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## DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the offering price per share of our common stock and the pro forma net tangible book value per share of our common stock after this offering. We calculate actual net tangible book value per share by dividing the net tangible book value, or tangible assets less total liabilities, by the number of outstanding shares of common stock. Our actual net tangible book value at December 31, 2013, was \$61.3 million, or \$4.85 per share.

After giving effect to the sale of the 1,275,235 shares of common stock by us at an assumed offering price of \$26.20 per share, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value at December 31, 2013, would be \$92.2 million, or \$6.63 per share. This represents an immediate increase in the net tangible book value of \$1.78 per share to existing stockholders and an immediate dilution of \$19.57 per share to investors purchasing shares at offering price of \$26.20 per share. The following table illustrates this per share dilution:

Assumed public offering price per share	\$ 26.20
Actual net tangible book value per share at December 31, 2013	\$ 4.85
As adjusted net tangible book value per share after this offering	\$ 6.63
Increase per share attributable to new investors	\$ 1.78
Dilution per share to new investors in this offering	\$ 19.57
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## SELECTED CONSOLIDATED FINANCIAL DATA

The selected consolidated financial data in this section is not intended to replace our consolidated financial statements and the related notes. You should read this summary consolidated financial data together with the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and related notes, all included elsewhere in this prospectus. We derived the consolidated statements of operations data for the years ended December 31, 2012 and 2013 and the consolidated balance sheet data as of December 31, 2012 and 2013 from our consolidated financial statements appearing elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected in the future and results of interim periods are not necessarily indicative of results for the entire year.

				Years	end	led Decen	ıber	31,	
		2009		2010		2011		2012	2013
		(i	n the	ousands, e	xcep	t share ar	ıd pe	er share dat	a)
Consolidated Statements of Operations Data:									
Revenue	\$	24,969	\$	40,489	\$	47,840	\$	63,421	
Cost of goods sold (1)		21,525		27,539		34,468		44,492	55,396
Gross profit	\$	3,444	\$	12,950	\$	13,372	\$	18,929	3 23,028
Operating expenses:									
Research and development (1)		5,707		5,176		6,451		7,603	8,512
Sales and marketing (1)		2,018		1,993		2,412		3,135	4,191
General and administrative (1)		7,298		8,382		8,243		8,012	10,632
Asset impairment charges		.,		492		-, -		- , -	1,11
Total operating expenses	\$	15,023	\$	16,043	\$	17,106	\$	18,750	3 23,335
Income (loss) from operations		(11,579)		(3,093)		(3,734)		179	(307)
Interest and other income (expense), net:									
Interest income		7		34		15		26	104
Interest expense		(1,038)		(906)		(1,338)		(1,381)	(1,125)
Other income (expense), net		68		585		(271)		231	(78)
Total interest and other income (expense), net	\$	(963)	\$	(287)	\$	(1,594)	\$	(1,124)	6 (1,099)
Loss before income taxes		(12,542)		(3,380)		(5,328)		(945)	(1,406)
Benefit from (provision for) income taxes		38		(5,500)		(0,020)		() ()	(1,100)
Net Loss attributable to common stockholders	\$	(12,504)	\$	(3,380)	\$	(5,328)	\$	(945)	(1,406)
Net Loss per share attributable to common stockholders:	¢	(40.20)	¢	(12.06)	¢	(20.21)	¢	(2.50)	(0.14)
Basic and diluted	\$	(48.39)	\$	(13.06)	\$	(20.21)	\$	(3.56) S	(0.14)

Weighted average shares used to compute net loss per share attributable to common

stockholders:

Basic and diluted 258,414 258,901 263,658 265,576 9,964,955

(1)

These expenses include share-based compensation expense. Share-based compensation expense is accounted for at fair value, using the Black-Scholes option-pricing model. Share-based compensation expense is recognized over the vesting period of the stock options and was included in cost of goods sold and operating expenses as follows:

Years	ended	December	31,
-------	-------	----------	-----

	20	)11	2	012	2013
Cost of goods sold	\$	35	\$	7	\$ 56
Research and development		50		8	53
Sales and marketing		58		9	52
General and administrative		420		137	907
Total share-based compensation expense	\$	563	\$	161	\$ 1,068
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	Years ended December 31,										
	2009			2010	2	2011		2012		2013	
					(in thousands)						
Consolidated balance sheet data:											
Cash, cash equivalents and short-term											
investments	\$	2,867	\$	4,643	\$	2,074	\$	11,226	\$	30,751	
Working capital (1)		7,511		(2,322)		(1,911)		13,669		38,879	
Total assets		45,560		52,934		53,723		65,748		111,057	
Total debt (2)		14,300		23,071		22,597		24,584		28,455	
Convertible preferred stock		90,423		90,423		94,373		105,367			
Common stock and additional paid-in-capital		3,939		4,723		5,303		5,542		144,036	
Total deficit		(72,263)		(75,643)		(80,972)		(81,917)		(83,323)	

<sup>(1)</sup> Working capital is defined as total current assets less total current liabilities.

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<sup>(2)</sup> Total debt is defined as short-term loans, notes payable and total long-term debt.

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# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the accompanying notes appearing elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in "Risk Factors."

## Overview

We are a leading, vertically integrated provider of fiber-optic networking products. We target three networking end-markets: CATV, FTTH and internet data centers. We design and manufacture a range of optical communications products at varying levels of integration, from components, subassemblies and modules to complete turn-key equipment. In designing products for our customers, we begin with the fundamental building blocks of lasers and laser components. From these foundational products, we design and manufacture a wide range of products to meet our customers' needs and specifications, and such products differ from each other by their end market, intended use and level of integration. We are primarily focused on the higher-performance segments within the CATV, FTTH and internet data center markets which increasingly demand faster connectivity and innovation. Our vertically integrated manufacturing model provides us several advantages, including rapid product development, fast response times to customer requests and control over product quality and manufacturing costs.

The three end markets we target are all driven by significant bandwidth demand fueled by the growth of network-connected devices, video traffic, cloud computing and online social networking. Within the CATV market, we benefit from a number of ongoing trends including the global build-out of CATV infrastructure, the move to higher bandwidth networks among CATV service providers and the outsourcing of system design among CATV networking equipment companies. In the FTTH market, we benefit from continuing PON deployments and system upgrades among telecommunication service providers. Within the internet data center market, we benefit from the increasing use of higher-capacity optical networking technology as a replacement for copper cables, particularly as speeds reach 10 gigabits per second and above, as well as the movement to open internet data center architectures and the increasing use of in-house equipment design among leading internet companies.

We sell our products to leading original equipment manufacturers, or OEMs, in the CATV and FTTH markets as well as internet data center operators. In 2013, we earned 60.4% of our total revenue from the CATV market, and 24.7% of our total revenue from the data center market. In 2013, our key customers in the CATV market included Cisco Systems and Biogenomics Corp., a distributor. In 2011, 2012 and 2013, Cisco Systems accounted for 26.8%, 33.2%, and 21.8%, respectively, of our revenue and Biogenomics Corp. accounted for 11.7%, 11.2% and 8.7%, respectively, of our revenue. In 2013, our key customers that contributed most to our FTTH revenue were Genexis B.V. and a leading internet service provider, which accounted for 2.8% and 2.0% of our total revenue, respectively. In 2013, our key customers in the data center market included Amazon and Microsoft. In 2012 and 2013, Amazon accounted for 5.8% and 18.2% of our revenue, respectively, and Microsoft accounted for 2.6% and 6.1% of our revenue, respectively. In 2013, revenue from the CATV market, data center market, FTTH market and other markets provided 60.4%, 24.7%, 5.6%, and 9.3% of our revenue, respectively, compared to 78.6%, 8.3%, 5.8% and 7.3% of our 2012 revenue, respectively.

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Our sales model focuses on direct engagement and close coordination with our customers to determine product design, qualifications, performance and price. Our strategy is to use our direct sales force to sell to key accounts and to expand our use of distributors for increased coverage in certain international markets and certain domestic market segments. We have direct sales personnel that cover the U.S., Taiwan and China focusing primarily on major OEM customers and internet data center operators. Throughout our sales cycle, we work closely with our customers to qualify our products into their product lines. As a result, we strive to build strategic and long-lasting customer relationships and deliver products that are customized to our customers' requirements.

Our business depends on winning competitive bid selection processes to develop components, systems and equipment for use in our customers' products. These selection processes are typically lengthy, and as a result, our sales cycles will vary based on the level of customization required, market served, whether the design win is with an existing or new customer and whether our solution being designed in our customers' product is our first generation or subsequent generation product. We do not have any long-term purchase commitments (in excess of one year) with any of our customers, all of whom purchase our products on a purchase order basis. Once one of our solutions is incorporated into a customer's design, however, we believe that our solution is likely to continue to be purchased for that design throughout that product's life cycle because of the time and expense associated with redesigning the product or substituting an alternative solution.

In 2011, 2012 and 2013, we had 11, 15 and 17 design wins, respectively. We define a design win as the successful completion of the evaluation stage, where our customer has tested our product, verified that our product meets substantially all of their requirements and has informed us that they intend to purchase the product from us. Although we believe that our ability to obtain design wins is a key strength and can provide meaningful and recurring revenue, an increase or decrease in the mere number of design wins does not necessarily correlate to a likely increase or decrease in revenue, particularly in the short term. As such, the number of design wins we achieve on a quarterly or annual basis and any increase or decrease in design wins will not necessarily result in a corresponding increase or decrease in revenue in the same or immediately succeeding quarter or year. For example, if our total number of design wins in an annual or quarterly period increases or decreases compared to the total number of design wins in a prior period, this does not necessarily mean that our revenue in such period will be higher or lower than our revenue in the prior period. In fact, our experience is that some design wins result in significant revenue and some do not, and the timing of such revenue is difficult to predict as it depends on the success of the end customer's product that uses our components. Thus, some design wins result in orders and significant revenue shortly after the design win is awarded and other design wins do not result in significant orders and revenue for several months or longer after the initial design win (if at all). We do believe that over a period of years the collective impact of design wins correlates to our overall revenue growth.

We believe we have an attractive financial profile, with strong revenue performance and control over our manufacturing costs through our vertically integrated manufacturing model. While we have incurred substantial losses since our inception, and as of December 31, 2013 had an accumulated deficit of \$83.3 million, we achieved profitability (net income on a GAAP basis) in the third quarter of 2013 and recorded a slight loss (\$0.5 million) in the fourth quarter of 2013. We have grown our revenue at a 33.1% CAGR between 2009 and 2013, including 23.7% growth year-over-year from 2012 to 2013.

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## **Factors Affecting Our Performance**

Increasing Consumer Demand for Bandwidth. Bandwidth demand in all of our target markets is driving service provider investment in new equipment and in turn generating demand for our products. Increasingly, optical networking technologies are being incorporated into networking equipment, replacing legacy copper-based networking technologies. This shift to optical networking solutions benefits us as a provider of those solutions.

Pricing, Product Cost and Margins. Our solution pricing varies depending upon the end market, the complexity of the product and the level of competition. Our product costs also vary with complexity as well as the degree to which we can utilize components designed and manufactured ourselves. We tend to realize higher gross margins on products that incorporate a higher percentage of our own components. We often initially experience lower gross margins on new products, as our pricing is based upon anticipated volume-driven cost reductions over the life of the design win. Thus, if we are unable to realize our expected cost reductions, we may experience declining gross margins on such products.

Our product pricing is established when the product is initially introduced to the market, and thereafter through periodic negotiations with customers. We generally do not agree to periodic automatic price reductions. Furthermore, due to the dynamics in the CATV market and the value of our outsourced design services to our customers, we believe we face less downward price pressure than many of our competitors. We sell a wide variety of products among our three target markets and our gross margin is heavily dependent in any quarter on the product mix achieved during that period.

Decreasing Customer Concentration within End Markets. Historically, our revenue has been significantly concentrated within the CATV market and among a few customers within this market. Over the past two years, we have developed new products within the FTTH and internet data center markets. Furthermore, we have developed additional original design manufacturer, or ODM, relationships with customers in each of our target markets which should enable us to diversify our revenue. Although the CATV market is our largest market today, we anticipate that sales in the FTTH and internet data center markets will account for a more significant percentage of our total revenue in the future. We believe that our entry into the FTTH and internet data center markets with new customers and with new products will continue to facilitate revenue growth and customer diversification.

*Product Development.* We invest heavily to develop new and innovative products. The majority of our research and development expense is allocated to product development, usually with a specific customer and customer platform in mind. We believe our close coordination with our customers regarding their future product requirements enhances the efficiency of our research and development expenditures.

## **Discussion of Financial Performance**

## Revenue

We generate revenue through the sale of our products to equipment providers for the CATV, FTTH and internet data center markets. We derive a significant portion of our revenue from our top ten customers, and we anticipate that we will continue to do so for the foreseeable future. We also anticipate that our revenue derived from the FTTH and internet data center markets will increase as a percentage of our revenue as we further penetrate and extend our products into these markets. The following chart provides the revenue contribution from each of the markets

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we serve for the years 2011, 2012 and 2013, as well as the corresponding percentage of our total revenue for each period:

Market	Mar. 31, 2011	Jun. 30, 2011	Sep. 30, 2011	Dec. 31, 2011	Mar. 31, 2012	Jun. 30, 2012	Sep. 30, 2012	Dec. 31, 2012	Mar. 31, 2013	Jun. 30, 2013	Sep. 30, 2013	Dec. 31, 2013
(in thousands, except percentages)												
CATV	7,422	9,228	9,878	12,411	9,761	13,274	13,530	13,277	8,259	10,514	14,559	14,041
Datacenter			14		670	647	977	2,998	3,620	6,640	3,216	5,910
FTTH	907	552	752	1,103	1,063	418	698	1,512	1,087	705	982	1,603
Other	1,178	1,709	1,450	1,236	1,012	1,299	1,211	1,074	1,351	1,738	2,009	2,190
m . 1	0.505	11 100	12.001	44550	10.506	47.620	46.446	10.061	44045	40.505	20.7	22.744
Total	9,507	11,489	12,094	14,750	12,506	15,638	16,416	18,861	14,317	19,597	20,766	23,744

					Pe	rcentage of	Revenue					
CATV	78.1%	80.3%	81.7%	84.1%	78.0%	84.9%	82.4%	70.4%	57.7%	53.7%	70.3%	59.1%
Datacenter	0.0%	0.0%	0.1%	0.0%	5.4%	4.1%	6.0%	15.9%	25.3%	33.9%	15.5%	24.9%
FTTH	9.5%	4.8%	6.2%	7.5%	8.5%	2.7%	4.2%	8.0%	7.6%	3.6%	4.7%	6.7%
Other	12.4%	14.9%	12.0%	8.4%	8.1%	8.3%	7.4%	5.7%	9.4%	8.8%	9.5%	9.3%

Total 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% In 2011, 2012, and 2013, our top ten customers represented 76.6%, 77.6% and 76.9% of our revenue, respectively. While the percentage earned from our top ten customers remained consistent, the increase in data center revenue, from 8.3% in 2012 to 24.7% in 2013 resulted in more diversification across our top ten customers. In 2013, our key customers in the CATV market included Cisco Systems, Biogenomics Corp., a distributor in China, and Aurora Networks. In 2011, 2012 and 2013, Cisco Systems accounted for 26.8%, 33.2%, and 21.8%, respectively, of our revenue and Biogenomics Corp. accounted for 11.7%, 11.2% and 8.7%, respectively, of our revenue. In 2013, our key customers in the data center market included Amazon and Microsoft. In 2012 and 2013, Amazon accounted for 5.8% and 18.2% of our revenue, respectively, and Microsoft accounted for 2.6% and 6.1% of our revenue, respectively. In 2013, our key customers that contributed most to our FTTH revenue

were Genexis B.V. and a leading internet service provider, which accounted for 2.8% and 2.0% of our total revenue, respectively.

Revenue is recognized when the product is shipped and title has transferred to the customer. We bear all costs and risks of loss or damage to the goods up to that point. On most orders, our terms of sale provide that title passes to the customer upon placement by us with a common carrier (upon shipment). A majority of our annual sales are denominated in U.S. dollars, but some sales from our Taiwan location and China-based subsidiary are denominated in NT dollars and RMB, respectively. For the year ended December 31, 2013, 17.4% of our total revenue was derived from our China-based subsidiary, with \$6.3 million denominated in RMB, \$2.0 million sold directly by our Taiwan location and an immaterial amount denominated in NT dollars. We expect a similar portion of our sales to be denominated in foreign currencies in 2014.

During the three year period from 2011 to 2013, our average sales price across our product lines declined less than 8.0%. Certain of our competitors in the optical industry, who may have narrower market focus than us or broader product lines within a market, have publically stated that they typically experience annual price declines of 10-15%. Revenue from period to period is driven by the volume of shipments and may be impacted by pricing pressures, among other factors.

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Cost of goods sold and gross margin

Our cost of goods sold consists of material costs, direct labor, allocated overhead and periodic cost variances, including reserves for excess and obsolete inventory, with each representing approximately 65.1%, 12.6%, 17.3%, 5.0% of our total cost of goods sold, respectively, in 2013.

Our cost of goods sold is impacted by variances arising from changes in yields and production volume. We typically experience lower yields and higher associated costs on new products. In general, our cost of goods sold for a particular product declines over time as a result of increasing efficiencies in the manufacturing processes, or supply cost declines, as well as yield improvements and testing enhancements.

We manufacture our products in all three of our facilities in the U.S., Taiwan and China. Generally, laser chips and optical components are manufactured in our U.S. facility, optical components and subassemblies are manufactured in our Taiwan facility, and equipment is manufactured in our China facility. Because of our vertical integration model, we utilize our own products in our semi-finished and finished goods that we sell between and among our respective manufacturing operations. We base those internal sales upon established transfer pricing methodologies. However, we eliminate all of those internal sales, and cost of goods sold transactions, to arrive at total revenue and cost of goods sold on a consolidated basis.

We have a global set of suppliers to help balance considerations related to product availability, quality and cost. Components of our cost of goods sold are denominated in U.S. or NT dollars or RMB, depending upon the manufacturing location.

Gross profit as a percentage of total revenue, or gross margin, has been and is expected to continue to be affected by a variety of factors, including the introduction of new products, production volumes, the mix of products sold, the geographic region in which products are sold, changes in the cost and volumes of materials purchased from our suppliers, changes in labor costs, changes in overhead costs, reserves for excess and obsolete inventories and changes in the average selling prices of our products. Although our overall gross margins over the past three years have been between 28.0% and 32.9%, our gross margins vary more broadly on a product-by-product basis. Our newer and more advanced products typically have higher average selling prices and higher gross margins; however, until the product volumes scale, the gross margin from newer and advanced products may initially be lower. Within our markets, we sell similar products to different geographic regions at different prices, and therefore realize different gross margins among those similar products. We generally realize a lower gross margin in sales to Asian markets. Our strategy is to improve our gross margins through vertical integration such as utilization of our own laser chips and optical sub-components in our solutions. We expect that our gross margins are likely to continue to fluctuate from quarter to quarter because of the variety of products we sell and the relative product mix within a quarter.

## Operating expenses

Our operating expenses consist of research and development, sales and marketing, and general and administrative expenses. Personnel costs are the most significant component of operating expenses and include salaries, benefits, bonuses and share-based compensation. With regard to sales and marketing expense, personnel costs also include sales commissions.

Research and development. Research and development, or R&D, expense consists primarily of personnel costs, including share-based compensation for R&D personnel, and R&D work

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orders (that include material, direct labor and allocated overhead), as well as allocated development costs, such as engineering services, software and hardware tools, depreciation of capital equipment and facility costs. We record all research and development expense as incurred. Customers rely upon us to assist them with the development of new products and modification of existing products because of our extensive optical design and manufacturing expertise. We work closely with our customers in the critical design phase of product development, and are often reimbursed for those development efforts. By virtue of our overseas R&D operations and by focusing on customer-specific projects, our research and development expenses have tended to represent a lower percentage of revenue compared to some of our competitors. In the future, we expect research and development expense to increase on a dollar basis, but continue to decline as a percentage of revenue, to the extent our revenue increases over time.

Sales and marketing. Sales and marketing expense consists primarily of personnel costs, including stock based compensation for our sales and marketing personnel, as well as travel and trade show expense, sales commissions and the allocation of overall corporate services and facility costs. We sell our products to customers who either incorporate our products into their offering or resell our products to end customers. Because we sell to a limited number of well-established customers, we employ a limited number of sales professionals who are able to cover large markets. We compensate our sales staff through base salary and commissions, with base salary being the largest component of overall compensation. Total sales commissions to employees amounted to less than one percent of our revenue in 2013. Additionally, we pay commissions to third parties on certain product lines and identified customers, which also amounted to less than one percent of our revenue in 2013. As such, our sales and marketing expense does not directly increase with revenue. In the future, we expect sales and marketing expense to increase on a dollar basis as we incrementally increase our overall sales activities, but expect our sales and marketing expense to decline as a percentage of revenue, to the extent our revenue increases over time.

General and administrative. General and administrative expense consists primarily of personnel costs, including share-based compensation, primarily for our finance, human resources and information technology personnel and certain executive officers, as well as professional services costs related to accounting, tax, banking, legal and information technology services, depreciation of capital equipment and facility costs. We expect general and administrative expense to increase in the short term, as we develop the infrastructure necessary to operate as a public company, including increased audit and legal fees, costs to comply with the Sarbanes-Oxley Act and the rules and regulations applicable to companies listed on a national stock exchange, as well as investor relations expense and higher insurance premiums. In the future, we expect general and administrative expense to increase on a dollar basis but continue to decline as a percentage of revenue, to the extent our revenue increases over time.

Other income (expense)

Interest income consists of income earned on our cash, cash equivalents and short-term investments. Interest expense consists of amounts paid for interest on our short-term and long-term debt borrowings.

Other income (expense), net is primarily made up of foreign currency transaction gains and losses. The functional currency of our China subsidiary is the RMB and the foreign currency transaction gains and losses of our China subsidiary primarily result from their transactions in U.S. dollars. The functional currency of our Taiwan location is the NT dollar and the foreign

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currency transaction gains and losses of our Taiwan location primarily result from their transactions in U.S. dollars.

Income taxes

We conduct our business globally. However, our operating income is subject to varying rates of tax in the U.S., Taiwan and China. Consequently, our effective tax rate is dependent upon the geographic distribution of our earnings or losses and the tax laws and regulations in each geographical region. We expect that our income taxes will vary in relation to our profitability and the geographic distribution of our profits. Our effective U.S. federal income tax rate was 0% in the past three years as we have incurred operating losses. At December 31, 2013, our U.S. accumulated net operating loss, or NOL, was \$65.7 million. As we earn profits in the U.S., we expect to reduce our cash tax obligations by the utilization of NOL carry forwards. Our NOL benefits expire over the twelve-year period from 2020 to 2032. Under Section 382 of the Code, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change NOLs, capital loss carry forwards and other pre-change tax attributes to offset its post-change income may be limited going forward. Based upon an analysis of our equity ownership, we have experienced an ownership change and our NOL carry forwards are limited in dollar amount. As of December 31, 2013, of the total accumulated NOL only \$40.3 million is available for utilization in 2014 and thereafter to shelter federal taxable income. Each year after 2014, an additional \$0.3 million is added to the total available NOL, until a maximum of \$43.9 million is reached. The amount of NOL available each year may decrease by the amount of NOL utilized and may increase by the amount of any operating losses incurred. Should we experience additional ownership changes our NOL carry forwards may be further limited.

Our wholly owned subsidiary, Global Technology, Inc., has enjoyed preferential tax concessions in China as a national high-tech enterprise. In March 2007, China's parliament enacted the PRC Enterprise Income Tax Law, or the EIT Law, under which, effective January 1, 2008, China adopted a uniform income tax rate of 25% for all enterprises including foreign invested enterprises. Global Technology, Inc. was recognized as a national high-tech enterprise in 2008 and was entitled to a 15% tax rate for a three year period from November 2008 to November 2011. In 2011, Global Technology, Inc. renewed its national high-tech enterprise certificate and was therefore extended its three year tax preferential status from November 2011 to November 2014.

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## **Results of Operations**

The following table set forth our results of operations for the periods presented and as a percentage of our revenue for those periods. The period-to-period comparison of our financial results is not necessarily indicative of our financial results to be achieved in future periods.

	Years ended December 31,											
		2011		2012		2013						
		(in thousa	ands	, except per	enta	iges)						
Consolidated Statements of Operations Data:												
Revenue	\$	47,840	\$	63,421	\$	78,424						
Cost of goods sold (1)		34,468		44,492		55,396						
Gross profit	\$	13,372	\$	18,929	\$	23,028						
Gross margin		28.0%		29.8%		29.4%						
Operating expenses:												
Research and development (1)		6,451		7,603		8,512						
Sales and marketing (1)		2,412		3,135		4,191						
General and administrative (1)		8,243		8,012		10,632						
Total operating expenses	\$	17,106	\$	18,750	\$	23,335						
Income (loss) from operations		(3,734)		179		(307)						
Interest and other income (expense), net		(1,594)		(1,124)		(1,099)						
Loss before income taxes	\$	(5,328)	\$	(945)	\$	(1,406)						
Benefit from (provision for) income taxes												
Net loss	\$	(5,328)	\$	(945)	\$	(1,406)						
Additional Financial Data:												
Non-GAAP gross profit (2)	\$	13,405	\$	18,936	\$	23,084						
Non-GAAP income (loss) from operations (2)		(3,000)		441		864						
Non-GAAP net income (loss) (2)		(5,027)		(503)		107						
Adjusted EBITDA (2)		(638)		3,734		4,467						

<sup>(1)</sup>These expenses include share-based compensation expense, which is accounted for at fair value, using the Black-Scholes option-pricing model.

Share-based compensation expense is recognized over the vesting period of the stock options and was included in cost of goods sold and operating expenses as follows:

	Years	Years ended December 31,									
	2011	2012	2013								
Cost of goods sold	\$ 35	\$ 7	\$ 56								
Research and development	50	8	53								
Sales and marketing	58	9	52								
General and administrative	420	137	907								

Total share-based com	pensation expense	\$ 563	\$ 161	\$ 1,068

(2)

We prepare Adjusted EBITDA and our other non-GAAP measures to eliminate the impact of items that we do not consider indicative of our overall operating performance. To arrive at our non-GAAP gross profit, we exclude share-based compensation expense from our GAAP gross profit. To arrive at our non-GAAP income (loss) from operations we exclude all amortization of intangible assets, share-based compensation expense and non-recurring consulting fees, if any, from our GAAP net income (loss) from operations. To arrive at our Adjusted EBITDA, we exclude these same items and, additionally, exclude asset impairment charges, loss (gain) from disposal of idle assets, unrealized

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exchange loss (gain), interest (income) expense, on a net basis, provision for (benefit from) income taxes and all depreciation expense from our GAAP net income (loss).

We believe that our non-GAAP measures are useful to investors in evaluating our operating performance for the following reasons:

We believe that elimination of items, such as share-based compensation expense, adjusted depreciation and amortization, income tax expense and other income, net, is appropriate because treatment of these items may vary for reasons unrelated to our overall operating performance;

We use non-GAAP measures in conjunction with our GAAP financial measures for planning purposes, including the preparation of our annual operating budget, as a measure of operating performance and the effectiveness of our business strategies and in communications with our board of directors concerning our financial performance;

We believe that non-GAAP measures provide better comparability with our past financial performance, facilitates better period-to-period comparisons of operational results and also facilitates comparisons with our peer companies, many of which also use similar non-GAAP financial measures to supplement their GAAP reporting; and

We anticipate that, after consummating this offering, our investor presentations and those of securities analyst will include non-GAAP measures to evaluate our overall operating performance.

Adjusted EBITDA and other non-GAAP measures should not be considered as an alternative to gross profit, income (loss) from operations, net income (loss) or any other measure of financial performance calculated and presented in accordance with GAAP. Our Adjusted EBITDA and other non-GAAP measures may not be comparable to similarly titled measures of other organizations because other organizations may not calculate Adjusted EBITDA or such other non-GAAP measures in the same manner. You are encouraged to evaluate these adjustments and the reason we consider them appropriate. For a reconciliation between GAAP and Non-GAAP measures, see footnote 2 to the table in the section titled "Summary Consolidated Financial Data" on page 7 of this prospectus.

## Comparison of Years Ended December 31, 2013 and 2012

Revenue

		Years Decem				Change	ıge		
	2012 2013 Amount								
		(in	thous	ands, excep	t per	centages)			
Revenue	\$	63,421	\$	78,424	\$	15,003	23.7%		

Of our total revenue in 2013, we generated \$47.3 million, or 60.4%, from the CATV market, \$19.3 million, or 24.7%, from the internet data center market, \$4.4 million, or 5.6%, from the FTTH market, and \$7.3 million, or 9.3%, from other markets. Total revenue increased by \$15.0 million, or 23.7%, from 2012 to 2013.

The increase in revenue was attributable to a \$14.1 million increase from the internet data center market, and a \$2.7 million increase from other markets, partially offset by a \$2.5 million decrease from our CATV market. The increase in revenues in the internet data center market were driven by increasing sales to customers we added late in 2012. The decline in revenues in the CATV market in 2013 was a result of market-wide weakness, particularly in China, as well as delays in orders as a consequence of mergers among several of our CATV customers.

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Cost of goods sold and gross margin

## Years ended December 31,

		2012	2	201	3		
	A	Amount	% of revenue	Amount	% of revenue of percentages)	Change Amount	%
Cost of goods sold	\$	44,492	70.2% \$	55,396	70.6% \$	10.904	24.5%
Gross margin	Ψ	, .> =	29.8%	00,000	29.4%	10,50.	2 110 70

Cost of goods sold increased by \$10.9 million, or 24.5%, from 2012 to 2013, primarily due to the combination of an \$7.2 million increase in direct material costs and a \$3.7 million increase in labor and overhead costs, both of which were associated with our increase in revenues. Within our markets, we sell similar products in different geographic regions at different prices, resulting in different gross margins among our products. The decrease in gross margin was primarily the result of a higher percentage of sales of lower margin CATV equipment in Asia and a lower percentage of higher margin component sales in the U.S.

## Operating expenses

## Years ended December 31,

		2012	2	2013	3		
	A	amount	% of revenue	Amount	% of revenue	Change Amount	%
			(in thou	sands, except	percentages)		
Research and development	\$	7,603	12.0%\$	8,512	10.9% 5	909	11.9%
Sales and marketing		3,135	4.9%	4,191	5.3%	1,056	33.7%
General and administrative		8,012	12.6%	10,632	13.6%	2,620	32.7%
Total operating expenses	\$	18,750	29.6%\$	23,335	29.8%	4,585	24.4%

## Research and development expense

Research and development expense increased by \$0.9 million, or 11.9%, from 2012 to 2013. This was primarily due to increases in personnel costs and R&D work order and project costs related to new product development.

## Sales and marketing expense

Sales and marketing expense increased by \$1.1 million, or 33.7%, from 2012 to 2013. This was due to an increase in personnel costs due to additional sales and marketing staff to better serve our customers, and an increase in sales commissions directly related to our revenue growth.

## General and administrative expense

General and administrative expense increased by \$2.6 million, or 32.7%, from 2012 to 2013. This was primarily due to an increase in share based compensation expense as well as an increase in personnel costs, expenses related to being a public company, professional fees and travel expenses.

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Other income (expense), net

## Years ended December 31,

		2012	2	201	3		
		Amount	% of revenue	Amount	% of revenue	Chang Amount	ge %
	r	imount			pt percentages)		70
Interest income	\$	26	0.0% \$	104	0.1% \$	78	300.0%
Interest expense		(1,381)	(2.2)%	(1,125)	(1.4)%	256	18.5%
Other income (expense), net		231	0.4%	(78)	(0.1)%	(309)	(133.8)%
Total Other income (expense),	Ф	(1.124)	(1.0)(7.4)	(1.000)	(1.4)((.4)	25	2.2%
net	\$	(1,124)	(1.8)%\$	(1,099)	(1.4)%\$	5 25	2.2%

Total net other expense decreased slightly from 2012 to 2013. Interest expense decreased while average loan balances increased from 2012 to 2013 due to a further reduction in interest rates in 2013. Our net other expense decreased by \$0.3 million from 2012 to 2013 primarily due to a \$0.6 million unrealized foreign currency revaluation loss from U.S. denominated accounts in 2013 when the NT dollar depreciated against the U.S. dollar which was offset by an additional \$0.2 million of government subsidies received by our China subsidiary.

Benefit from (provision for) income taxes

		ber 31,	
	2012 (in	2013 thousands,	Change , except
		percentag	ges)
Benefit from (provision for) income taxes	\$	\$	\$
Effective tax rate	0.09	% 0.09	% 0.0%

Our effective tax rate was 0.0% for 2012 and 2013, as we did not generate positive taxable income.

Voore anded

## Comparison of Years Ended December 31, 2012 and 2011

Revenue

	Years	ende	ed						
	Decem	;							
	2011		2012	2012 Amount					
	(in t	hous	ands, excep	ot pei	centages)				
Revenue	\$ 47,840	\$	63,421	\$	15,581	32.6%			

Of our total revenue in 2012, we generated \$49.8 million, or 78.6%, from the CATV market, \$5.3 million, or 8.3%, from the internet data center market, \$3.7 million, or 5.8%, from the FTTH market, and \$4.6 million, or 7.3%, from other markets. Total revenue increased by \$15.6 million, or 32.6%, from 2011 to 2012. The increase in revenue was attributable to an \$11.0 million increase in revenue from our CATV market, a \$5.3 million increase from the internet data center market, and a \$0.4 million increase in the FTTH market, which increases were partially offset by a \$1.0 million decrease from other markets. Our CATV market revenue increased in 2012 primarily due to increased capital expenditures by CATV service providers and increased shipments of our CATV equipment products. Revenues in 2012 were also driven by sales increases from two customers in the internet data center market. Our FTTH market

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revenue increased primarily because of the sale of new transceiver products to existing customers. Revenue declined in other markets because of a de-emphasis by our sales staff and the decline in sales of certain legacy products within those markets.

Cost of goods sold and gross margin

#### Years ended December 31,

		201	1	20	012		
	A	mount	% of revenue	Amount	% of revenue	Change Amount	%
			(in tho	usands, exc	ept percentages	)	
Cost of goods sold	\$	34,468	72.0%	\$ 44,492	2 70.2%	\$ 10,024	29.1%
Gross margin			28.0%		29.8%		

Cost of goods sold increased by \$10.0 million, or 29.1%, from 2011 to 2012, primarily due to a combination of an \$8.5 million increase in direct material costs and a \$1.3 million increase in labor and overhead costs, both of which were associated with our increase in revenues. The increase in gross margin was caused by lower direct labor costs and lower overhead from improved efficiency, combined with a reduction in our inventory reserve. The inventory reserves were higher in 2011 primarily due to discontinued products and aging of inventory on hand.

Operating expenses

## Years ended December 31,

		2011	1		201	2			
	A	mount	% of revenue	A	Amount	% of revenu		Chang mount	e %
			(in	thousa	nds, excep	t percent	ages)		
Research and development	\$	6,451	13.5	5% \$	7,603	12	.0% \$	1,152	17.9%
Sales and marketing		2,412	5.0	)%	3,135	4	.9%	723	30.0%
General and administrative		8,243	17.2	2%	8,012	12	.6%	(231)	(2.8)%
Total operating expenses	\$	17,106	35.8	3% \$	18,750	29	.6% \$	1,644	9.6%

#### Research and development expense

Research and development expense increased by \$1.2 million, or 17.9%, from 2011 to 2012, \$0.7 million of which was attributable to R&D material expenses associated with new product development. The remaining \$0.5 million increase was a result of a reallocation of existing personnel costs to R&D work orders and an increase in R&D staffing. Because our R&D staff is integral to new product development, our R&D staff often rotate between R&D work orders (non-production orders) and production orders. As we shift those personnel from production back to R&D, our R&D expenses vary.

Sales and marketing expense

Sales and marketing expense increased by \$0.7 million, or 30.0%, from 2011 to 2012. This was due to a \$0.5 million increase in personnel costs due to additional sales and marketing staff to better serve our customers, and an increase in sales commissions of \$0.2 million because of our revenue growth.

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General and administrative expense

General and administrative expense decreased by \$0.2 million, or 2.8%, from 2011 to 2012. This was primarily due to a decrease in share based compensation expense because of the use of a reduced volatility assumption and prior grants becoming fully vested.

Other income (expense), net

#### Years ended December 31,

		2011	1			2012	2				
			%	of			%	of		Chang	,
	A	mount	reve	enue	An	nount	reve	nue	Am	ount	%
				(in thou	ısaı	ıds, excep	ot per	centages	)		
Interest income	\$	15		0.0% \$	6	26		0.0%	\$	11	71.3%
Interest expense		(1,338)		(2.8)%		(1,381)		(2.2)%		(45)	(3.3)%
Other income (expense), net		(271)		(0.6)%		231		0.4%		502	186.0%
Total Other income (expense), net	\$	(1,594)		(3.3)% \$	6	(1,124)		(1.8)%	\$	470	29.5%

Total net other expense decreased by \$0.5 million, or 29.5%, from 2011 to 2012. Interest expense remained relatively unchanged from 2011 to 2012. While average loan balances increased from 2011 to 2012 by about \$2.0 million, we benefited from a reduction in interest rates in 2012. The net other expense decreased by \$0.5 million from 2011 to 2012 primarily due to foreign currency revaluation gains from U.S. denominated accounts in 2012 when the NT dollar appreciated against the U.S. dollar.

Benefit from (provision for) income taxes

		s ended aber 31,	
	2011 (in	2012 thousands,	Change except
		percentag	es)
Benefit from (provision for) income taxes	\$	\$	\$
Effective tax rate	0.09	% 0.09	% 0.0%

Our effective tax rate was 0.0% for 2011 and 2012, as we did not generate positive taxable income.

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## **Quarterly Results of Operations**

The following tables set forth selected unaudited quarterly statements of operations data for our last eight completed fiscal quarters. The information for each of these quarters has been prepared on the same basis as the consolidated financial statements appearing elsewhere in this prospectus and, in the opinion of management, includes all adjustments necessary for the fair presentation of the results of operations for these periods. These data should be read in conjunction with our consolidated financial statements and related notes appearing elsewhere in this prospectus. These quarterly operating results are not necessarily indicative of our operating results for any future period.

	Μ	Iar. 31,	J	un. 30,	S	ер. 30,	D	ec. 31,	N	Iar. 31,	Jı	une. 30,	S	ер. 30,	D	ec. 31,
		2012	_	2012		2012		2012		2013	_	2013		2013		2013
Revenue	\$	12,506	\$	15,638	\$	16,416	\$	18,861	\$	14,317	\$	19,597	\$	20,766	\$	23,744
Cost of goods sold (1)		8,393		10,938		11,743		13,418		9,732		14,150		14,445		17,069
Gross profit	\$	4,113	\$	4,700	\$	4,673	\$	5,443	\$	4,585	\$	5,447	\$	6,321	\$	6,675
Gross margin		32.9%		30.1%		28.5%	,	28.9%		32.0%	,	27.8%	, )	30.4%		28.1%
Operating expenses:																
Research and																
development (1)	\$	1,574	\$	1,708	\$	2,178	\$	2,144	\$	2,004	\$	1,898	\$	2,211	\$	2,400
Sales and marketing (1) General and		814	,	806		759	*	756		907		1,053	-	1,034		1,198
administrative (1)		1,961		1,947		1,892		2,213		2,374		2,447		2,435		3,375
Total operating expenses	\$	4,349	\$	4,460	\$	4,829	\$	5,112	\$	5,285	\$	5,398	\$	5,680	\$	6,973
Income (loss) from operations	\$	(236)	\$	240	\$	(156)	\$	331	\$	(700)	\$	49	\$	641	\$	(297)
Interest and other income		(207)		(222)		(225)		(200)		(20.4)		(221)		(250)		(222)
(expense), net  Net income (loss)	\$	(523)	\$	(332)	\$	(225)	\$	(280)	\$	(294)	\$	(282)	\$	390	\$	(223)
Additional Financial Data:																
Non-GAAP gross profit (2)	\$	4,115	\$	4,702	\$	4,675	\$	5,445	\$	4,597	\$	5,461	\$	6,335	\$	6,690
Non-GAAP income (loss) from operations (2)		(203)		278		(108)		474		(555)		213		793		413
Non-GAAP net income																
(loss) (2)		(443)		(106)		(215)		262		(686)		(93)		611		275
Adjusted EBITDA (2)		656		953		851		1,275		350		959		1,782		1374
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	Mar. 31, 2012	Jun. 30, 2012	Sep. 30, 2012	Dec. 31, 2012	Mar. 31, 2013	June. 30, 2013	Sep. 30, 2013	Dec. 31, 2013
Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of goods sold	67.1%	69.9%	71.5%	71.1%	68.0%	72.2%	69.6%	71.9%
Gross profit	32.9%	30.1%	28.5%	28.9%	32.0%	27.8%	30.4%	28.1%
Operating expenses:								
Research and development	12.6%	10.9%	13.3%	11.4%	14.0%	9.7%	10.6%	10.1%
Sales and marketing	6.5%	5.2%	4.6%	4.0%	6.3%	5.4%	5.0%	5.0%
General and administrative	15.7%	12.4%	11.5%	11.7%	16.6%	12.5%	11.7%	14.2%
Total operating expenses	34.8%	28.5%	29.4%	27.1%	36.9%	27.5%	27.4%	29.4%
Income (loss) from operations	(1.9)%	1.5%	(0.9)%	1.8%	(4.9)%	0.3%	3.1%	(1.2)%
Interest and other income (expense), net	(2.3)%							
Net income (loss)	(4.2)%	(0.6)%	(2.3)%	0.3%	(6.9)%	(1.4)%	1.9%	(2.2)%
Additional Financial Data:								
Non-GAAP gross profit (1)	32.9%	30.1%	28.5%	28.9%	32.1%	27.9%	30.5%	28.2%
Non-GAAP income (loss) from operations (1)	(1.6)%	1.8%	(0.7)%	2.5%	(3.9)%	5 1.1%	3.8%	1.7%
Non-GAAP net income (loss) (1)	(3.5)%				(4.8)%			1.2%
Adjusted EBITDA (1)	5.2%	6.1%	5.2%	6.8%	2.4%	4.9%	8.6%	5.8%

<sup>(1)</sup> These expenses include share-based compensation expense as follows:

	Mar. 31, 2012		Jun. 30, 2012		Sep. 30, 2012		Dec. 31, 2012		Mar. 31, 2013		Jun. 30, 2013		Sep. 30, 2013		Dec. 31, 2013	
(in thousands)																
Cost of goods sold	\$	2	\$	2	\$	2	\$	2	\$	12	\$	14	\$	14	\$	16
Research and development		2		2		2		2		11		13		13		17
Sales and marketing		2		2		2		2		10		11		11		20
General and administrative		12	1	2		9		104		78		92		96		640
Total share-based																
compensation expense	\$	18	\$ 1	8	\$	15	\$	110	\$	111	\$	130	\$	134	\$	693

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(2)

See footnote 2 to the table in the section titled "Summary Consolidated Financial Data" on page 7 of this prospectus for further discussion regarding Non-GAAP measures. The following table reflects the reconciliation of U.S. GAAP financial measures to non-GAAP financial measures:

		ar. 31, 2012		ın. 30, 2012		ep. 30, 2012		ec. 31, 2012 (in tho		(ar. 31, 2013		ne. 30, 2013		ep. 30, 2013		ec. 31, 2013
Gross profit	\$	4,113	¢	4,700	¢	4 673	\$	`		4,585	¢	5,447	\$	6,321	\$	6,675
Non-GAAP adjustment:	Ψ	7,113	Ψ	4,700	Ψ	4,073	Ψ	3,773	Ψ	7,505	Ψ	3,777	Ψ	0,321	Ψ	0,073
Share-based compensation expense		2		2		2		2		12		14		14		15
Non-GAAP gross profit	\$	4,115	\$	4,702	\$	4,675	\$	5,445	\$	4,597	\$	5,461	\$	6,335	\$	6,690
Income (loss) from operations Non-GAAP adjustments: Amortization of intangible	\$	(236)	\$	240	\$	(156)	\$	331	\$	(700)	\$	49	\$	641	\$	(297)
assets		15		14		15		16		17		17		17		17
Share-based compensation expense		18		18		15		110		111		129		135		693
Non-recurring consultant fee		10		6		18		17		17		18		133		093
Non-GAAP income (loss) from operations	\$	(203)	\$	278	\$	(108)	\$	474	\$	(555)	\$	213	\$	793	\$	413
Net income (loss) Non-GAAP adjustments:	\$	(523)	\$	(92)	\$	(381)	\$	51	\$	(994)	\$	(282)	\$	390	\$	(520)
Amortization of intangible assets		15		14		15		16		17		17		17		17
Share-based compensation		10				10		10				1,		-,		1,
expense		18		18		15		110		111		129		135		693
Non-recurring consultant fee Loss (gain) from disposal of				6		18		17		17		18				
idle assets		(36)				(1)										
Unrealized Exchange loss (gain)		83		(52)		119		68		163		25		69		85
Non-GAAP net income (loss)	\$	(443)	\$		\$	(215)	\$		\$	(686)	\$	(93)	\$	611	\$	275
Net income (loss)	\$	(523)	\$	(92)	\$	(381)	\$	51	\$	(994)	\$	(282)	\$	390	\$	(520)
Non-GAAP adjustments: Amortization of intangible												, , , , , , , , , , , , , , , , , , ,				
assets Share-based compensation		15		14		15		16		17		17		17		17
expense		18		18		15		110		111		129		135		693
Depreciation expense		725		724		721		712		753		772		859		954
Non-recurring consultant fee		(36)		6		18 (1)		16		17		18				

Loss (gain) from disposal of								
idle assets								
Unrealized Exchange loss								
(gain)	83	(53)	119	68	161	31	65	85
Interest expense, net	374	336	345	301	285	282	308	145
-								
Adjusted EBITDA	\$ 656	\$ 953	\$ 851	\$ 1,275	\$ 350	\$ 967	\$ 1,776	\$ 1,374

# Quarterly revenue trends and seasonality

Our quarterly results reflect seasonality in the sale of our products. Historically, our revenue has been highest in the fourth quarter and lowest in the first quarter. The first quarter of the year has historically been negatively affected by reduced economic activity due to the Chinese New Year holiday and the lower level of deployment of outdoor CATV equipment in cold weather environments.

# Quarterly gross margin trends

Our gross margin varies quarter to quarter but has been within a range of 27.8% and 32.9% over the past eight quarters. Our gross margin varies primarily due to the product mix in a

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particular quarter, as well as from the level of manufacturing efficiencies, production yields (particularly in the laser chip fabrication process) and overall supply costs.

Quarterly operating result trends

Our quarterly operating results are likely to fluctuate due to seasonality and other factors such as:

general economic, industry and market conditions in our target markets;

our CATV customers' willingness to outsource more of their internal design and manufacturing;

changes in the mix of products within a quarter or changes in the volume of products sold within a particular target market;

our ability to obtain new orders, and the timing of such orders;

the level of revenues from our orders;

pricing policies by us or our competitors;

our ability to fulfill sales orders in a timely manner within normal lead times or as otherwise demanded by customers;

our ability to adjust our production in response to quarter-over-quarter variations in revenue;

our ability to adjust sales, general and administrative costs in response to changes in revenue; and

The occurrence of one or more of these factors could cause our revenue and corresponding operating results to vary widely. As such, we believe that our quarterly levels of revenue and expenses may vary significantly in the future, and that period-to-period comparisons of our results may not be meaningful and should not be relied upon as an indication of future performance.

our ability to control costs and capital expenditures.

# **Liquidity and Capital Resources**

From inception until our initial public offering, we financed our operations through private sales of equity securities and cash generated from operations and from various lending arrangements. On October 1, 2013, we completed our initial public offering, in which we issued and sold 3,600,000 shares of our common stock at a public offering price of \$10.00 per share, providing proceeds of \$31.5 million, net of underwriting discounts and commissions and offering expenses. At December 31, 2013, our cash, cash equivalents, restricted cash and short-term investments totaled \$30.8 million. Cash and cash equivalents were held for working capital purposes and were invested primarily in money market funds. We do not enter into investments for trading or speculative purposes.

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The table below sets forth selected cash flow data for the periods presented:

	Years Ended December 31,						
	2011 2012 2013					2013	
			(in t	thousands)			
Net cash provided by (used in) operating activities	\$	(4,125)	\$	(358)	\$	(6,552)	
Net cash used in investing activities		(1,571)		(3,290)		(17,736)	
Net cash provided by financing activities		2,836		12,754		35,368	
Effect of exchange rates on cash and cash equivalents		136		(150)		203	
Net increase (decrease) in cash and cash equivalents	\$	(2,724)	\$	8.956	\$	11.283	

## Operating activities

In 2013, net cash used in operating activities was \$6.6 million. Cash used in operating activities primarily related to an increase in receivables from customers from the sale of our products in excess of cash paid to our suppliers. During the year ended December 31, 2013, we recognized a net loss of \$1.4 million. The net loss incorporated non-cash charges, including depreciation and amortization of \$3.4 million, share based compensation expenses of \$1.1 million and non-cash increases to our inventory reserve accounts of \$0.5 million. We also spent \$7.5 million to increase our inventories to support increases in sales volumes, but this was offset by an increase in accounts payable.

In 2012, net cash used in operating activities was \$0.4 million. Cash used in operating activities primarily related to payments to suppliers in excess of cash received from our customers from the sale of our products. During 2012, we recognized a net loss of \$0.9 million. However, that net loss incorporated non-cash charges, including depreciation and amortization of \$2.9 million, share-based compensation expense of \$0.1 million and non-cash increases to our inventory reserve accounts of \$0.9 million. In addition, we spent \$0.5 million in 2012 to increase our inventories in anticipation of expected increases in sales volumes.

In 2011, net cash used in operating activities was \$4.1 million. Cash used in operating activities primarily related to payments to suppliers in excess of cash received from our customers from the sale of our products. During 2011, we recognized a net loss of \$5.3 million. However, that net loss incorporated non-cash charges, including depreciation and amortization of \$3.1 million, share-based compensation expense of \$0.6 million and non-cash increases to our inventory reserve accounts of \$1.6 million. In addition, we spent \$1.6 million in 2011 to increase our inventories in anticipation of expected increases in sales volumes.

# Investing activities

Our investing activities consisted primarily of capital expenditures and purchases of intangible assets.

In 2013, we used \$17.7 million of cash for investing activities, of which \$9.3 million of cash was used for the purchase of additional machinery and equipment to support our research and development efforts and manufacturing activities and \$8.0 million of cash was used for the purchase of short-term investments.

In 2012, we used \$3.3 million of cash for investing activities. We used \$3.2 million of cash for the purchase of additional machinery and equipment to support our research and

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development efforts and manufacturing activities, partially offset by \$0.1 million of cash provided by the sale of obsolete equipment.

In 2011, we used \$1.6 million of cash for investing activities. We used \$1.8 million of cash for the purchase of property and equipment, partially offset by \$0.4 million of cash provided by the sale of obsolete equipment.

## Financing activities

Our financing activities consisted primarily of proceeds from the issuance of common stock and preferred stock and activity associated with our various lending arrangements.

In 2013, our financing activities provided \$35.4 million in cash. We received \$31.5 million in net proceeds from our initial public offering. We received \$3.5 million in net borrowings associated with our bank loans and received \$0.7 million from the exercise of stock options and warrants. These increases were offset by an increase in our restricted cash by \$0.2 million, related to the compensating balances required by our loans in China.

In 2012, our financing activities provided \$12.8 million in cash. We received \$10.2 million in cash from the issuance of preferred stock, \$2.7 million in net borrowings associated with our bank loans and \$0.8 million from the issuance of notes payable, offset in part by \$0.7 million of payments of principal on our term loans and notes payable and \$0.2 million to repay loans from stockholders.

In 2011, our financing activities provided \$2.8 million in cash, primarily resulting from \$2.9 million of cash from the issuance of preferred stock and \$1.6 million in net borrowings associated with our bank loans, offset in part by \$0.2 million of payments of principal on our term loans and notes payable and \$1.2 million to repay loans from stockholders.

#### Loans and commitments

We have lending arrangements with several financial institutions, including a loan and security agreement with East West Bank in the U.S., several lines of credit arrangements for our China subsidiary and financing agreements for our Taiwan location.

As of December 31, 2013, our loan and security agreement in the U.S. included a \$7.0 million revolving line of credit which matures on November 15, 2015. Also included with the same bank is a term loan with monthly payments of principal and interest that matures on November 15, 2014. As of December 31, 2013, we had \$7.0 million outstanding under the revolving line of credit and \$3.1 million outstanding on the term loan.

On September 10, 2013, our loan and security agreement in the U.S. was amended to add \$5.0 million of borrowing capability to the existing credit line, for the purpose of financing equipment. The additional equipment term loan allows us to draw up to the lesser of (i) \$5.0 million, or (ii) 90% of the costs of equipment purchased between March 31, 2013 and March 10, 2014. Through March 10, 2014, we are required to pay interest only on the then-outstanding balance, and then pay equal principal payments plus accrued interest monthly for the following 42 months. The interest rate for such equipment term loan is the bank's prime lending rate plus 0.75%, currently a total of 4.0%. As of December 31 2013, \$1.85 million has been drawn against this equipment term loan.

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Our loan and security agreement requires us to maintain certain financial covenants, including a minimum current ratio, maximum debt over net worth ratio and minimum debt service coverage. The agreement also restricts our minimum cash deposits and the percentage of deposit with other banks. As of December 31, 2013, we were in compliance with all covenants contained in this agreement.

As of December 31, 2013, our China subsidiary had a line of credit facility and bank acceptances with China banks totaling \$18.0 million. As of December 31, 2013, a total of \$12.1 million was outstanding under various notes, each with its own maturity date and each renewing annually from January 2014 to August 2014. The notes that begin to mature in January 2014 are expected to be renewed on the same terms and with new one year terms. These loans have renewed each year for the past three years. While there can be no assurance of renewal as each loan matures, we expect these loans to renew this year as they have over the past periods. On January 6, 2014, we paid off \$4.5 million in loans with maturity dates ranging January 2014 to March 2014 to China bank.

As of December 31, 2013, our China subsidiary had a U.S. currency based loan of \$2.4 million under various notes with four month terms.

In July 2013, our Taiwan location extended its outstanding note payable with a financing company to mature on July 31, 2015.

In December 2013, our Taiwan location entered into one year revolving Credit Facility Agreements with Taiwan banks for a total of \$8.0 million. Borrowings under the Credit Facility will be used for general corporate purposes. Our obligations under the Credit Facility are secured by our \$8.0 million cash deposit in a one-year CD with such banks. Borrowings under the Credit Facility will bear interest at a rate equal to the Taiwan Time Deposit Interest Rate Index plus 0.41%, which is currently 1.78%. As of December 31, 2013, \$3.8 million was outstanding under this credit facility.

A customary business practice in China is for customers to exchange accounts receivable with notes receivable issued by their bank. From time to time we accept notes receivable from certain of our customers in China. These notes receivable are non-interest bearing and are generally due within six months, and such notes receivable may be redeemed with the issuing bank prior to maturity at a discount. Historically, we have collected on the notes receivable in full at the time of maturity.

Frequently, we also direct our banking partners to issue notes payable to our suppliers in China in exchange for accounts payable. Our China subsidiary's banks issue the notes to vendors and issue payment to the vendors upon redemption. We owe the payable balance to the issuing bank. The notes payable are non-interest bearing and are generally due within six months of issuance. As a condition of the notes payable lending arrangements, we are required to keep a compensating balance at the issuing banks that is a percentage of the total notes payable balance until the notes payable are paid by our China subsidiary. These balances are classified as restricted cash on our consolidated balance sheets. As of December 31, 2013, our restricted cash totaled \$0.7 million.

## Future liquidity needs

We believe that our existing cash, cash equivalents, short term investments, and cash flows from our operating activities, will be sufficient to meet our anticipated cash needs for the next 12 to 24 months. Our future capital requirements will depend on many factors including our

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growth rate, the timing and extent of spending to support our development efforts, the expansion of our sales and marketing activities, the introduction of new and enhanced products, the costs to increase our manufacturing capacity and the continuing market acceptance of our products. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, operating results and financial condition would be adversely affected.

## **Contractual Obligations and Commitments**

The following summarizes our contractual obligations as of December 31, 2013:

	Payments due by period							
		Total		ess than I Year		1 - 3 Years	3 - 5 Years	More than 5 Years
				(iı	ı tho	usands)		
Notes payable and long-term debt (1)	\$	28,455	\$	19,532	\$	8,923	\$	\$
Operating leases (2)		914		689		225		
Purchase obligations (3)		35		26		9		
Total commitments	\$	29,404	\$	20,247	\$	9,157	\$	\$

# Quantitative and Qualitative Disclosures About Market Risk

## Market Risks

Market risk represents the risk of loss that may impact our financial statements through adverse changes in financial market prices and rates and inflation. Our market risk exposure results primarily from fluctuations in foreign exchange and interest rates. We manage our exposure to these market risks through our regular operating and financing activities. We have not historically attempted to reduce our market risks through hedging instruments; we may, however, do so in the future.

#### **Interest Rates**

We are exposed to interest rate fluctuations on our cash, cash equivalents and short-term investments. We had unrestricted cash and cash equivalents of \$1.8 million, \$10.7 million and \$22.0 million at December 31, 2011, 2012 and 2013, respectively. Our cash, cash equivalents and short-term investments are subject to limited interest rate risk and are primarily maintained in money market funds and bank deposits.

We have entered into various loan agreements with East West Bank in the U.S., China Construction Bank in China and Mega Bank and Chailease Finance Co LTD in Taiwan. At December 31, 2013:

the revolving line of credit for our U.S.-based loans had a principal balance of \$7.0 million, bearing interest at rates based on the prime rate plus a premium of 0.5% or floor rate of 3.75% whichever is higher, maturing on November 15, 2015,

<sup>(1)</sup> We have several loan and security agreements in China, Taiwan and the U.S. that provide various credit facilities, including lines of credit and term loans. The amount presented in the table represents the principal portion of the obligations.

<sup>(2)</sup> We have entered into various non-cancellable operating lease agreements for our offices in Taiwan and the U.S.

<sup>(3)</sup>We are obligated to make payments under various arrangements with suppliers for the procurement of goods and services.

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our term loan with a U.S. bank had a principal balance of \$3.1 million, with monthly payment of principal and interest at prime rate plus 0.75% or floor rate 4%, maturing on November 15, 2014,

our term loan with a U.S. bank had a principal balance of \$1.9 million, interest payment only through March 10, 2014, and then equal principal and interest monthly installment payment for the following 42 months, maturing in September 2017,

the Chinese-based revolving line of credit loan had a principal balance of \$7.1 million, bearing interest at 108%-110% of LIBOR or 6.48% to 6.6%,

the Chinese-based revolving loan had a principal balance of \$2.4 million, bearing interest at 4.1% to 4.15%,

the Chinese bank acceptance notes issued to vendors had a balance of \$2.3 million, bearing no interest rate,

the Taiwanese-based revolving line of credit had a principal balance of \$3.8 million, bearing interest at 1.78%, maturing in December 2014, and

the Taiwanese-based term loan had \$0.9 million principal balance outstanding, with monthly payment of principal and interest at interest rate of 4.95%, maturing on July 30, 2015.

With respect to our interest expense for the year ended December 31, 2013, an increase or decrease of 1.0% in each of our interest rates would have resulted in an increase of \$0.3 million in our interest expense for such period.

# Foreign Exchange Rates

We operate on an international basis with a portion of our revenue and expenses being incurred in currencies other than the U.S. dollar. Fluctuations in the value of these foreign currencies in which we conduct our business relative to the U.S. dollar affects our results and will cause U.S. dollar translation of such currencies to vary from one period to another. We cannot predict the effect of exchange rate fluctuations upon our future operating results. The effect on our results of operations from currency fluctuations is reduced, however, because we have revenue and expenses in each of these foreign currencies.

We maintain certain assets, including certain bank accounts, accounts receivables, land and building, in RMB and the NT dollar, which are sensitive to foreign currency exchange rate fluctuations. Additionally, certain of our current and long-term liabilities are denominated in these currencies. As of December 31, 2013, fluctuation in RMB and NT dollar currency exchange rates resulted in assets and liabilities denominated in these currencies being translated into \$0.5 million and \$0.4 million more U.S. dollars than at December 31, 2012, respectively.

Additionally, the value of the RMB against the U.S. dollar and other currencies fluctuates and is affected by, among other things, changes in political and economic conditions in China. The conversion of RMB into foreign currencies, including U.S. dollars, has been based on rates set by the People's Bank of China. On July 21, 2005, the Chinese government changed its policy of pegging the value of the RMB to the U.S. dollar and began allowing modest appreciation of the RMB against the U.S. dollar. Fluctuation of the RMB exchange rate is, however, restricted to a rise or fall of no more than 0.5% per day versus the U.S. dollar, and the People's Bank of China continues to intervene in the foreign exchange market to prevent significant short-term

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fluctuations in the RMB exchange rate. Nevertheless, under China's current exchange rate regime, the RMB may appreciate or depreciate significantly in value against the U.S. dollar in the medium to long term. The RMB has appreciated 8.46% against the U.S. dollar from January 1, 2011 to December 31, 2013. There remains international pressure on the Chinese government to adopt a substantial liberalization of its currency policy, which could result in a further and more significant appreciation in the value of the RMB against the U.S. dollar.

We use the U.S. dollar as our functional and reporting currency for our financial statements. All transactions in currencies other than the U.S. dollar during the year are re-measured at the exchange rates prevailing on the respective relevant dates of such transactions. Monetary assets and liabilities existing at the balance sheet date denominated in currencies other than the U.S. dollar are re-measured at the exchange rates prevailing on such date. Exchange differences are recorded in our consolidated income statement. The financial records of our China subsidiary and our Taiwan location are maintained in their respective local currencies, the RMB and the NT dollar, which are the functional currencies for our China subsidiary and our Taiwan location, respectively. Assets and liabilities are translated at the exchange rates at the balance sheet date, equity accounts are translated at historical exchange rates and revenues, expenses, gains and losses are translated using the average annual rate in 2011, a quarterly average rate in 2012 and a monthly average rate in 2013. Translation adjustments are reported as cumulative translation adjustments and are shown as a separate component of accumulated other comprehensive income in our statement of stockholders' equity (deficit) and comprehensive income. Transaction gains and losses are recognized in our statements of operations in other income (expenses).

We incurred approximately 49.4% of our operating expenses in currencies other than the U.S. dollar during 2013. As of December 31, 2013, we held the U.S. dollar equivalent of approximately \$14.3 million in RMB and \$0.1 million in NT dollars, included in cash, cash equivalents and short-term investments. Fluctuations in exchange rates directly affect our cost of revenues and net income, and have a significant impact on fluctuations in our operating margins. For example, in 2013, 92.2% of our revenues were generated from sales denominated in U.S. dollars, and 21.4% of our operating costs and expenses were denominated in RMB and 28.0% of our operating costs were denominated in NT dollars. Fluctuations in exchange rates also affect our balance sheet. For example, if we need to convert U.S. dollars into RMB or NT dollars for our operations, appreciation of the RMB or the NT dollar against the U.S. dollar would have an adverse effect on the RMB or NT dollar amount that we receive from the conversion. With respect to our total cash and short-term investments as of December 31, 2013, a 1.0% change in the exchange rates between the RMB and the U.S. dollar would result in a \$0.1 million change in our total cash and short-term investments, and a 1.0% change in the exchange rates between the NT dollar and the U.S. dollar would result in an immaterial change in our total cash, cash equivalents and short-term investments.

Fluctuations in currency exchange rates of the above currencies we hold against the U.S. dollar would have a corresponding impact on the U.S. dollar equivalent of such currencies included in the cash, cash equivalents and short-term investments reported in our financial statements from period to period.

#### Inflation

We believe that the relatively low rate of inflation in the U.S. over the past few years has not had a significant impact on our sales or operating results or on the prices of raw materials. To the extent we expand our operations in China and Taiwan, such actions may result in inflation having a more significant impact on our operating results in the future.

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# Off-Balance Sheet Arrangements

During 2011, 2012 and 2013, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

#### Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. These principles require us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, expenses and cash flows, and related disclosure of contingent assets and liabilities. Our estimates include those related to revenue recognition, share-based compensation expense, impairment analysis of goodwill and long-lived assets, valuation of inventory, warranty liabilities and accounting for income taxes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates. To the extent that there are material differences between these estimates and our actual results, our future financial statements will be affected.

We believe that of our significant accounting policies, which are described in Note B to our consolidated financial statements appearing elsewhere in this prospectus, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, we believe these are the most critical to fully understand and evaluate our financial condition and results of operations.

#### Revenue recognition

We generally employ a direct sales model in North America, and in the rest of the world we use both direct and indirect channels. Our revenue recognition policy is to recognize gross revenue whether our products are sold on a direct or indirect basis, because our reseller customers (indirect channel) take title to our products and honor the same terms and conditions as do our direct sales customers. We recognize revenue from the sale of our products provided that persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable and collectability is reasonably assured. Contracts or customer purchase orders are used to determine the existence of an arrangement. Shipping documents and customer acceptance, when applicable, are used to verify delivery. We assess whether the price is fixed or determinable based on the payment terms associated with the transaction and whether the sales price is subject to refund or adjustment. We assess collectability based primarily on the creditworthiness of the customer as determined by credit checks and the customer's payment history. Customers are generally extended net 30 credit terms from the date of shipment, with some extension to net 60 credit terms for some more creditworthy customers.

Whether our products are sold on a direct or indirect basis, revenue is recognized when the product is shipped and title has transferred to the customer. We bear all costs and risks of loss or damage to the goods up to that point. On most orders, our terms of sale provide that title passes to the customer upon placement by us with a common carrier (upon shipment). In some cases we may provide for title transfer to the customer upon delivery of the goods to the customer. We determine payments made to third party sales representatives are appropriately recorded to sales and marketing expense and not a reduction of revenue. Shipping and handling costs are included in cost of goods sold. We present revenue net of sales returns and allowances, sales taxes and any similar assessments. We provided a limited warranty as part of our standard

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terms and conditions of sale. This warranty provides for the repair or replacement of our products, at our discretion, that we determined (i) are defective in workmanship, material, or not in compliance with the mutually agreed written applicable specification and (ii) has in fact failed under normal use on or before one year from the date of original shipment of the products. Some of our customers are provided limited warranties between three to five years, on certain limited and identified products. Warranty costs associated with returned goods that are repaired or replaced are charged to cost of goods sold.

During our ordinary course of business, we may enter into new product development agreements to design, customize and develop new products for our customers. Such new product development agreements often involve material cost and engineering hours and therefore non-recurring engineering service (NRE) charges are agreed upon for the customer to reimburse our related costs. We adopt the percentage-of-completion method in revenue recognition for NRE revenues by using cost-input measurement. We capitalize cost input up to the contractual agreement amount and recognize NRE revenues based upon the agreement schedule. Contracts or customer purchase orders are often used to determine the existence of a service agreement.

#### Share-Based Compensation

Stock option fair value is calculated on the date of grant using the Black-Scholes valuation model. The compensation cost is then recognized on a straight-line basis over the requisite service period of the option, which is generally the option vesting term of four years. The Black-Scholes valuation model requires us to estimate key assumptions such as expected term, volatility, dividend yield and risk-free interest rates that determine the stock option fair value. In addition, we estimate forfeitures at the time of grant. As there had been no market for our common stock prior to our initial public offering, the expected volatility for options granted to date was derived from an analysis of reported data for a peer group of companies that issued options with similar terms. The expected volatility has been determined using an average of the expected volatility reported by this peer group of companies. We use a risk free interest rate based on the 10-year Treasury as reported during the period. The expected term of the options has been determined utilizing the simplified method which calculates a simple average based on vesting period and option life. We do not anticipate paying dividends in the near future. Estimated forfeitures are based on historical experience and future work force projections.

# Long-lived assets

Depreciation and amortization of the intangible assets and other long-lived assets is provided using the straight-line method over their respective estimated useful lives, reflecting the pattern of economic benefits associated with these assets. Changes in circumstances such as technological advances, changes to our business model, or changes in our capital strategy could cause the actual useful lives of intangible assets or other long-lived assets to differ from initial estimates. In those cases where we determine that the useful life of an asset should be revised, we depreciate the remaining net book value over the new estimated useful life.

Our long-lived assets are evaluated for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. We value on an asset-by-asset basis our long-lived assets and will recognize an impairment loss when the sum of such valuation is less than the carrying amount of such assets. The values, based on reasonable and supportable assumptions and projections, require subjective judgments. Depending on the assumptions and estimates used, the values projected in the evaluation of long-lived assets can vary within a range of outcomes. We consider the likelihood of possible outcomes in determining the best estimate for the value of the assets. We did not record any asset impairment charges in 2013 or 2012.

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# Valuation of inventories

Inventories are stated at the lower of cost (average-cost method) or market. Work in process and finished goods includes materials, labor and allocated overhead. We assess the valuation of our inventory on a periodic basis and provide an allowance for the value of estimated excess and obsolete inventory based on estimates of future demand. During the years ended December 31, 2013, 2012 and 2011, we recorded excess and obsolete inventory charges of \$0.5 million, \$0.9 million, and \$1.6 million, respectively. Of the \$1.6 million in inventory reserves during 2011, \$1.0 million was recorded in the fourth quarter of 2011 and was associated with the application of our inventory reserve policy.

During 2011, we reviewed our inventory policy to determine if the existing reserve for obsolescence and loss was appropriate. The policy at the time provided reserves on a schedule that weighted inventory over a two year period, but the maximum reserve was 80% of inventory value, regardless of the age of inventory. We modified the policy to account for more distinct periods, and to fully reserve any inventory that was over two years old. The policy provides for aging of inventory as follows:

Less than 360 days 10%

Between 360 and 540 days 50%

Between 540 and 720 80%

Over 720 days 100%

We considered the following factors in our determination of the appropriate reserve level: how often we buy material in bulk that lasts for more than 12 months of supply; changes in material costs over a 24 month period; the overall market value of raw material, semi-finished goods and finished goods across our varied product lines and within markets; changes in expected demand for our products; the change in valuations historically; the determined safety stock for key customers; and the likelihood of postponement in delivery schedules for materials already placed in finished goods inventory.

## Accounting for income taxes

We account for income taxes in accordance with the provisions of ASC 740, Income Taxes. The liability method is used to account for deferred income taxes. Under the liability method, deferred tax assets and liabilities are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The ability to realize deferred tax assets is evaluated annually and a valuation allowance is provided if it is unlikely that the deferred tax assets will not give rise to future benefits in our tax returns.

## **Recent Accounting Pronouncements**

ASU 2011-04. In May 2011, the FASB issued ASU 2011-04, Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRS. This ASU represents the converged guidance of the FASB and the IASB on measuring fair value and for disclosing information about fair value measurements. The amendments in this ASU clarify our board of directors' intent about the application of existing fair value measurement and disclosure requirements and changes particular principles or requirements for measuring fair value and for disclosing information about fair value measurements. ASU 2011-04 is effective prospectively for interim and annual reporting periods beginning after December 15, 2011. We adopted the provisions of ASU 2011-04 on January 1, 2012, and the adoption of this standard did not have a material impact on our financial position, results of operations, or cash flows.

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## **BUSINESS**

#### Overview

We are a leading, vertically integrated provider of fiber-optic networking products. We target three networking end-markets: CATV, FTTH and internet data center. We design and manufacture a range of optical communications products at varying levels of integration, from components, subassemblies and modules to complete turn-key equipment. In designing products for our customers, we begin with the fundamental building blocks of lasers and laser components. From these foundational products, we design and manufacture a wide range of products to meet our customers' needs and specifications, and such products differ from each other by their end market, intended use and level of integration. We are primarily focused on the higher performance segments within the CATV, FTTH and internet data center markets which increasingly demand faster connectivity and innovation.

In 2013, our revenue was \$78.4 million and our gross margin was 29.4%. We have grown our annual revenue at a CAGR of 33.1% between 2009 and 2013. In the years ended December 31, 2011, 2012, and 2013, we incurred losses of \$5.3 million, \$0.9 million, and \$1.4 million, respectively, and our accumulated deficit at December 31, 2012 and December 31, 2013 was \$81.9 million and \$83.3 million, respectively. In 2013, we earned 60.4% of our total revenue from the CATV market, and 24.7% of our total revenue from the data center market. In 2013, our key customers in the CATV market included Cisco Systems and Biogenomics Corp., a distributor. In 2011, 2012 and 2013, Cisco Systems accounted for 26.8%, 33.2%, and 21.8%, respectively, of our revenue and Biogenomics Corp. accounted for 11.7%, 11.2% and 8.7%, respectively, of our revenue. In 2013, our key customers in the data center market included Amazon and Microsoft. In 2012 and 2013, Amazon accounted for 5.8% and 18.2% of our revenue, respectively, and Microsoft accounted for 2.6% and 6.1% of our revenue, respectively.

The three end markets we target are all driven by significant bandwidth demand fueled by the growth of network-connected devices, video traffic, cloud computing and online social networking. According to Cisco Systems' 2013 Visual Networking Index, global network traffic is expected to grow at a compound annual growth rate of 23% from 2012 to 2017. To address this increased bandwidth demand, CATV and telecommunications service providers are competing directly against each other by providing bundles of voice, video and data services to their subscribers and investing to enhance the capacity and capability of their networks. The trend of rising bandwidth consumption also impacts the internet data center market, as reflected in the shift to higher speed server connections. According to a 2013 Infonetics report, 10 gigabit ethernet enterprise port shipments in 2012 were 14.7 million and are projected to grow to 109.4 million in 2017, representing a 49.3% CAGR. As a result of these trends, fiber-optic networking technology is becoming essential in all three of our target markets, as it is often the only economic way to deliver the required bandwidth.

The CATV market is our largest and most established market, for which we supply a broad array of products including lasers, transmitters and turn-key equipment. Sales of headend, node and distribution equipment have contributed significantly to our growth in recent years as a result of our ability to meet the needs of CATV equipment vendors who have begun to outsource both the design and manufacture of this equipment. While these equipment vendors have relied upon third parties to assemble products for some time, only recently have they started to shift the design of equipment to other parties due in part to the sophisticated engineering expertise needed to perform this work. We believe that our extensive high-speed optical, mixed-signal semiconductor and mechanical engineering capabilities position us well to benefit from it.

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Our vertically integrated manufacturing model provides us several advantages, including rapid product development, fast response times to customer requests and better control over product quality and manufacturing costs. We design, manufacture and integrate our own analog and digital lasers using a proprietary MBE fabrication process, which we believe is unique in our industry. We manufacture the majority of the laser chips and optical components that are used in our products. The lasers we manufacture are proven to be reliable over time and highly tolerant of changes in temperature and humidity, making them well-suited to the CATV and FTTH markets where networking equipment is often installed outdoors. We believe the superior performance of our lasers is evidenced by our leading share of lasers installed in CATV networks today.

We are based in Sugar Land, Texas, where we design and fabricate our lasers, and conduct most of our research and development efforts. At our facilities in Ningbo, China, and Taipei, Taiwan, we complete the assembly of our lasers and photodiodes and also design and assemble our module and equipment products, utilizing a combination of advanced automation and skilled labor. In addition to our global sales team in the U.S., we also have regional sales teams located in China and Taiwan.

In 2013, our revenue was \$78.4 million and our gross margin was 29.4%. We have grown our annual revenue at a CAGR of 33.1% between 2009 and 2013. In the years ended December 31, 2011, 2012, and 2013, we incurred losses of \$5.3 million, \$0.9 million, and \$1.4 million, respectively, and our accumulated deficit at December 31, 2012 and December 31, 2013 was \$81.9 million and \$83.3 million, respectively.

## **Industry Background**

Our three target markets of CATV, FTTH and internet data centers share a common trend of a significant growth in bandwidth consumption, and the corresponding need for network infrastructure improvement to support it. Within the CATV and FTTH markets, the speed of a broadband connection determines the types and quality of services that can be offered, and competitive pressure among service providers is spurring ever faster broadband connectivity. According to the Akamai State of the Internet report for the third quarter of 2013, the number of 10 megabit or faster broadband connections in the U.S. rose 82% year-over-year. Akamai reported that, globally, the average connection speed increased 29% over the prior year, including growth in all of the top 10 countries.

Government encouragement and sponsorship of enhanced broadband service is contributing to investment in access networks. For instance, in January 2013, the U.S. Federal Communications Commission announced the "Gigabit City Challenge," setting a goal of at least one community per state with 1 gigabit per second broadband by 2015. Similarly, according to Infonetics, China's State Agency for Radio, Film, and Television (SARFT) announced a \$30 billion Next Generation Broadband (NGB) stimulus program in 2009 to support the construction of critical networking infrastructure and promote the delivery of enhanced voice, video and data services between 2009 and 2015.

The commercial opportunity to provide ultra-high speed broadband services is also attracting private sector interest. For example, in 2010 Google announced plans to build a network, known as Google Fiber, to deliver up to 1 gigabit per second service to residences, approximately 100 times faster than the current average peak rate in the U.S. The network became operative late in 2012 in Kansas City. Google has announced that they plan to begin deploying Google Fiber in Austin, Texas in 2014 and it is in discussions with government officials in 34 additional cities to expand Google Fiber in these communities. We are not aware of our products currently being used in the Kansas City network and Google has not publicly

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announced the technology or the vendors it is using for the other cities. To deliver this dramatically greater bandwidth, Google is utilizing very advanced optical networking technology. The Google Fiber network demonstrates the ability to deliver dramatically more bandwidth to an end user, and may prompt traditional network service providers to accelerate investment in advanced optical networking solutions.

Based upon data prepared by Ovum, we estimate that our addressable segments of the CATV, FTTH and internet data center markets represented an annual revenue opportunity of \$2.2 billion in 2012.

#### Trends in the CATV Market

CATV service providers have been upgrading their hybrid fiber coaxial networks, which use a combination of optical fiber and coaxial cable, to support high speed, two-way communications. According to a 2013 Infonetics report, CATV service providers have spent approximately \$40 billion from 2008 through 2012 on upgrades and extensions to their networking infrastructure, including \$24 billion spent in North America. Broadcast video services remain the primary offering for CATV service providers, who compete in part on the breadth of high definition, or HD, TV content and on-demand programming they offer. CATV network operators can leverage an upgraded network to deliver additional services such as enhanced voice and broadband connectivity. Enhanced broadcast video and data connectivity services have had a profound effect on CATV network architecture, as they require substantially greater bandwidth to a home (the "forward path"), and two-way communications (introducing a "return path" from the home). In a 2013 report, Infonetics estimated that 53 million broadband subscribers in North America, or 54% of total North American broadband subscribers, received their service through a CATV network at the end of 2012.

Outside of the U.S., the opportunity for CATV growth is significant. For instance, China's installed cable infrastructure is significantly larger than that of the U.S., with over 200 million cable television subscribers. Nearly half of China's cable television subscribers are served by relatively low capacity, one-way cable networks today, and China has implemented a government stimulus program to upgrade broadband infrastructure. As a result, we believe that the Chinese CATV service providers will invest significantly in coming years.

Consolidation among CATV equipment companies has continued in recent years (including the recent announcement by Comcast that it will acquire Time Warner), putting pressure on the largest companies to streamline their operations, improve profitability and focus their resources. In response, many of these CATV equipment companies have begun to outsource not only the manufacturing of equipment, but more important to us, they have begun to outsource the system design function as well. Outsourcing of system design is significantly more challenging than simply shifting the assembly of equipment to a third party manufacturer. The complex interworking of optical, radio frequency and electrical technologies, as well as the physical challenges imposed by the harsh and unregulated conditions in which the CATV equipment is installed, requires deep technical knowledge of high-speed optical, mixed-signal semiconductor and mechanical engineering. Field failure of equipment is costly and problematic for CATV network operators, so they expect equipment providers to provide extremely reliable and durable solutions. As a result, the decision by a major CATV equipment company to outsource design and manufacture to a third party is made carefully, and once an outsourced design partner is selected, CATV equipment companies are typically very reluctant to change vendors. Moreover, once the design function is outsourced to a third party, the reallocation of internal resources previously performing that function makes it difficult for the equipment company to return to internally designing equipment.

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Based upon data prepared by Ovum, we estimate that our addressable segment of the CATV market represented an annual revenue opportunity of \$850 million in 2012.

## Trends in the FTTH Market

The FTTH market generally refers to the Passive Optical Networks, or PONs, that telecommunications service providers are deploying. PONs take their name from the use of passive splitters to divide the optical signal provided to each residential user over a shared fiber-optic cable from a service provider's central office. The equipment in the service provider's central office is called an optical line terminal, or OLT, and the equipment at the end user is an optical network unit, or ONU. A PON supports significantly greater bandwidth than does the legacy copper wire network, although the connection speed to a user (the "downstream" speed) is higher than the connection speed from the user (the "upstream" speed). In the U.S., Verizon's FIOS service and AT&T's uVerse offering are examples of PON deployments, and PONs have been widely deployed in Japan, Korea and selected cities in Europe as well. According to a 2013 Infonetics report, worldwide FTTH subscribers are expected to grow from 57 million in 2012 to 149 million in 2017, representing a CAGR of 21%, with the growth of higher speed FTTH connections among those subscribers being greater than the overall growth of FTTH connectivity.

Over time, the technology used in PONs has evolved to meet the increased bandwidth demand from users. At present, the most commonly deployed PON technology is GPON, or Gigabit PON, which delivers up to 2.5 gigabits per second of data downstream, split among subscribers, and 1.5 gigabits per second upstream. Due to the splitting of the bandwidth among multiple users often as many as 32 the actual bandwidth delivered to an individual subscriber is far less than the 2.5 gigabits per second supported by the GPON equipment. To deliver more bandwidth to a subscriber, a service provider can reduce the split ratio or change the PON technology. Reducing the number of subscribers supported by a single OLT may be less expensive for modest, incremental upgrades, but may not be the most economical solution to deliver the significant increases in bandwidth needed to support 1 gigabit per second service to the home, as encouraged by the FCC's Gigabit Challenge.

One approach that does support 1 gigabit per second service to the home connection is WDM-PON, or wavelength division multiplexing PON. Well-proven in other areas of the network for decades, WDM technology enables the transmission of multiple wavelengths of data over a single fiber-optic strand, thus significantly increasing the bandwidth of the physical fiber connection. Due to this significant increase in bandwidth supported with WDM-PON, the cost per bit delivered to a subscriber is lower than that for GPON at faster connection speeds. In addition to providing more bandwidth, WDM-PON offers a subscriber superior privacy and the service provider better scalability because each subscriber has a dedicated wavelength rather than a shared one.

Based upon data prepared by Ovum, we estimate that our addressable segment of the FTTH market represented an annual revenue opportunity of \$704 million in 2012.

#### Trends in the Internet Data Center Market

An internet data center is structured in a layered format, with rows of servers within multiple racks, and each server and rack connecting through a switch. These rack switches then connect to each other, and ultimately to the service provider's network. The connections between these top-of-rack switches, and to the service provider's network, are increasingly done with higher-capacity optical networking technology. Legacy copper cables can carry signals at distances adequate to meet most needs within an enterprise or internet data center at speeds up

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to about 1 gigabit per second. However, at speeds of 10 gigabits per second and above, the signals sent over copper cables experience increasing attenuation and dispersion over distances common in large internet data center environments, making copper much less effective as a transmission medium. According to a 2013 Infonetics report, 10 gigabit ethernet enterprise port shipments in 2012 were 14.7 million and are projected to grow to 109.4 million in 2017, representing a 49.3% CAGR.

In recent years, a number of leading internet companies have begun to adopt more open internet data center architectures, using a mix of systems and components from a variety of vendors, and in some cases designing their own equipment. For companies that are adopting open internet data center architectures, compatibility of new networking equipment with legacy infrastructure is not as important, and as a consequence, these companies are more willing to work with non-traditional equipment vendors. Non-traditional equipment vendors generally permit companies to source optical modules from any vendor, thus creating an open and growing opportunity for optical device vendors.

Based upon data prepared by research firm Ovum, we estimate that our addressable segment of the internet data center market represented an annual revenue opportunity of \$638 million in 2012.

# **Key Challenges in Our Markets**

The key challenges that we experience in our markets include:

Continuous pressure for innovation. To enhance their competitiveness and improve the financial returns on their infrastructure investments, CATV and FTTH network operators seek to regularly introduce new service offerings, increase the bandwidth provided to each user and reduce their operating costs. These operators work with their equipment and optical device suppliers to develop innovative technology that enables desired enhancements. Within the internet data center market, industry-leading technology companies are internally designing and developing internet data centers to deliver cloud-based solutions. These companies are, in many cases, working with third parties to design custom data-center equipment to improve their internet data center performance and differentiate their services from other vendors.

**Demand for highly integrated solutions.** CATV and FTTH network operators are seeking integrated and customized solutions that meet specific design and performance requirements. Furthermore, network equipment manufacturers are seeking to simplify their supply chains and lower their costs by working with optical device vendors who can provide a broad range of products, including integrated modules and subsystems rather than simply supplying discrete optical components.

*Need for reliable performance in harsh and demanding environments.* Unlike optical devices deployed in the long haul and metro segments of the telecom network, optical devices deployed in CATV and FTTH networks are typically installed outdoors, and occasionally in remote locations. As a result, these devices are subject to a wide range of temperatures and highly variable environmental conditions, and maintenance can be difficult. As a result of the difficulties associated with outdoor deployment, product quality and reliability are essential.

**Demand for production of high-quality devices in large volumes.** Due to the high number of optical devices deployed in CATV and FTTH networks as well as in internet

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data centers, network equipment manufacturers seek vendors that can provide cost-effective and high-quality optical devices in large volumes. As the required bandwidth in CATV and FTTH networks increases and the shift to fiber-optic technologies continues in order to meet the bandwidth needs, the number of optical devices deployed in CATV and FTTH networks should continue to increase.

Need for mixed signal communications expertise. As CATV network operators continue to shift from primarily broadcast-video content providers to data-connectivity providers, the networks they utilize to offer these services are evolving. For example, many newer networks are being designed with digital return-path capabilities. In this type of network, signals traveling from the cable office headend to the user residence, including digital video and data services, continue to be transported as analog signals, whereas signals traveling in the opposite direction, from the residence to the cable office headend, may now be carried as digital signals. This combination of analog and digital signaling creates unique challenges, which require high-performance networking equipment and optical technology.

#### **Our Solutions**

We are a leading, vertically integrated provider of fiber-optic networking products. We are primarily focused on the higher-performance segments within the CATV, FTTH and internet data center markets which increasingly demand faster connectivity and new technologies. Our products include a broad range of optical communications-based products at varying levels of integration from components to complete turn-key systems that we design and manufacture for leading networking equipment companies. The key benefits of our products include:

Enable customers to deliver innovative products. We leverage our deep expertise in high-speed optical, mixed-signal semiconductor and mechanical engineering and our proprietary MBE laser fabrication process to deliver technologically advanced products to our customers. Our solutions enable our customers to offer a wide variety of innovative products that meet their desired performance needs and cost requirements. Similar to other competitors who have a vertically-integrated structure, our comprehensive manufacturing capabilities give us significant time-to-market advantages as well as the flexibility and agility to respond to changing customer needs.

Enhance efficiency and cost effectiveness of our customers' supply chain. We design and sell products at the level of integration desired by a customer, from components to turn-key equipment providing our customers a more dependable, cost-effective and simplified supply chain. By leveraging our vertical integration, proprietary expertise and our broad range of products, we can often design and manufacture new solutions rapidly and cost-effectively for our customers. For example, our integration capabilities have enabled us to benefit from the trend of outsourced design and manufacturing among CATV equipment vendors.

**Deliver high quality, reliable products in high volume.** As a vertically integrated supplier, we are able to monitor and maintain quality control throughout the production process, using our internally produced components where possible for our final products. By leveraging this greater degree of control throughout the entire production process, our proprietary MBE laser fabrication process and packaging technology, and our extensive facilities, we are able to deliver high-quality, highly-reliable and stable products in high volume.

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**Provide sophisticated design solutions to our customers.** We believe our expertise in analog and digital optical engineering, as well as radio frequency and high-speed electronics differentiates us from many competitors, as other vendors tend to focus on a limited number of these disciplines. Our mixed-signal expertise enables us to design solutions that meet many of the different network architectures and protocols used today. We offer our customers an advantage by providing them a comprehensive solution.

# **Our Strengths**

Our key competitive strengths include the following:

Industry-leading position in the CATV market. We are the leading provider of optical components and the second largest provider of subsystems to the CATV market, according to Ovum. In 2013, our products were used by the three largest CATV OEMs, consisting of Cisco Systems, Inc., Arris Group Inc. (which acquired the Motorola Home Business in 2013) and Aurora Networks (which acquired the Harmonic optical business in 2013 and was subsequently itself acquired by Pace plc). These OEMs are extremely demanding on their suppliers with respect to product performance, reliability, cost and vendor service level. We believe these customer relationships benefit us with other customers who view our selection by these leading OEMs as validation of our expertise and product excellence.

**Proprietary technological expertise and track record of innovation.** We continue to develop innovative products as evidenced by our design wins since the beginning of 2010. We believe our proprietary laser manufacturing, or MBE process, allows us to produce more reliable and cost-effective solutions than our competitors who typically employ MOCVD processes. We own fundamental intellectual property in MBE technology and other laser design and manufacturing processes. We had 113 U.S. and foreign issued patents as of December 31, 2013. In addition we have amassed substantial manufacturing, process, design and testing domain expertise that we retain as documented trade secrets.

*Highly customized products.* Most of our products have some level of customization, and in some cases our product is the only one that can meet our customers' specifications. These factors make it more difficult for our customers to rapidly switch to another supplier, and, we believe, contribute to longer product lifecycles and more stable product pricing relative to the pricing trends experienced in many telecommunications optical component categories.

**Proven system design capabilities.** Our customers rely on us to design their customized, complex and integrated equipment due to our deep expertise in high-speed optical, mixed-signal semiconductor and mechanical engineering. As a result of these capabilities, we believe that we are well positioned to take advantage of the continuing shift to outsourced design and manufacturing among CATV equipment vendors.

Vertically integrated, geographically distributed manufacturing model. Our vertically integrated design and manufacturing process encompasses all steps from laser wafer design and fabrication to complete optical system design and assembly. Furthermore, we have geographically distributed our manufacturing model by strategically locating our operations in the U.S., China and Taiwan to reduce development time and production costs and to help protect our intellectual property. Our comprehensive capabilities allow us to offer our customers a dependable supply of quality optical components, modules

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and equipment. Additionally, similar to other competitors who have a vertically-integrated structure, these capabilities give us significant time-to-market, time-to-volume and cost advantages as well as the ability to respond more rapidly to changing market and customer requirements. Furthermore, these capabilities allow us to provide fully integrated solutions and capture a larger portion of the bill of materials within the optical value chain.

# **Our Strategy**

We seek to be the leading global provider of optical components, modules and equipment designed for each of our three target markets, CATV, FTTH and internet data centers. All of our target markets are growing due to the increasing demand for bandwidth, but each of our markets is also being driven by independent factors. As a result, our overall growth is not dependent upon a single market or a single trend. Our strategy includes the following key elements:

**Extend our leadership in CATV networking.** We intend to maintain our position as the leading producer of optical components used in CATV networks, and to capture an increasing share of the CATV equipment market as the major equipment vendors continue to outsource the design and manufacturing of such products. We believe that our comprehensive design expertise, proven ability to handle increased system-level responsibility and vertically integrated manufacturing model position us well to capture a meaningful share of this opportunity.

Continue to penetrate the FTTH market. We believe our WDM-PON technology is a cost-effective solution for delivering substantially greater bandwidth to a residence. As the residential access market migrates to higher bandwidth connections, we expect that our solutions will become increasingly attractive. Moreover, we are expanding our product offerings for the FTTH market to increase the portion of the market we can address. Our initial WDM-PON products addressed the network operator side of the link between residences and the network operator, and we have recently introduced solutions for the customer premise side of the link.

Continue to penetrate the internet data center market. To date, we have targeted internet data center operators directly, particularly those who have adopted an open system architecture in which the optical connectivity solutions can be provided by a different vendor than the vendor which provides their servers and switches. We believe this segment of the market will grow meaningfully in coming years, and that we are well positioned to capture this business as an independent optics vendor. Additionally, we are expanding our sales efforts to leading network equipment vendors who sell into the internet data center as well as large scale enterprise markets.

Continue to invest in our capabilities and infrastructure. Product and process innovations have been important elements in our growth and commercial success. For instance, our leading position in the CATV market is a result of our research and development efforts to address the need for climate-tolerant, low-cost and highly reliable lasers, components and equipment. We believe our vertically integrated manufacturing model and our ability to design and manufacture the fundamental optical devices that are deployed throughout a network give us a significant competitive advantage. We intend to continue to invest in new products, new technology and our production infrastructure and facilities to maintain and strengthen our competitive position.

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Selectively pursue other opportunities that leverage our existing expertise. The proven performance of our lasers in harsh climate conditions and our expertise in designing and manufacturing outdoor plant equipment for the CATV industry provide us an advantage in pursuing applications that are also characterized by having varying and demanding environments. We have sold and plan to continue to sell products into the telecom networking market, such as for wireless and wireline telecom infrastructure. We have also selectively sold products into the industrial robotics, aerospace and defense, and oil and gas exploration markets. We will continue to seek ways to capitalize on our research and development investments and leverage our high-speed optical, mixed-signal semiconductor and mechanical engineering expertise in these and other markets.

**Pursue complementary acquisition and strategic alliance opportunities.** While we prefer to use our components whenever possible, we will evaluate and selectively pursue acquisition opportunities or strategic alliances that we believe will enhance or complement our current product offerings, augment our technology roadmap, or diversify our revenue base.

# **Technology**

We believe that we have technology leadership in four key areas: semiconductor laser manufacturing, electronic technologies that enhance the performance of our lasers, optical hybrid integration and mixed-signal semiconductor design.

Differentiated semiconductor laser manufacturing. We use a MBE fabrication process to make our lasers, rather than MOCVD, the technique most commonly used in optical chip manufacturing by traditional communications optics vendors. Among the differentiators of MBE relative to MOCVD fabrication are a lower process temperature and the use of solid phase materials rather than gaseous sources to grow wafers and the growth of more highly strained crystals. These factors contribute to longer operating lives of our lasers, improved laser efficiency and threshold current, among other performance attributes that make them well-suited to our target markets. While we believe that these advantages of MBE are important, MBE does have disadvantages including the inability to use certain dopant materials (for example Iron), difficulty in certain types of regrowth, and the necessity to maintain complex ultra-high vacuum equipment. As a result of some of these challenges, production yields, and the performance attributes of laser devices, are highly variable and optimizing these characteristics requires numerous enhancements and modifications to standard MBE equipment and the MBE process. To our knowledge, we are unique in using an MBE process to produce communications lasers in high volume, and believe it would be difficult, and time-consuming, for other vendors to replicate our production technology.

Laser enhancement technology. Certain properties of the semiconductor lasers predominantly used in traditional communications devices, such as chirp and wavelength drift, negatively affect their ability to transmit signals over long fiber distances or prevent them from transmitting signals with acceptable fidelity in certain applications. We have developed laser enhancement circuitry that can correct many of these deficiencies. We believe that our technology will become more essential with wider deployment of higher capacity CATV and FTTH systems, which place more stringent demands on laser performance.

*Optical hybrid-integration technology.* Reducing the size, power consumption and complexity of optical devices is essential for achieving the price and performance targets

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of our customers. Our ability to integrate multiple optical networking functions into a single device, and to co-package multiple devices into smaller form factors helps us meet customer requirements and we believe can also create new opportunities. For instance, installing new fiber-optic cable is expensive and difficult, and in some situations prohibitively so for a network service provider. As a consequence, network operators seek to maximize the utilization of their installed fiber plant. In long-haul and metropolitan networks, service providers deployed WDM technology as fiber utilization rose. Fiber utilization in access networks is rising, but the use of WDM technology in the access segment has been problematic due to the relatively high cost and power consumption of the requisite optical devices. We have developed proprietary miniaturized optical packaging, electronic control circuitry and testing algorithms to create a hybrid WDM-PON solution that addresses these historical impediments that we believe will make WDM-PON a cost-effective alternative for deployment. WDM-PON is a term used for a variety of multi-wavelength PON architectures. Various technologies have been utilized by several companies to deploy WDM-PON networks in the past. These existing technologies are generally believed to be too costly to deploy or suffer from operational limitations that limit their use to only certain deployment scenarios. By contrast, we believe our optical hybrid-integration technology can be deployed in a wide range of circumstances due to its lower cost per bit delivered, and as the market migrates to higher bandwidth connections we expect that our solutions will become increasingly attractive. In the internet data center market, we target operators who have adopted an open system architecture one in which the optical connectivity solutions can be provided by a different vendor than the vendor which provides their servers and switches. We believe this segment of the market will grow meaningfully in coming years, and that we are well positioned to capture this business as an independent optics vendor.

Mixed-signal design. As CATV providers continue to evolve from primarily broadcast-video content providers to a mixture of HD video content together with data-connectivity providers, the networks they utilize to offer these services must evolve as well. Older analog networks are giving way to hybrid networks that incorporate both analog and digital signals. For example, many newer networks are being designed with "digital return-path" capabilities. In this type of network, signals traveling from the headend to the residence are transported as analog signals, whereas signals traveling in the opposite direction (that is, originating at the residence and being transmitted towards the headend) are carried as digital signals. This combination of analog and digital signaling creates unique design challenges. Our engineers have many years of experience in developing equipment, modules and components that are well suited to these sorts of mixed-signal architectures. We believe that having deep experience in both digital and analog signaling allows us to offer superior solutions to our customers, compared with companies who have expertise in only one of these signal types.

## **Our Products**

Our products include an array of optical communications solutions at varying levels of integration. We begin from the fundamental building blocks of lasers and laser components. From these foundational products, we design and manufacture a wide range of products from optical modules to complete turn-key equipment. We design our products to target customers in our identified markets to meet their needs and specifications.

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Our components often incorporate one or more of our optical laser chips inside a precision housing that provides mechanical protection as well as standardized electrical contacts. More complex optical components may also include optical filters (for example, for use in WDM) or other optical elements by which optical signals are routed internally within the component. These more advanced components may also include coolers, heaters and sensors that allow the temperature of the laser chip to be measured and controlled. We manufacture the majority of the laser chips and optical components that are used in our own products.

At the next level of integration, our module or sub-assembly products typically contain one or more of our optical components and some additional control circuitry. Examples of modules include our transceiver line primarily used in internet data center markets and FTTH markets.

At the highest level of integration and complexity, our equipment products typically contain one or more optical components, modules and additional electronic control circuitry required to enable these subsystems to operate independently. For example, our CATV transmitter equipment requires utilization of our optical components and assembly onto a circuit board and to an external housing. Examples of equipment include our CATV transmitter and CATV nodes.

Our products mainly differ from each other by their end market, intended use and level of integration. We have over 10,600 product stock-keeping units, or SKUs, including approximately 4,600 component product SKUs, approximately 3,500 module product SKUs and approximately 2,600 equipment product SKUs. The following tables provide a view of our some of our various components, modules and equipment grouped by the markets they serve.

# **Selected CATV Products**

Representative Picture	Product Family CATV transmitters	Product Level Equipment	Description Equipment for transmitting data and video signals from the office or hub site of a multiple system operator, or MSO, to the consumer.  Compliant with the emerging DOCSIS 3.1 standard.
	CATV nodes	Equipment	Equipment used for receiving optical signals and re-transmitting them over the coaxial cable portion of an CATV network. May also include return-path functions for receiving signals from the consumer and re-transmitting them as optical signals.  Compliant with the emerging DOCSIS 3.1 standard.

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Representative Picture	Product Family	Product Level	Description
	CATV return-receivers	Equipment	Equipment used in the office or hub site of an MSO to receive signals transmitted from a node.
	Ethernet over Coax Access Points	Equipment	Used primarily in China for deployment of fiber-to-the-home services over the CATV infrastructure.
	SFP Transmitter/Receiver	Module	Pluggable transmitter or receiver for digital return-path CATV architecture.  Up to 90° Celsius operating temperature.
	Cooled laser diodes	Component	Laser diodes incorporating integrated coolers to maintain consistent performance over wide ambient temperature ranges.  Up to 90° Celsius operating temperature.
	Uncooled laser diodes	Component	Laser diodes without coolers.  Up to 90° Celsius operating temperature.

Photodiodes Component Used to receive optical signals

Used to receive optical signals transmitted from a laser diode or other

optical transmitter.

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# **Selected FTTH Products**

Representative Picture	Product Family WDM-PON OLT module	Product Level Module	Description Transmission, multiplexing, demultiplexing and reception of multiple WDM optical signals.  16 Gbps transceiver modules.
	Gigabit Ethernet SFF	Module	Small Form Factor transmit/receive module for Gigabit Ethernet FTTH.
	Video receiver modules	Module	Reception of video signals in an FTTH network.
	Bi-directional and tri-port optical blocks	Component	Optical devices incorporating wavelength division multiplexing functionality allowing multiple signal types on a single optical fiber.
	Laser chips	Component	Standard GPON optical chips used by other manufacturers in specialized applications.
Selected Internet Data Center Pr	roducts		
Representative Picture	Product Family 40 gigabit small form factor pluggable, or SEP+ transceiver	Product Level Module	Description Used for 40 Gigabit Ethernet optical

or SFP+, transceiver

interconnections.

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Representative Picture	<b>Product Family</b>	Product Level	Description
	10 gigabit small form factor pluggable, or SFP+, transceivers	Module	Used for 10 Gigabit Ethernet optical interconnections.
	Small form-factor pluggable, or SFP, transceivers	Module	Used for Gb Ethernet, or GbE, SONET OC-3 to OC-48, FiberChannel.
	Active Optical Cable	Module	10 and 40 Gbps fiber-optic cable incorporating laser diode drive electronics into the cable assembly.

# **Intellectual Property**

We rely on a combination of patent, copyright, trademark and trade secret laws, as well as confidentiality and licensing arrangements, to establish and protect our intellectual property. We employ various methods to protect these intellectual property rights, including maintaining a technological infrastructure with significant security measures, limiting disclosure and restricting access to only those individuals with an operational need for such information, and having employees, consultants and suppliers execute confidentiality agreements with us. While we expect our intellectual property to provide competitive advantages, we also find meaningful value from unpatented proprietary process knowledge, know-how and trade secrets.

#### Patents

As of December 31, 2013, we owned a total of 113 U.S. and foreign issued patents, 58 of which were issued in the U.S. and 55 of which were issued in China and Taiwan. Our issued patents will expire between 2018 and 2028.

 $Our\ portfolio\ of\ patents\ and\ patent\ applications\ covers\ several\ different\ technology\ families\ including:$ 

laser structure and design;
optical signal conditioning and laser control;
laser fabrication;

photodiode and optical receiver design and fabrication;
optical device and module designs;
optical device packaging equipment and techniques; and
optical network enhancements.
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Trademarks

We have registered the trademarks APPLIED OPTOELECTRONICS, INC., AOI and our logo with the U.S. Patent and Trademark Office on the Principal Register. These marks are also registered in, or have applications for registration pending in, various foreign trademark offices. A U.S. trademark registration is also pending for the mark "AAOI."

## **Research and Development**

To maintain our growth and competitiveness, we engage in an active research and development program to develop new products and enhance existing products. As a result of these efforts, we anticipate releasing various new or enhanced products over the next several years. Our research and development expenses were approximately \$6.5 million, \$7.6 million, and \$8.5 million for the years 2011, 2012 and 2013, respectively.

As of December 31, 2013, we had a total of 142 employees working in the R&D department, including 12 with Ph.D. degrees. We continue to recruit talented engineers to further enhance our research and development capabilities. We have research and development departments in our facilities in Texas, China and Taiwan. Our research and development teams collaborate on joint projects, and by co-locating with our manufacturing operations enable us to achieve an efficient cost structure and improve our time to market.

A key factor in our research and development success is our highly collaborative process for new product development. Particularly in our equipment and module businesses, we often collaborate very closely with our customers from a very early stage in product development. By purposefully fostering this close collaboration, we believe that we can more rapidly develop leading solutions meeting the needs of our customers.

#### **Manufacturing and Operations**

We have three manufacturing sites: Sugar Land, Texas, Ningbo, China and Taipei, Taiwan. Our research and development functions are partnered with our manufacturing locations. In our U.S. facility, we manufacture laser chips (utilizing our MBE process), sub-assemblies and components. The sub-assemblies are used in the manufacture of components by our other manufacturing facilities or sold to third parties as modules. We manufacture our laser chips only within our U.S. facility, where our laser design team is located. In our Taiwan location, we manufacture optical components, such as our butterfly lasers, which incorporate laser chips, sub-assemblies and components manufactured within our U.S. facility. In addition, in our Taiwan location, we manufacture transceivers for the FTTH, internet data center and other markets. In our China facility we take advantage of lower labor costs and manufacture certain more labor intensive components and optical equipment systems, such as CATV transmitters (at the headend) and CATV outdoor equipment (at the node). Each facility conducts testing on the components, modules or subsystems it manufactures and each facility is certified to ISO 9001:2000.

Our products are sold to our customers worldwide and also supply our internal component needs for the transceivers and equipment we manufacture. With a vertically integrated manufacturing process, we produce many of our own laser chips and other parts required to manufacture our optical components. Through this model, we are able to reduce development time and product costs as well as enhance quality control. We incorporate our own components into our transceivers, subsystems and equipment products wherever possible. In instances where

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we do not produce components ourselves, we source them from external suppliers and regularly evaluate these relationships in an attempt to reduce risk and lower cost.

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

#### Customers

Our customers are primarily CATV and telecommunications equipment manufacturers, internet service providers and internet data center operators. We generally employ a direct sales model in North America and in the rest of the world we use both direct and indirect sales channels. In 2011, 2012, and 2013 we obtained 84.3%, 85.4% and 88.4% of our revenue, respectively, through our direct sales efforts and the remainder of our revenue through our indirect sales channels. Our sales channel partners provide logistical services and day-to-day customer support. Where we sell through an indirect sales channel, we work with the end customer to establish technological specifications for our products. Our equipment customers typically offer our equipment under their brand-name and our equipment is often customized with unique design or performance criteria by each of these customers. We also from time to time offer design or manufacturing services to customers to assist them in more effectively using our products and realizing time-to-market advantages.

In 2013, our products were used by the three largest CATV OEMs, consisting of Cisco Systems, Inc., Arris Group Inc. (which acquired the Motorola Home Business in 2013) and Aurora Networks (a subsidiary of Pace plc (which acquired the Harmonic optical business in 2013) and was subsequently itself acquired by Pace plc). The two customers that contributed most to our revenue in the FTTH market in 2013 were Genexis B.V. and a leading internet service provider. In 2013, our key customers in the internet data center market included Amazon and Microsoft. In 2013, revenue from the CATV market, data center market, FTTH market and other markets provided 60.4%, 24.7% and 5.6%, and 9.3% of our revenue, respectively, compared to 78.6%, 8.3%, 5.8% and 7.3%, respectively in 2012.

We support our sales efforts by attendance at industry trade shows, technical conferences, advertising in various trade journals and magazines and other promotional efforts. These efforts are aimed at attracting new customers and enhancing our existing customer relationships.

## **Backlog**

We generally make sales pursuant to short-term purchase orders without deposits and subject to rescheduling, revision or cancellation on short notice. We accordingly believe that purchase orders are not an accurate indicator of our future sales and any backlog of purchase orders is not a reliable indicator of our future revenue.

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# Competition

The optical networking market is intensely competitive. Because of the broad nature of our product offerings, we do not believe that we face a single major competitor across all of our markets. We do, however, experience intense competition in each product area from a number of manufacturers and we anticipate that competition will increase. Our major competitors in one or more of our markets include Avago, Inc., EMCORE Corporation, Finisar Corporation, JDS Uniphase Corporation, Mitsubishi, NeoPhotonics Corporation, Oclaro, Inc. and Sumitomo Electric Industries, Ltd.

Many of our competitors are larger than we are and have significantly greater financial, marketing and other resources. In addition, several of our competitors have large market capitalizations or cash reserves and are much better positioned to acquire other companies to gain new technologies or products that may displace our products. Network equipment providers, who are our customers, and network service providers, who are supplied by our customers, may decide to manufacture the optical subsystems incorporated into their network systems in-house. We also encounter potential customers that, because of existing relationships, are committed to the products offered by these competitors.

We believe the principal competitive factors in our target markets include the following:

use of internally manufactured components;
product breadth and functionality;
timing and pace of new product development;
breadth of customer base;
technological expertise;
reliability of products;
product pricing; and
manufacturing efficiency.

We believe that we compete favorably with respect to the above factors based on our MBE processes, our vertically integrated model, the performance and reliability of our product offerings and the compelling value we offer to our customers.

# **Employees**

As of December 31, 2013, we employed 1,146 full-time employees, of which 26 held Ph.D. degrees in a science or engineering field. Of our employees, 229 are located in the U.S., 644 are in China, and 273 are in Taiwan. None of our employees are represented by any collective bargaining agreement, but certain employees of our China subsidiary are members of a trade union. We have never suffered any work stoppage and believe that we have satisfactory relations with our employees.

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#### **Facilities**

We maintain manufacturing, research and development, sales and administrative offices in the U.S., China and Taiwan. Our corporate headquarters is located at our facility in Sugar Land, Texas. The table below provides information regarding our facilities.

Location	Owned or Lease Expiration Date	Approximate Square Footage	Use
Sugar Land, Texas	Owned (1)	23,850	Administration, sales, manufacturing, research and development
Sugar Land, Texas	May 31, 2015	7,066	Research and development
Ningbo, China	Owned (2)	458,849	Administration, sales, manufacturing, research and development
Taipei, Taiwan	March 31, 2015 (3)	55,269	Administration, sales, manufacturing, research and development

- (1)

  The property is subject to a mortgage in favor of East West Bank, securing our short-term debt obligations.
- Our China subsidiary acquired the land use rights to the real property on which our new facility is located from the Chinese government. The land use rights expire on October 7, 2054. Our China subsidiary owns the facility located on the property.
- (3) Leases covering four floors expire on March 31, 2015.

In 2013, we expanded the amount of square footage utilized by our Taiwan facility, adding a fourth floor to our then existing lease space. We believe that our existing facilities are adequate to meet our needs in 2014, and that we will be able to obtain additional commercial space as needed. To meet planned growth in 2015, we plan in late 2014 to investigate expansion of our laser fabrication facilities in Sugar Land, Texas, and expansion of our transceiver manufacturing facilities in Taipei, Taiwan.

## **Environmental Matters**

Our research and development and manufacturing operations and our products are subject to a variety of federal, state, local and foreign environmental, health and safety laws and regulations, including those governing discharges of pollutants to air and water, the use, storage, handling and disposal of hazardous materials, employee health and safety, and the hazardous material content in our products. Our environmental management systems in our facilities in Ningbo and Taipei are both certified to meet the requirements of ISO14001:2004. However, there can be no assurance that violations of applicable laws at any of our facilities will not occur in the future as a result of human error, accident, equipment failure or other causes. We use, store and dispose of hazardous materials in our manufacturing operations and hazardous materials are present in our products. We incur costs to comply with environmental, health and safety requirements, and any failure to comply, or the identification of contamination for which we are found liable, could cause us to incur substantial costs, including cleanup costs, monetary fines, or civil or criminal penalties, and subject us to property damage and personal injury claims, and result in the suspension of production, alteration of our manufacturing processes, redesign of our products, or curtailment of sales and adverse publicity. Liability under environmental, health and safety laws can be joint and several and without regard to fault or negligence. For example, pursuant to environmental laws and regulations, including but not limited to the Comprehensive Environmental Response Compensation and Liability Act, or CERCLA, we may be liable for the full amount of any remediation-related costs at properties we currently own or formerly owned,

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such as our currently owned Sugar Land, Texas facility, or at properties at which we operated, as well as at properties we will own or operate in the future, and properties to which we have sent hazardous substances, whether or not we caused the contamination.

We expect that our operations and products will be affected by new environmental requirements on an ongoing basis. Environmental, health and safety requirements have become more stringent over time, and changes to existing requirements could restrict our ability to expand our facilities, require us to acquire costly pollution control equipment, or cause us to incur other significant expenses or to modify our manufacturing processes or the hazardous material content of our products. Identification of presently unidentified environmental conditions, more vigorous enforcement by a governmental authority, enactment of more stringent legal requirements or other unanticipated events could give rise to adverse publicity, restrict our operations, affect the design or marketability of our products or otherwise cause us to incur material environmental costs.

We face increasing complexity in our product design and procurement operations as we adjust to new and upcoming requirements relating to the materials composition of our products. Some jurisdictions in which our products are sold have enacted requirements regarding the hazardous material content of certain products. For example, member states of the European Union and China are among a growing number of jurisdictions that have placed restrictions on the use of lead, among other chemicals, in electronic products, which affect the composition and packaging of our products. The passage of such requirements in additional jurisdictions, or the tightening of standards or elimination of certain exemptions in jurisdictions where our products are already subject to such requirements, could cause us to incur significant expenditures to make our products compliant with new requirements, or could limit the markets into which we may sell our products. Other governmental regulations may require us to reengineer our products to use components that are more environmentally compatible, resulting in additional costs to us.

#### **Export Regulations**

The Bureau of Industry and Security (BIS) of the U.S. Department of Commerce is responsible for regulating the export of most commercial items that are so called dual-use goods that may have both commercial and military applications. A limited number of our products are exported by license under the Export Control Classification Number, or ECCN, of 5A991. Export Control Classification requirements are dependent upon an item's technical characteristics, the destination, the end-use, and the end-user, and other activities of the end-user. Should the ECCN change, then the export of our products to certain countries would be restricted. However, we currently do not export our products to any countries on the restricted list, and therefore a change in the ECCN would not materially impact our business.

# **Legal Proceedings**

We anticipate that we will from time to time be subject to various claims and legal actions during the ordinary course of our business. We are not aware of any material claims or legal actions to which we, our properties or our officers or directors are subject.

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# MANAGEMENT

#### **Executive Officers and Directors**

The following table sets forth certain information regarding our executive officers and directors as of February 28, 2014.

Name	Age	Position(s)
Chih-Hsiang (Thompson) Lin	50	President, Chief Executive Officer and Chairman of the Board of Directors
James L. Dunn, Jr.	52	Chief Financial Officer
Stefan J. Murry	41	Chief Strategy Officer
Hung-Lun (Fred) Chang	50	Senior Vice President of Optical Component Business Unit
Klaus Alexander Anselm	45	Vice President of Semiconductor Products
Shu-Hua (Joshua) Yeh	48	Senior Vice President of Network Equipment Module Business Unit
Chung-Yao (Ford) Li	52	Senior Vice President, Asia General Manager
David C. Kuo	31	General Counsel, Vice President and Secretary
William H. Yeh (1)(3)	61	Director, Compensation Committee Chairman
Richard B. Black (1)(2)	80	Director, Audit Committee Chairman
Alan Moore (2)	53	Director
Min-Chu (Mike) Chen (1)(3)	64	Director
Alex Ignatiev (2)(3)	69	Director, Nominating and Corporate Governance Committee Chairman
Che-Wei Lin	50	Director

- (1) Member of the compensation committee.
- (2) Member of the audit committee.
- (3) Member of the nominating and corporate governance committee.

Chih-Hsiang (Thompson) Lin, Ph.D., founded Applied Optoelectronics, Inc. in February 1997 and has been President and Chief Executive Officer since our inception. He currently serves as the Chairman of our board of directors, a position he has held since January 2014. He has served as a director on our board of directors since 1997, and he served as Chairman of our board of directors from May 2000 through September 2002, and again from June 2008 through October 2009. Dr. Lin has also served as a research associate professor and senior research scientist at the University of Houston. Dr. Lin holds a BS degree in Nuclear Engineering from National Tsing Hua University in Taiwan and an MS degree and a Ph.D. in Electrical and Computer Engineering from University of Missouri-Columbia.

The board of directors believes that Dr. Lin is qualified to serve as a director based on his extensive background in business management, his role as founder, President and Chief Executive Officer and his years of service on our board.

*James L. Dunn, Jr.*, has served as our Chief Financial Officer since December 2012. Prior to joining us, Mr. Dunn served as the Chief Financial Officer of GET Enterprises, LLC, a private

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equity backed distributor of restaurant tableware, from March to December 2012. Mr. Dunn also served as Chief Financial Officer and in-house counsel of Polymics, Ltd., a global manufacturer of high temperature plastics, from 2009 to 2012. Mr. Dunn served as the Chief Financial Officer and General Counsel of iLinc Communications, Inc. (Amex:ILC), a provider of web conferencing software, from 1998 to 2009. Mr. Dunn received a BBA in Accounting from Texas A&M University and a JD from Southern Methodist University School of Law.

Stefan J. Murry, Ph.D., has served as our Chief Strategy Officer since December 2012. Previously, Dr. Murry served as our Vice President of Sales and Marketing from June 2004 until December 2012, our Director of Sales and Marketing from January 2000 to June 2004 and as a Senior Engineer of Device Packaging from February 1997 to January 2000. He also previously served as Research Associate and Mission Control Specialist with the Space Vacuum Epitaxy Center in Houston, TX. Dr. Murry has been issued multiple patents in the optoelectronics industry, as well as in various related and complimentary industries. Dr. Murry received BS and MS degrees in Physics and a Ph.D. in Electrical Engineering from the University of Houston.

Hung-Lun (Fred) Chang, Ph.D., has served as Senior Vice President of our Optical Component Business Unit since October 2012. Previously, Dr. Chang served as Vice President of our Optical Module Division from March 2005 until October 2012, our Director of Manufacturing from June 2002 to March 2004, and as our Deputy Packaging Manager from April 2001 to May 2002. Dr. Chang has held numerous positions in the optoelectronics industry throughout his career. His most recent position prior to joining us was Deputy Manager of the Optical Active Component Group at Hon-Hai Precision Industry Co., Ltd., which is based in Taiwan. He was also a researcher and project manager of the Optoelectronic Module Technology group at Chunghwa Telecom Co., Ltd. from 1996 to 2000. Dr. Chang received a BS degree in Electrophysics and a Ph.D. in Electro-Optical Engineering from National Chiao Tung University in Taiwan.

*Klaus Alexander Anselm, Ph.D.*, has served as our Vice President of Semiconductor Products since 2009. Previously, Dr. Anselm served as our Senior Director of Semiconductor Products from October 2007 to 2009, as our Director of Semiconductor Products from 2004 until September 2007, and as our Processing Department Manager from 1999 to 2004. Dr. Anselm received a BS degree in Electrical Engineering from Rice University, and an MS degree and Ph.D. in Electrical Engineering from the University of Texas at Austin.

Shu-Hua (Joshua) Yeh has served as Senior Vice President of our Network Equipment Module Business Unit since November 2012. Previously, Mr. Yeh served as our General Manager of our Video Equipment Division of Global Technology Inc., our China subsidiary, since its acquisition by us in March 2006 and had served as its President and Chief Executive Officer from April 2002 until the acquisition. From May 1995 to April 2002, Mr. Yeh served as a Vice President of Sales and Marketing of Twoway CATV Technology Inc. Mr. Yeh received a BS degree in Mechanical Engineering and an MS in Automatic Control Science from National Chung Shing University in Taiwan.

Chung-Yao (Ford) Li has served as our Senior Vice President since November 2011 and as our Asia General Manager since July 2011. From 2007 to 2011, Mr. Li served as a general manager in Shanghai, China for Pegatron Corporation, an electronics and computing design and manufacturing company. Mr. Li served in various operational management capacities of Wistron Infocomm Corporation from 2005 until 2007. From 2002 to 2005, Mr. Li also served as an Assistant Vice President of Quanta Computer Inc., in Shanghai, China. Mr. Li received an MS degree in Engineering Manufacturing Management from University of South Australia.

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*David C. Kuo* has served as our General Counsel and Vice President since August 2013 and as our Secretary since November 2012. Previously, Mr. Kuo served as our Assistant General Counsel from May 2009 until August 2013, and as our Asia Legal Manager from January 2011 until August 2013. Mr. Kuo holds a JD from South Texas College of Law and a BBA degree in Real Estate from Baylor University.

William H. Yeh has served as a director on our board of directors since May 2000. He is the current Chief Executive Officer and President of Hungyeh Investment, Ltd., a hospitality real estate investment and management company, a position he has held since 2000. Mr. Yeh has also served as president of Gold Star Investment since 1997. He was a Senior Vice President of United Central Bank overseeing the Houston region and Vice Chairman of Central Bancorp, Inc. from 1997 to 2012. He is also currently a director of Central Bancorp, Inc., the holding company of United Central Bank, a position which he has held since 1997. Mr. Yeh received a BS degree from National Cheng Kung University in Taiwan an MS degree from University of Houston Clear Lake.

The board of directors believes that Mr. Yeh is qualified to serve as a director based on his business and financial management and leadership experience and his years of service on our board.

Richard B. Black has served as a director on our board of directors since August 2001. He is the President and Chief Executive Officer of ECRM, Incorporated, a worldwide supplier of laser based imaging equipment, a position he has held since 2002, and has been the chairman of the board of directors of ECRM, Incorporated since 1983. Beginning in 1989, Mr. Black was a director of Oak Technology, Inc., a manufacturer of semi-conductors for optical storage, and then became President in 1998 and vice chairman of the board of directors in 1999 until its merger with Zoran, Inc. in 2003. Mr. Black has served as President and CEO of AM International from 1980 to 1982. He served as a Division President of Maremont Corporation, a manufacturer of auto parts and textile machinery, from 1967, then as Maremont's President and CEO from 1974 to 1979. When Maremont was acquired by Alusuisse in 1979, he served as President and CEO of Alusuisse of America until 1981. He served as a director and chairman of the audit committee of GSI Group, a manufacturer of lasers, laser systems, semi-conductor equipment, from 1998 to 2012, and was its chairman of its board of directors from 2006 to 2012. He currently serves as a director and chairman of the audit committee of Alliance Fiber Optics Products, Inc. (Nasdaq: AFOP), a position he has held since 2002, and TREX Enterprises, Inc., a position he has held since 2000. Mr. Black has served as trustee of the Institute for Advanced Study at Princeton since 1990, and became its vice chairman in 2006. He has served as a trustee of the American Indian College Fund, Beloit College, Bard College, and serves on the Visiting Committee for the Physical Sciences Division of the University of Chicago. Mr. Black received a BS degree in Engineering from Texas A&M University, an MBA from Harvard University and an honorary Ph.D. from Beloit College.

The board of directors believes that Mr. Black is qualified to serve as a director based on his extensive business and financial management and leadership experience, and his service on other private company and publicly-held boards of directors.

Alan Moore has served as a director on our board of directors since March 2013. Since 2007, Mr. Moore has served as a Manager of Silver Tree Fund II Management, LLC, a real estate investment fund, since 1999, he has served as the Treasurer of Silver Tree Partners, Inc., a real estate development company, and since 1995, he has served as the President of Red Oak Capital, a private equity company. From May 2004 until December 2011, Mr. Moore served as a Manager of Silver Tree Fund Management, LLC, also a real estate investment fund, and from March 1998

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to October 1999, Mr. Moore served as the Chief Financial Officer of Window on WallStreet (sold to Trade Station Group, Inc. in 1999). Previously, Mr. Moore was a co-founder of Fossil, Inc. (Nasdaq: FOSL). Mr. Moore received an MS degree in Accounting and a BA degree in Business Control Systems from the University of North Texas.

The board of directors believes that Mr. Moore is qualified to serve as a director based on his extensive background in business and financial management and his role as co-founder of a publicly-held company.

*Min-Chu (Mike) Chen, Ph.D.* has served as a director on our board of directors since February 2013. Since January 2013, Dr. Chen has served as a member of the board of directors of Nanning Baota Biowin Technologies Co. Ltd., a real estate management company; since January 2012, he has served as an executive director of FGel Nanotek, Inc., a food and beverage additive company based on nanotechnology; since November 2011, he has served as the Asia Pacific Director for U.S. Flow Control Group Pte. Ltd., a petroleum equipment manufacturer and services company; since 2003, he has served as a director of Seth Nanotechnology Inc., a nanotechnology patent portfolio company owning more than 10 patents in fullerene derivatives and related application technologies; and since 2001, he has been a partner and member of the board of directors of EverRich Capital Inc., a financial consulting company. From September 2008 to April 2010, Dr. Chen served as the Chief Executive Officer of SilverPAC, Inc., a consumer electronics business, and from March 1994 to June 2002, Dr. Chen served as a board member of PCTEL, Inc. (Nasdaq: PCTI). Dr. Chen received a Ph.D. in Ocean Engineering from Oregon State University.

The board of directors believes that Dr. Chen is qualified to serve as a director based on his business management experience, his service on other private company boards of directors and his prior service on the board of a publicly-held company.

Alex Ignatiev, Ph.D. has served as a director on our board of directors since February 2013, and previously served as a director on our board of directors from June 2008 to October 2009 and from May 2001 to August 2002. Since March 2013, Dr. Ignatiev has served as the Chief Science Officer of Smart Grid Intelligent Management, Inc., which develops operating systems and alternative energy source integration, since February 2009, he has served as the Chief Technology Officer of Quarius Technologies, LP, a renewable energy company, since February 2006, he has served as a vice president and Chief Technology Officer at Nano EnerTex, Inc., a nanomaterials company, since January 2005, he has served as a Vice President of Virtual Vision LLP, which develops artificial retinas, and since May 2002, he has served as the Chief Technology Officer of Metal Oxide Technologies, Inc., which develops, manufactures and sells superconducting wire. Dr. Ignatiev was a director of the Space Vacuum Epitaxy Center at the University of Houston from 1987 until 2002 after which he became director of the Texas Center for Superconductivity and Advanced Materials until 2005. From 2005 until the present he has served as a director of the Center for Advanced Materials at the University of Houston. Dr. Ignatiev has also served a task leader for the Texas Center for Superconductivity from 1987 to 2008. Dr. Ignatiev has served since 2010 as the Hugh Roy and Lillie Cranz Cullen professor of physics, chemistry and electrical and computer engineering at the University of Houston, and has been elected to the International Academy of Astronautics and to the Kazakhstan National Academy of Sciences. Dr. Ignatiev received a Ph.D. in Materials Science from Cornell University.

The board of directors believes that Dr. Ignatiev is qualified to serve as a director based on his business management experience, broad technology industry experience and his past service on our board.

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Che-Wei Lin has served as a director on our board of directors since January 2014, and previously served as a director on our board of directors from December 2006 to October 2009. Since November 2007, Mr. Lin has served as the President of ASMedia Technology Inc., a chipset manufacturer. Since November 2009, Mr. Lin has also served as the Corporate Vice President of the Motherboard Business Unit of the Open Platform Business Group of ASUSTek Computer Inc., a computer hardware and electronics company. Mr. Lin was employed at VIA Technologies, Inc., a manufacturer of integrated circuits and motherboard chipsets, from 1993 to 2007 in various positions, including President of the Desktop Platform Business Unit, Vice President of the System Platform Division and Vice President of OEM and Chipset Product Marketing. Mr. Lin received a BS in Electrical Engineering from Fu Jen University in Taiwan and a MS in Electrical Engineering from the University of Missouri.

The board of directors believes that Mr. C. Lin is qualified to serve as a director based on his business and financial management and leadership experience and his years of service on our board.

Our executive officers are elected by, and serve at the discretion of, our board of directors. There are no family relationships among any of our directors or executive officers.

# **Board Composition**

Our amended and restated certificate of incorporation provides that the number of authorized directors is determined from time to time by resolution of the board of directors and any vacancies in our board of directors and newly created directorships may be filled only by our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes, so that, as nearly as possible, each class will consist of one-third of the total number of directors. Our amended and restated certificate of incorporation further provides for the removal of a director only for cause and by the affirmative vote of the holders of 66<sup>2</sup>/<sub>3</sub>% or more of the shares then entitled to vote at an election of our directors. We currently have seven directors.

Our board of directors is divided into three classes with members of each class of directors serving for staggered three-year terms as follows:

Class I directors, Alan Moore and Che-Wei Lin, whose initial terms will expire at the annual meetings held in 2014;

Class II directors, William H. Yeh and Alex Ignatiev, whose initial terms will expire at the annual meetings held in 2015; and

Class III directors, Chih-Hsiang (Thompson) Lin, Richard B. Black and Min-Chu (Mike) Chen, whose initial terms will expire at the annual meetings held in 2016.

Our classified board could have the effect of making it more difficult for a third party to acquire us. We have determined that each of William H. Yeh, Richard B. Black, Alex Ignatiev, Alan Moore, Min-Chu (Mike) Chen and Che-Wei Lin qualify as independent directors under the NASDAQ rules and SEC rules and regulations.

# **Director Compensation**

From January 2013 until April 2013, non-employee directors were eligible to receive \$1,500 for each board meeting attended in person, and a \$300 meeting fee for each board or committee

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meeting attended by telephone. In April 2013, our board of directors approved increasing the meeting fee for each board meeting attended by telephone to \$750 for meetings lasting two hours or less, and \$1,500 for meetings lasting longer than two hours. In April 2013, our board of directors also approved providing our non-employee directors with a \$12,000 annual retainer fee. Non-employee directors that serve as the Chairman of our board of directors, chairman of our audit committee, chairman of our compensation committee and chairman of our nominating and corporate governance committee are entitled to receive an additional \$5,000, \$5,000, \$3,000 and \$2,000 annual retainer fee, respectively. If a committee meeting occurred at the same site as a scheduled board meeting, no additional compensation was paid. Employee directors did not receive any compensation other than their employee compensation for their service as directors. Directors were reimbursed for out-of-pocket expenses incurred in the course of their service on the board of directors or its committees.

In April 2013, our board of directors approved providing non-employee directors with a number of restricted stock units under our 2013 Long-Term Incentive Plan equal to \$55,000 divided by the then-current share price of our common stock. All restricted stock units granted to directors vest in equal monthly amounts over the first twelve months following the date of grant, subject to early termination in accordance with their terms.

The table below sets forth, for each person who served as a non-employee director during 2013, information regarding compensation for service on our board of directors during 2013.

	Fees Earned or	Restricted Stock	All Other	
NAME	Paid in Cash (1)	Units (2)	Compensation	Total
Juen-Sheng (Andrew) Kang (3)	\$ 21,38	1 \$ 55,000		\$ 76,381
William H. Yeh	19,94	2 55,000		\$ 74,942
Richard B. Black	22,88	55,000		\$ 77,881
Nancy T. Chang (4)	2,10	0	\$ 25,000	\$ 27,100
Benjamin C.M. Jen (5)	1,80	0		\$ 1,800
Chih-Kai (C.K.) Cheng (6)	1,80	0		\$ 1,800
Hsiang-Teh (Steven) Ho (6)	1,80	0		\$ 1,800
Min-Chu (Mike) Chen (7)	15,68	55,000		\$ 70,683
Alex Ignatiev (8)	18,17	2 55,000		\$ 73,172
Alan Moore (9)	17,18	55,000		\$ 72,183

- (1)

  Reflects the aggregate dollar amount of fees earned or paid in cash for services as a non-employee director, including committee service fees, fees for serving as a committee chairperson, and board and committee meeting fees.
- Represents the aggregate grant date fair value computed in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant date fair value of the restricted stock units reported in Note M to the consolidated financial statements included in this prospectus. The amounts reported in this column reflect the accounting cost for these restricted stock units and do not correspond to the actual economic value that may be received by the named executive officers for the restricted stock units.
- (3) Resigned as a member of our board of directors on December 30, 2013.
- (4)

  Resigned as a member of our board of directors on March 22, 2013. Reflects payment of \$25,000 to Chang Office, LLC under our consulting agreement with Chang Office, LLC. Under the consulting agreement, Chang Office, LLC agreed to provide certain consulting services for the benefit of our audit committee, including the evaluation of our internal controls. Ms. Chang is the President and sole member of Chang Office, LLC.

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- (5) Resigned as a member of our board of directors on February 27, 2013.
- (6) Resigned as a member of our board of directors on February 20, 2013.
- (7) Appointed as a member of our board of directors on February 27, 2013.
- (8) Appointed as a member of our board of directors on February 20, 2013.
- (9) Appointed as a member of our board of directors on March 25, 2013.

#### **Board Committees**

Our board of directors directs the management of our business and affairs, as provided by Delaware law, and conducts its business through meetings of the board of directors. Our board of directors has three standing committees: an audit committee, a compensation committee and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business.

#### **Audit Committee**

Our audit committee currently consists of Richard B. Black, Alan Moore and Alex Ignatiev. Our board of directors has determined that Messrs. Black, Moore and Ignatiev each satisfy the independence and financial literacy requirements under the applicable rules and regulations of the SEC and NASDAQ. Mr. Black serves as the chairman of this committee, and our board of directors has determined that he qualifies as an "audit committee financial expert" as that term is defined in the rules and regulations established by the SEC and has the requisite financial sophistication as defined under the applicable NASDAQ rules. The functions of this committee include, but are not limited to:

meeting with our management periodically to consider the adequacy of our internal controls and the objectivity of our financial reporting;

meeting with our independent auditors and with internal financial personnel regarding these matters;

appointing, compensating, retaining and overseeing the work of our independent auditors;

pre-approving audit and non-audit services of our independent auditors;

reviewing our audited financial statements and reports and discussing the statements and reports with our management, including any significant adjustments, management judgments and estimates, new accounting policies and disagreements with management;

establishing procedures for the receipt, retention and treatment of complaints we receive regarding accounting, internal accounting controls or auditing matters, as well as for the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters;

reviewing the independence and quality control procedures of the independent auditor and the experience and qualifications of the independent auditor's senior personnel that are providing us audit services;

reviewing all related-party transactions for approval; and

reviewing and reassessing the adequacy of the audit committee's charter at least annually and recommending any changes to our board of directors.

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Both our independent auditors and internal financial personnel regularly meet privately with our audit committee and have unrestricted access to this committee.

# **Compensation Committee**

Our compensation committee currently consists of William H. Yeh, Richard B. Black and Min-Chu (Mike) Chen, each of whom is not an employee and is otherwise "independent" as that term is defined in the current applicable NASDAQ rules. Mr. Yeh serves as the chairman of this committee. Pursuant to its charter, our compensation committee has responsibility for overseeing our compensation policies and programs, including developing compensation policies and providing oversight in the implementation of all applicable policies and benefit plans. Specifically, the compensation committee recommends the compensation payable to our non-employee directors, evaluates and sets compensation for the Chairman of our board of directors and our executive officers and monitors all general compensation programs. In accordance with its charter, the compensation committee's responsibilities include, but are not limited to:

reviewing and approving all compensation for the Chief Executive Officer, including incentive-based and equity-based compensation;

reviewing and approving annual performance objectives and goals relevant to compensation for the Chief Executive Officer and evaluating the performance of the Chief Executive Officer;

reviewing and approving incentive-based or equity-based compensation plans in which our executive officers participate;

reviewing and approving all compensation for executive officers, including incentive-based and equity-based compensation, and overseeing the evaluation of management;

approving all employment, severance, or change-in-control agreements, special or supplemental benefits, or provisions including the same, applicable to executive officers;

periodically reviewing and advising our board of directors concerning both regional and industry-wide compensation practices and trends in order to assess the adequacy and competitiveness of our compensation programs for executive officers relative to comparable companies in our industry;

reviewing and reassessing the adequacy of the compensation committee charter and recommending any changes to our board of directors on an annual basis; and

reviewing and evaluating the compensation committee's own performance periodically.

The compensation committee may delegate its authority to a subcommittee to make grants of stock, stock options and other equity securities to executive officers and other employees, provided that these grants are made within established guidelines. In addition, the compensation committee may obtain advice or assistance from compensation consultants, legal counsel or other advisors to perform its duties, provided that the compensation committee shall periodically assess the independence of any such compensation consultant as required by NASDAQ rules and applicable law.

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# **Nominating and Corporate Governance Committee**

Our nominating and corporate governance committee currently consists of William H. Yeh, Alex Ignatiev and Min-Chu (Mike) Chen. Mr. Ignatiev serves as the chairman of this committee. Our nominating and corporate governance committee oversees and advises the board of directors with respect to corporate governance matters, assists the board of directors in identifying and recommending qualified candidates for nomination to the board of directors, makes recommendations to the board of directors with respect to assignments to committees of the board of directors and oversees the evaluation of the board of directors. The functions of this committee include, but are not limited to:

making recommendations to the board of directors regarding all nominees for board membership, whether for the slate of director nominees to be proposed by the board of directors to the stockholders or any director nominees to be elected by the board of directors to fill interim director vacancies;

considering director candidates submitted by stockholders and determining the procedure to be followed by stockholders in submitting such recommendations;

recommending board of directors committee structure and responsibilities to be included in the charter of each committee of the board of directors to be submitted to full board of directors for consideration;

recommending directors to serve on each board committee and suggesting rotations for chairpersons of the board committees as the nominating and corporate governance committee deems appropriate;

recommending corporate governance standards to the board of directors;

evaluating and recommending any revisions to board of directors and board committee meeting policies;

reviewing the effectiveness of the operation of the board of directors and board committees, including the corporate governance and operating practices;

reviewing and reassessing the adequacy of the nominating and corporate governance committee charter and recommending any changes to the board of directors; and

periodically reviewing the compensation paid to non-employee directors and making recommendations to our board of directors for any adjustments.

# Compensation Committee Interlocks and Insider Participation in Compensation Decisions

None of our executive officers serves as a member of our compensation committee or as a member of the board of directors or any other committee serving an equivalent function of any other entity that has one or more of its executive officers serving as a member of our board of directors or compensation committee.

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# **Code of Business Conduct**

Our board of directors has adopted a code of business conduct. The code of business conduct applies to all of our employees, officers and directors. The full text of our code of business conduct is posted on our website at www.ao-inc.com under the Investor Relations section. We intend to disclose future amendments to certain provisions of our code of business conduct, or waivers of such provisions, at the same location on our website identified above and also in public filings.

# **Risk Assessment of Compensation Programs**

We do not believe that our compensation programs create risks that are reasonably likely to have a material adverse effect on our company. We believe that the combination of different types of compensation as well as the overall amount of compensation, together with our internal controls and oversight by the board of directors, mitigates potential risks.

# **Tax and Accounting Considerations**

Section 162(m) of the Code generally disallows public companies a tax deduction for compensation in excess of \$1,000,000 paid to their Chief Executive Officer and certain other executive officers unless certain performance and other requirements are met. As one of the factors in its consideration of compensation matters, the compensation committee also considers the anticipated tax treatment to our company and to the executive officers of various payments and benefits, including the effect of Section 162(m). The compensation committee retains discretion, however, to implement executive compensation programs that may not be deductible under Section 162(m) if the compensation committee believes the programs are nevertheless appropriate to help achieve our primary objective of ensuring that compensation paid to our executive officers is reasonable, performance-based and consistent with the goals of our company and its stockholders. We do not believe that Code Section 162(m) will limit our tax deductions for our last completed fiscal year.

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# **EXECUTIVE COMPENSATION**

# **Summary Compensation Table**

The following table presents summary information regarding the total compensation awarded to, earned by, and paid to our principal executive officer, principal financial officer and other two most highly compensated executive officers who were serving as executive officers at the end of the fiscal year ended December 31, 2013. These officers are referred to as our named executive officers. The information included in this table reflects compensation for the years ended December 31, 2012 and 2013.

		Nonqualified					
				Non-Equi	•		
Name and Principal			St	cock Option Incentive &	lampensation All Other		
Position	Year	Salary (1)	Bonus Aw	ards Awards (2)Compensat	ienrningCompensation (3)	Total	
Chih-Hsiang (Thompson) Lin	2013	\$ 336,533	\$ 19,050	\$ 3,571,769	\$ 4,452 \$	3,931,804	
President and Chief Executive	2012	318,689		53,733	4,632	377,054	
Officer							
James L. Dunn, Jr. (4)	2013	196,667		72,826	1,360	270,853	
Chief Financial Officer	2012	3,654			113	3,767	
Stefan J. Murry	2013	218,575	12,406	143,238	1,360	375,579	
Chief Strategy Officer	2012	201,872		21,829	1,540	225,241	
		ĺ		·	·	,	
Hung-Lun (Fred) Chang	2013	196,788	10,716	105,854	1,360	314,718	
Senior Vice President of Optical	2012	177,285	•	15,112	1,540	193,937	
Module Division		,===		-,	-,	,	

- (1)
  Includes amounts earned but deferred at the election of the named executive officers, such as salary deferrals under our 401(k) Plan established under Section 401(k) of the Code.
- Represents the aggregate grant date fair value computed in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant date fair value of the stock options reported in the Option Awards column are set forth in Note M to the consolidated financial statements included in this prospectus. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value that may be received by the named executive officers for the stock options.
- (3) Includes life insurance premiums paid by us for the benefit of the named executive officers.
- (4) Mr. Dunn joined us on December 12, 2012 as Chief Financial Officer. His base annualized salary for 2012 was \$192,000.

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# Outstanding Equity Awards at Fiscal Year-end

The following table sets forth certain information regarding outstanding equity awards at fiscal year-end for our named executive officers for the year ended December 31, 2013.

	Number of Shares Underlying Unexercised Options			ption ercise	Option Expiration
Name	Exercisable	Unexercisable		Price	Date
Hung-Lun (Fred) Chang	2,833 (1)		\$	4.50	July 31, 2014
Hung-Lun (Fred) Chang	751 (12)		\$	3.00	December 31, 2014
Hung-Lun (Fred) Chang	400 (13)		\$	7.50	June 9, 2015
Hung-Lun (Fred) Chang	1,367 (3)		\$	6.00	October 19, 2019
Hung-Lun (Fred) Chang	2,167 (5)		\$	6.00	October 19, 2019
Hung-Lun (Fred) Chang	2,000 (4)		\$	6.00	October 19, 2019
Hung-Lun (Fred) Chang	4,500 (7)	1,500 (7)		6.00	August 23, 2020
Hung-Lun (Fred) Chang	3,208 (8)	1,459 (8)		6.00	March 4, 2021
Hung-Lun (Fred) Chang	1,125 (9)	1,875 (9)	\$	6.00	May 22, 2022
Hung-Lun (Fred) Chang		12,667 (14	l)\$	7.50	January 18, 2023
Hung-Lun (Fred) Chang		9,000 (15	5)\$	9.96	September 26, 2023
James L. Dunn, Jr.		10,000 (14	l)\$	7.50	January 18, 2023
James L. Dunn, Jr.		5,000 (15	5)\$	9.96	September 26, 2023
Lin Chih-Hsiang (Thompson) Lin	3,438 (2)		\$	7.50	June 9, 2015
Lin Chih-Hsiang (Thompson) Lin	5,833 (4)		\$	6.00	June 5, 2017
Lin Chih-Hsiang (Thompson) Lin	6,514 (5)		\$	6.00	February 12, 2018
Lin Chih-Hsiang (Thompson) Lin	2 (6)		\$	6.00	May 29, 2019
Lin Chih-Hsiang (Thompson) Lin	4,375 (3)		\$	6.00	October 19, 2019
Lin Chih-Hsiang (Thompson) Lin	21,125 (7)	7,042 (7)	\$	6.00	August 23, 2020
Lin Chih-Hsiang (Thompson) Lin	11,968 (8)	5,439 (8)	\$	6.00	March 4, 2021
Lin Chih-Hsiang (Thompson) Lin	4,000 (9)	6,667 (9)	\$	6.00	May 22, 2022
Lin Chih-Hsiang (Thompson) Lin		91,333 (14	l)\$	7.50	January 18, 2023
Lin Chih-Hsiang (Thompson) Lin		615,348 (15	5)\$	9.96	September 26, 2023
Stefan J. Murry	1,833 (1)		\$	4.50	July 31, 2014
Stefan J. Murry	900 (10)		\$	3.00	December 31, 2014
Stefan J. Murry	1,370 (11)		\$	4.50	December 31, 2014
Stefan J. Murry	2,666 (4)		\$	6.00	February 12, 2018
Stefan J. Murry	2,667 (5)		\$	6.00	October 19, 2019
Stefan J. Murry	2,000 (3)		\$	6.00	October 19, 2019
Stefan J. Murry	5,750 (7)	1,917 (7)	\$	6.00	August 23, 2020
Stefan J. Murry	4,583 (8)	2,084 (8)	\$	6.00	March 4, 2021
Stefan J. Murry	1,625 (9)	2,708 (9)	\$	6.00	May 22, 2022
Stefan J. Murry		17,333 (14	1)\$	7.50	January 18, 2023
Stefan J. Murry		12,000 (15	5)\$	9.96	September 26, 2023

<sup>(1)</sup>The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2004 under our 2000 Incentive Share Plan. The stock options vest over a four-year period with respect to one-forty-eighth (1/48) of the shares as of the first day of the calendar month following the vesting start date, subject to continued service through each applicable vesting date.

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- (2)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2005 under our 2004 Incentive Share Plan. The stock options vest over a four-year period with respect to one-sixteenth (1/16) of the shares as of each three-month period following the vesting start date, subject to continued service through each applicable vesting date.
- (3)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2006 under our 2006 Incentive Share Plan. The stock options vest over a four-year period with respect to one-sixteenth (1/16) of the shares as of each three-month period following the vesting start date, subject to continued service through each applicable vesting date.
- (4)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2007 under our 2006 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date with the remainder vesting 25% each twelve month period over the remaining three years, subject to continued service through each applicable vesting date
- (5)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2008 under our 2006 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date and the remaining shares shall become exercisable with respect to one-thirty-sixth (1/36) of the remaining shares as of the first day of the calendar month following the first anniversary of the vesting start date, subject to continued service through each applicable vesting date.
- (6)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2009 under our 2006 Incentive Share Plan. The stock options vest over a one year period with respect to one-twelfth (1/12) of the shares as of the first day of the calendar month beginning after the vesting start date, subject to continued service through each applicable vesting date.
- (7)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2010 under our 2006 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date with the remaining shares vesting 12.5% each six months over the remaining three years, subject to continued service through each applicable vesting date.
- (8)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2011 under our 2006 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date and the remaining shares shall become exercisable with respect to one-thirty-sixth (1/36) of the remaining shares as of the first day of the calendar month following the first anniversary of the vesting start date, subject to continued service through each applicable vesting date.
- (9)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2012 under our 2006 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date with the remaining shares vesting 12.5% each six months over the remaining three years, subject to continued service through each applicable vesting date.
- (10)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2001 under our 2000 Incentive Share Plan. The stock options vest over a five-year period with respect to one-twentieth (1/20) of the shares as of the first day of the calendar quarter (three-month period) following the vesting start date, subject to continued service through each applicable vesting date.
- The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2000 under our 1998 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest immediately and the remaining shares shall become exercisable with respect to one-thirty-sixth (1/36) of the remaining shares as of the first day of the calendar month following the first anniversary of the vesting start date, subject to continued service through each applicable vesting date.
- (12)
  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2002 under our 2000 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date with the remainder vesting one-sixteenth (1/16) as of the first day of the calendar quarter (three-month period) following the vesting start date, subject to continued service through each applicable vesting date.
- (13)

  The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2005 under our 2000 Incentive Share Plan. The stock options vest over a four-year period with respect to one-sixteenth (1/16) of the shares as of each three-month period following the vesting start date, subject to continued service through each applicable vesting date.

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- (14)
  - The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2013 under our 2006 Incentive Share Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date with the remaining shares vesting 12.5% each six months over the remaining three years, subject to continued service through each applicable vesting date.
- The amounts reported reflect shares of common stock underlying stock options granted in calendar year 2013 under our 2013 Long-Term Incentive Plan. The stock options vest over a four-year period as follows: 25% of the shares underlying the stock option vest on the first anniversary of the vesting start date with the remaining shares vesting 12.5% each six months over the remaining three years, subject to continued service through each applicable vesting date.

# **Agreements with Executive Officers**

Change of Control or Separation of Service Agreements with Chief Executive Officer and Other Executive Officers

Each of Mr. Lin, Mr. Murry and Mr. J. Yeh has an agreement regarding change of control or separation of service with our company, which provides that, if our board of directors terminates his employment for any reason other than Cause or if he resigns for Good Reason before the occurrence of a Change in Control, as defined below, he will be entitled to receive (i) a payment equal to one year's base salary plus \$15,000, (which may be used for benefit continuation under COBRA or for any other purpose), (ii) a payment equal to his target bonus and (iii) in the case of Mr. Murry, a lump sum equal to Mr. Murry's four most recent commission payments. The severance benefits that may arise as a result of a termination prior to a Change in Control will be paid periodically in installments over the 12 months following his separation from service, subject to certain limitations including his execution of a release agreement. The release agreement would include a reasonable agreement to cooperate for a period of six months following the employment termination date and a mutual non-disparagement clause. In consideration of these benefits, he has agreed to be subject to a non-compete provision for a period of 12 months following his separation from service and would agree to maintain the confidentiality of company information. Mr. Dunn's and Mr. Chang's employment agreement do not provide for the above benefits.

Each employment agreement generally defines "Cause" as, following written notice to the executive and the executive's failure to cure such occurrence(s): (i) conviction or plea of nolo contendre to any felony offense or to a crime of moral turpitude; (ii) commission of willful misconduct or violation of law in connection with the performance of his duties, including (a) misappropriation of funds or property, (b) attempting to secure personally any profit in connection with any transaction entered into on behalf of our company, or (c) making any material misrepresentation to our board of directors, our company or its affiliates; (iii) material violation or failure to comply with our company policy; (iv) material breach of the employment agreement; or (v) the willful and continued failure or neglect to substantially perform his duties with our company. "Good Reason" is defined to include: (i) the executive's assignment to duties inconsistent with his position or title; (ii) reduction in his base compensation, except as part of an overall cost reduction program that affects all senior executives and does not disproportionately affect the executive; (iii) any purported termination of the executive by our company other than for disability or Cause or a voluntary resignation initiated by the executive, except for a voluntary termination for Good Reason; (iv) failure of any successor entity to our company to expressly assume the employment agreement; and (v) material breach by our company of the agreement.

Each of Mr. Lin, Mr. Murry, Mr. J. Yeh, Mr. Dunn and Mr. Chang have provisions in their employment agreements that provide if, within one year after a Change in Control or within six months prior to a Change in Control, the executive's employment is terminated by the executive for Good Reason or by our company other than for Cause, the executive will instead be entitled

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to receive severance benefits consisting of: (i) a lump sum payment equal to one year's base salary plus \$10,000 (\$15,000 for Mr. Dunn and Mr. Chang) which may be used for benefit continuation under COBRA or for any other purpose; (ii) a lump sum payment equal to his target bonus; and (iii) accelerated vesting of the executive's stock options, with all vested options becoming exercisable for an extended period following termination of employment. The severance benefits that may arise as a result of termination within one year following a Change in Control will be paid on the later of the 60th day after the effective date of the executive's separation from service or six months and one day after executive's separation from service if the executive is, at the time of termination, a "specified employee" as defined under Section 409A of the Code. Additionally, Mr. Lin's employment agreement provides him with a tax gross-up payment to make him whole for any excise taxes that he would owe resulting from the application of the 20% excise tax provisions under Section 280G of the Code, that apply when certain "parachute payments" are paid to Mr. Lin as the result of a Change in Control. None of the other employment agreements with our executive officers provide them with any right to a tax gross-up.

A "Change in Control" is deemed to occur if: (i) individuals who constitute the board of directors of our company on the date of the employment agreement (Incumbent Directors) cease to constitute at least a majority of our board of directors; provided, that any individual whose election or nomination for election by the stockholders was approved by a majority of the then Incumbent Directors shall be considered an Incumbent Director, with certain exceptions; or (ii) the stockholders of our company approve (1) any merger, consolidation or recapitalization of our company or any sale of substantially all of its assets where (a) the stockholders of our company prior to the transaction do not, immediately thereafter, own at least 51% of both the equity and voting power of the surviving entity or (b) the Incumbent Directors at the time of the approval of the transaction would not immediately thereafter constitute a majority of the board of directors of the surviving entity, or (2) any plan of liquidation or dissolution of our company.

# **Equity Compensation Plans**

# 2013 Long-Term Incentive Plan

Our board of directors and stockholders adopted and approved our 2013 Long-Term Incentive Plan, or the 2013 Plan, effective as of September 26, 2013. The following is a brief summary of the material terms of our 2013 Plan.

#### Purpose

The purpose of our 2013 Plan is to attract and retain employees, directors and consultants by providing them with additional incentives, and to promote the success of our company's business.

# Administration

Our board of directors or one or more committees appointed by our board of directors administers the 2013 Plan. For this purpose our board of directors has delegated general administrative authority for the 2013 Plan to the compensation committee. A committee may delegate some or all of its authority with respect to the 2013 Plan to another committee of directors and may delegate certain limited award grant authority to one or more officers of our company. (The appropriate acting body, be it our board of directors, a committee within its delegated authority, or an officer within his or her delegated authority, is referred to in this summary as the "Administrator.") The Administrator determines the number of shares that are

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subject to awards and the terms and conditions of such awards, including the price (if any) to be paid for the shares or the award. Along with other authority granted to the Administrator under the 2013 Plan, the Administrator may (i) determine fair market value, (ii) select recipients of awards, (iii) determine the number of shares subject to awards, (iv) approve form award agreements, (v) determine the terms and conditions of awards, (vi) reduce the exercise price of outstanding awards without participant consent, (vii) amend outstanding awards, and (viii) allow participants to satisfy withholding tax obligations through a reduction of shares.

#### Eligibility

Persons eligible to receive awards under the 2013 Plan include our officers, employees, consultants and members of our board of directors. The Administrator determines from time to time the participants to whom awards will be granted.

Authorized shares; limits on awards

The maximum number of common shares that may be issued or transferred pursuant to awards under the 2013 Plan equals 800,000, which number includes shares remaining available under our prior plans as described below and shares subject to outstanding awards forfeited back to our prior plans, all of which may be subject to incentive stock option treatment. The maximum aggregate number of common shares that may be issued pursuant to all awards under the 2013 Plan shall increase annually on the first day of each fiscal year following the adoption of the 2013 Plan by the number of common shares equal to the lesser of (i) 333,333 shares, (ii) 2% of the total issued and outstanding common shares on the first day of such fiscal year, or (iii) such lesser amount determined by our board of directors. Additionally, the maximum number of shares subject to those options and stock appreciation rights that are granted during any calendar year to any individual under the 2013 Plan is 600,000 shares.

To the extent that an award is settled in cash or a form other than shares, the shares that would have been delivered had there been no such cash or other settlement will not be counted against the shares available for issuance under the 2013 Plan. To the extent that shares are delivered pursuant to the exercise of a stock appreciation right or stock option, or to satisfy the tax withholding obligations under an award, then only the shares actually issued shall be counted against the applicable share limits. Shares that are subject to or underlie awards that expire or for any reason are cancelled or terminated, are forfeited, fail to vest, or for any other reason are not paid or delivered under the 2013 Plan will again be available for subsequent awards under the 2013 Plan. Additionally, shares that are exchanged by a participant or withheld by our company as full or partial payment in connection with any award under the 2013 Plan, as well as any shares exchanged by a participant or withheld by our company to satisfy the tax withholding obligations related to any award under the 2013 Plan, will be available for subsequent awards under the 2013 Plan and are not counted against the applicable share limits.

As is customary in incentive plans of this nature, the number and kind of shares available under the 2013 Plan and the then outstanding share-based awards, as well as exercise or purchase prices, performance targets under certain performance-based awards and share limits, are subject to adjustment in the event of certain reorganizations, mergers, combinations, consolidations, recapitalizations, dividends, stock splits, a split-up or a spin-off, repurchases or exchange, or other similar events, or extraordinary dividends or distributions of property to the stockholders.

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Incentive awards

The 2013 Plan authorizes stock options, stock appreciation rights, or SARs, restricted stock, restricted stock units, performance shares and performance units, as well as other awards (described in the 2013 Plan) that are responsive to changing developments in management compensation. The 2013 Plan retains the flexibility to offer competitive incentives and to tailor benefits to specific needs and circumstances. Any award may be paid or settled in cash. An option or SAR will expire, or other award will vest in accordance with the schedule set forth in the applicable award agreement.

Stock option. A stock option is the right to purchase common shares at a future date at a specified price per share generally equal to, but no less than, the fair market value of a share on the date of grant. An option may either be an Incentive Stock Option, or ISO, or a nonstatutory stock option, or NSO. ISO benefits are taxed differently from NSOs, as described under "Federal Income Tax Treatment of Awards under the 2013 Plan," below. ISOs also are subject to more restrictive terms and are limited in amount by the Code and the 2013 Plan. Full payment for shares purchased on the exercise of any option must be made at the time of such exercise in a manner approved by the Administrator.

**SAR.** A SAR is the right to receive payment of an amount equal to the excess of the fair market value of a common share on the date of exercise of the SAR over the base price of the SAR. The base price will be established by the Administrator at the time of grant of the SAR but will not be less than the fair market value of a share on the date of grant. SARs may be granted in connection with other awards or independently.

Restricted stock award. A restricted stock award is typically for a fixed number of common shares subject to restrictions. The Administrator specifies the price, if any, the participant must pay for such shares and the restrictions (which may include, for example, continued service and/or performance standards) imposed on such shares. A stock bonus may be granted by the Administrator to any eligible person to reward exceptional or special services, contributions or achievements in the manner and on such terms and conditions (including any restrictions on such shares) as determined from time to time by the Administrator. The number of shares so awarded shall be determined by the Administrator and may be granted independently or in lieu of a cash bonus.

**Restricted stock unit.** A restricted stock unit is similar to a SAR except that it entitles the recipient to receive an amount equal to the fair market value of a common share.

Performance-based award. A performance-based award is designed to satisfy the requirements for deductibility under Section 162(m) of the Code (in addition to other awards expressly authorized under the 2013 Plan which may also qualify as performance-based) and may be based on the performance of our company and/or one or more of our subsidiaries, divisions, segments, or units. The business criteria from which performance goals will be established are listed in the 2013 Plan under the term "Performance Goals." Performance goals may be adjusted to reflect certain changes, including reorganizations, liquidations and capitalization and accounting changes, to the extent permitted by Section 162(m). Performance-based awards may be share-based (payable in stock only or in cash or stock) or may be cash-only awards (in either case, subject to the limits described under the heading "Authorized Shares; Limits on Awards" above). Before any performance-based award is paid, the Administrator must certify that the performance goals have been satisfied. The Administrator has discretion to determine

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the performance goals and restrictions or other limitations of the individual awards and reserves discretion to reduce payments below maximum award limits.

The Administrator may grant stock unit awards and permit deferred payment of awards, and may determine the form and timing of payment, vesting and other terms applicable to stock units or deferrals.

Acceleration of awards; possible early termination of awards

Upon a change in control of our company, outstanding awards under the 2013 Plan will be assumed or substituted on the same terms. However, if the successor corporation does not assume or substitute the outstanding awards, then vesting of these awards will fully accelerate, and in the case of options or stock appreciation rights, will become immediately exercisable. For this purpose a change in control is defined to include certain changes in the majority of our board of directors, the sale of all or substantially all of our company's assets and the consummation of certain mergers or consolidations.

# Transfer restrictions

Subject to certain exceptions, awards under the 2013 Plan are not transferable by the recipient other than by will or the laws of descent and distribution and are generally exercisable, during the recipient's lifetime, only by him or her.

Termination of or changes to the 2013 Plan

Our board of directors may amend or terminate the 2013 Plan at any time and in any manner. Unless required by applicable law or listing agency rule, stockholder approval for any amendment will not be required. Unless previously terminated by our board of directors, the 2013 Plan will terminate in September 2023 upon the tenth anniversary of the completion of our initial public offering. Generally speaking, outstanding awards may be amended, subject, however, to the consent of the holder if the amendment materially and adversely affects the holder.

Federal income tax treatment of awards under the 2013 Plan

Federal income tax consequences (subject to change) relating to awards under the 2013 Plan are summarized in the following discussion. This summary is not intended to be exhaustive and, among other considerations, does not describe the deferred compensation provisions of Section 409A of the Code to the extent an award is subject to and does not satisfy those rules, nor does it describe state, local, or international tax consequences.

For "NSOs," our company is generally entitled to deduct (and the optionee recognizes taxable income in) an amount equal to the difference between the option exercise price and the fair market value of the shares at the time of exercise. For ISOs, our company is generally not entitled to a deduction nor does the participant recognize income at the time of exercise. The current federal income tax consequences of other awards authorized under the 2013 Plan generally follow certain basic patterns: SARs are taxed and deductible in substantially the same manner as NSOs; nontransferable restricted stock subject to a substantial risk of forfeiture results in income recognition equal to the excess of the fair market value over the price paid (if any) only at the time the restrictions lapse (unless the recipient elects to accelerate recognition as of the date of grant); bonuses and performance share awards are generally subject to tax at the time of payment; cash-based awards are generally subject to tax at the time of payment; and

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compensation otherwise effectively deferred is taxed when paid. Our company will generally have a corresponding deduction at the time the participant recognizes income. However, as for those awards subject to ISO treatment, our company would generally have no corresponding compensation deduction.

If an award is accelerated under the 2013 Plan in connection with a change in control (as this term is used under the Code), our company may not be permitted to deduct the portion of the compensation attributable to the acceleration ("parachute payments") if it exceeds certain threshold limits under the Code (and certain related excise taxes may be triggered). Furthermore, the aggregate compensation in excess of \$1,000,000 attributable to awards which are not "performance-based" within the meaning of Section 162(m) of the Code, or do not fall within any other applicable exception, may not be permitted to be deducted by our company in certain circumstances.

#### Various Incentive Share Plans

Our board of directors previously adopted, and our stockholders previously approved, the 1998 Share Incentive Plan, the 2000 Share Incentive Plan, the 2004 Share Incentive Plan and the 2006 Share Incentive Plan, which are referred to collectively as our Prior Plans. As of January 31, 2014, we had 1,562,437 shares of common stock subject to outstanding stock options under our Prior Plans with a weighted average exercise price of \$8.7743 per share. In connection with the effectiveness of our 2013 Plan, no further awards may be granted under the Prior Plans. However, all outstanding awards under the Prior Plans will continue to exist and will continue to be governed by their existing terms. Upon a change in control of our company, as described in each of the Prior Plans, the vesting of stock options and other outstanding awards under the Prior Plans will be accelerated and all unexercised awards will terminate upon the change in control to the extent the acquirer does not assume the outstanding stock options.

# Section 401(k) Plan

We maintain a tax-qualified retirement plan that provides eligible employees with an opportunity to save for retirement on a tax-advantaged basis. All participants' interests in their contributions are 100% vested when contributed. Historically, we have not made any matching contributions to the Section 401(k) plan. Pre-tax contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. The retirement plan is intended to qualify under Sections 401(a) and 501(a) of the Code.

# Indemnification of Directors and Officers and Limitation of Liability

As permitted by Delaware General Corporation Law, provisions in our amended and restated certificate of incorporation and amended and restated bylaws limit or eliminate the personal liability of our directors. Consequently, a director will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability for:

any breach of the director's duty of loyalty to us or our stockholders;

any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;

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any unlawful payments related to dividends or unlawful stock repurchases, redemptions or other distributions; or

any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission. In addition, our amended and restated bylaws provide that:

we will indemnify, to the fullest extent permitted by law, any person who is or was a party or is threatened to be made a party to any action, suit or proceeding by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director or officer of another corporation, partnership, joint venture, trust, or other enterprise;

we may indemnify to the fullest extent permitted by law any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our employees or agents or is or was serving at our request as an employee or agent of another corporation, partnership, joint venture, trust, or other enterprise; and

we must advance expenses incurred by or on behalf of a director or officer in advance of the final disposition of any action or proceeding, subject to very limited exceptions.

# **Indemnification Agreements**

We have entered into agreements that indemnify each of our directors and certain of our executive officers, in addition to the indemnification provided for in our amended and restated certificate of incorporation and amended and restated bylaws. These agreements, among other things, provide for indemnification for judgments, fines, settlement amounts and expenses, including attorneys' fees incurred by the director or executive officer in any action or proceeding, including any action by or in our right, arising out of the person's services as a director or executive officer, or any other company or enterprise to which the person provides services at our request. We believe that these provisions and agreements are necessary to attract and retain qualified persons as directors and executive officers.

The limitations on liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty and may reduce the likelihood of derivative litigation against our directors and officers, even though a derivative action, if successful, might otherwise benefit us and our stockholders. A stockholder's investment in us may be adversely affected to the extent we pay the costs of settlement or damage awards against our directors and officers under these indemnification provisions.

At present, there is no pending litigation or proceeding involving any of our directors or officers in which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

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# CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation agreements and other arrangements which are described as required under "Management" and the transactions described below, since January 1, 2011, there has not been, and there is not currently proposed, any transaction or series of similar transactions to which we were or will be a party in which the amount involved exceeded or will exceed \$120,000 and in which any director, executive officer, holder of five percent or more of any class of our capital stock, or any member of their immediate family had or will have a direct or indirect material interest. Our audit committee will be responsible for approving all future transactions between us and our officers, directors and principal stockholders and their affiliates.

# **Loans from Stockholders**

On February 3, 2010, we entered into a promissory note with Lina Yeh in the principal amount of \$200,000 at an interest rate of 6%. Lina Yeh is the wife of William Yeh, a member of our board of directors. The principal balance of \$200,000 was converted to acquire 19,047 shares of Series G preferred stock in August 2012 at a price of \$10.50 per share, and the remaining interest amount of \$7,715 under the promissory note was paid off in September 2012. In connection with the promissory note, Ms. Yeh was also issued warrants to acquire 3,200 shares of Series F preferred stock at a price of \$7.50 per share, and 785 shares of Series G preferred stock at a price of \$18.00 per share. The warrant to acquire 3,200 shares of Series F preferred stock was exercised by Ms. Yeh on May 13, 2013. The remaining warrants expired upon the closing of our initial public offering.

On February 8, 2010, we entered into (i) a promissory note with Techgains Global Corporation in the aggregate principal amount of \$150,000 at an interest rate of 6% and (ii) a promissory note with Techgains Pan Pacific Corporation in the aggregate principal amount of \$150,000 at an interest rate of 6%. Juen-Sheng (Andrew) Kang, the former Chairman of our board of directors, was a shareholder and a member of the board of directors of both Techgains Global Corporation and Techgains Pan Pacific Corporation. The remaining principal balance and the remaining interest of \$319,159 under the two promissory notes was converted to acquire 30,396 shares of Series G preferred stock in September 2012 at a price of \$10.50 per share. In connection with the promissory notes, Techgains Global Corporation and Techgains Pan Pacific Corporation each received warrants to acquire (i) 2,400 shares of Series F preferred stock at a price of \$7.50 per share and (ii) 889 shares of Series G preferred stock at a price of \$18.00. The Series F preferred stock warrants were fully exercised and converted into 5,760 shares of common stock upon the closing of our initial public offering, and the Series G preferred stock warrants expired upon the closing of our initial public offering.

On February 11, 2010, we entered into (i) a promissory note with Budworth Investments Limited in the aggregate principal amount of \$175,000 at an interest rate of 6% and (ii) a promissory note with Harbinger III Venture Capital Corp. in the aggregate principal amount of \$75,000 at an interest rate of 6%. Chih-Kai (C.K.) Cheng, a former member of our board of directors, is a shareholder, co-founder and general partner of both Budworth Investments Limited and Harbinger III Venture Capital Corp. The principal balance and interest owed under the two promissory notes were paid off in September 2011. In connection with the promissory notes, Budworth Investments Limited and Harbinger III Venture Capital Corp. received warrants to acquire an aggregate of 4,000 shares of Series F preferred stock at a price of \$7.50 per share. The Series F preferred stock warrants were fully exercised and converted into 4,800 shares of common stock upon the closing of our initial public offering, and the Series G preferred stock warrants expired upon the closing of our initial public offering.

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We entered into (i) a promissory note with Robinhood III, LP on February 25, 2010 in the aggregate principal amount of \$300,000 at an interest rate of 6% and (ii) a promissory note with Robinhood III, LP on April 21, 2010 in the aggregate principal amount of \$550,000 at an interest rate of 6%. Nancy T. Chang, a former member of our board of directors is the sole beneficiary and the President of the general partner of Robinhood III, LP, and entities affiliated with Robinhood III, LP beneficially own more than five percent of any class of our capital stock. The principal balance and interest owed under one promissory note was paid off in August 2011 and the principal balance and interest owed under the other promissory note was paid off in November 2011. In connection with the promissory notes, Robinhood III, LP received warrants to acquire an aggregate of 13,600 shares of Series F preferred stock at a price of \$7.50 per share. The warrants to acquire 13,600 shares of Series F preferred stock were exercised by Robinhood III, LP on March 12, 2013.

On April 23, 2010, we entered into a promissory note with Helix Micro, Inc. the aggregate principal amount of \$1,000,000 at an interest rate of 6%. Juen-Sheng (Andrew) Kang, the former Chairman of our board of directors, was a shareholder and the former chairman of the board of directors of Helix Micro, Inc. The remaining principal balance of \$1,000,000 under the promissory note was initially converted to acquire 55,555 shares of Series G preferred stock in December 2011 at a price of \$18.00 per share, which number of shares was subsequently adjusted to an aggregate of 95,238 shares of Series G preferred stock at a price of \$10.50 per share in September 2012 as a result of the second closing of our Series G private placement. The remaining interest of \$102,445 owed under the promissory note was paid off in January 2012. In connection with the promissory note, Helix Micro, Inc. was issued warrants to acquire (i) 16,000 shares of Series F preferred stock at a price of \$7.50 per share and (ii) 740 shares of Series G preferred stock at a price of \$18.00. The Series F preferred stock warrants were fully exercised and converted into 19,200 shares of common stock upon the closing of our initial public offering, and the Series G preferred stock warrants expired upon the closing of our initial public offering.

# **Consulting Services**

On April 1, 2009, William H. Yeh, a member of our board of directors, began providing us with certain financial consulting services. The compensation arrangement for such services was formalized on October 19, 2009 through a letter agreement that we entered into with Mr. Yeh. Pursuant to this letter agreement, we agreed to grant Mr. Yeh 133 shares of common stock as compensation for each month of such services that Mr. Yeh rendered to us. As a result, we granted Mr. Yeh 2,133 shares of common stock on August 1, 2010 for 16 months of services rendered and 1,333 shares of common stock on June 1, 2011 for 10 months of services rendered. As of May 31, 2011, Mr. Yeh ceased to render such services.

On June 1, 2012, we entered into an agreement with Chang Office, LLC, pursuant to which Chang Office, LLC agreed to provide us with certain internal auditing and consulting services. Nancy T. Chang, president and sole member of Chang Office, LLC, was at that time a member of our board of directors. Under the agreement, we agreed to pay \$50,000 to Chang Office, LLC, payable in two equal installments, as compensation for such services. Chang Office, LLC was paid their first payment of \$25,000 on November 6, 2012 and their second and final payment on March 25, 2013. Chang Office, LLC's services ceased on May 31, 2013.

On June 1, 2012, we entered into an agreement with Technology Associates Management Company, Ltd., pursuant to which Technology Associates Management Company, Ltd. agreed to provide us with certain internal auditing and consulting services. Juen-Sheng (Andrew) Kang, managing director of Technology Associates Management Company, Ltd., was at that time a member of our board of directors. Under the agreement, we agreed to pay \$20,000 to Technology

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Associates Management Company, Ltd. as compensation for such services. Technology Associates Management Company, Ltd. has not yet been paid for such services. Technology Associates Management Company's services ceased on May 31, 2013.

# **Private Placement of Securities**

On December 31, 2011, we issued and sold an aggregate of 222,554 shares of Series G preferred stock to twenty-five investors, at a price of \$18.00 per share, in the initial closing of our Series G private placement. On September 7, 2012, we issued and sold an additional 1,046,999 shares of Series G preferred stock to fifty-four investors, at a price of \$10.50 per share, in the second closing of our Series G private placement. In connection with the second closing of our Series G private placement, we agreed to amend the per share price of our Series G preferred stock issued under the initial closing of our Series G private placement from \$18.00 per share to \$10.50 per share and, as a result, an additional 158,973 shares of Series G preferred stock were issued to the investors in connection with the initial closing of our Series G private placement.

On December 31, 2011, we also issued warrants to purchase 33,385 shares of Series G preferred stock, with exercise price of \$18.00 per share in connection with the initial closing of our Series G private placement to the investors in the private placement. However, those warrants were terminated as a result of the second closing of our Series G private placement. None of these warrants were exercised prior to their termination.

Of the aggregate 1,431,307 shares of Series G preferred stock issued in the Series G private placement, 348,593 shares were sold for an aggregate price of \$3,660,277.90 to investors that, at such time, were beneficially owned by either directors, executive officers, holders of five percent or more of any class of our capital stock, or members of their immediate families, consisting of 95,238 shares sold to Helix Micro, Inc., 34,245 shares sold to Techgains Global Corporation, 53,293 shares sold to Techgains Pacific Corporation, 23,809 shares sold to Techgains Pacific Century Fund, 19,047 shares sold to Technology Associates Management Company, Ltd., 100,539 shares sold to Robinhood III, LP, 971 shares sold to Heather B. Black, 2,404 shares sold to Richard B. Black and 19,047 shares sold to William H. Yeh. In connection with the closing of our initial public offering, the outstanding shares of Series G preferred stock converted into 1,431,307 shares of our common stock. See "Principal and Selling Stockholders" for more detail on the shares of our stock held by these investors.

# **Registration Rights**

In February 2013, we provided registration rights to our holders of common stock and redeemable Series A preferred stock, including Chih-Hsiang (Thompson) Lin, an executive officer, chairman of the board of directors and holder of five percent or more of our common stock, Stefan J. Murry, Hung-Lun (Fred) Chang, Klaus Alexander Anselm, Richard B. Black and Alex Ignatiev, who are certain of our executive officers and directors, entities associated with Technology Associates Management Company, Ltd., who was then considered a holder of five percent or more of a class of our capital stock, and Shiu-Mei Lin Chou, Yaun-Chung Hsu and Wei-Chien Wu (which shares are held jointly) and Yuanpin Hsu, each of which was then a holder of five percent or more of a class of our capital stock. Such rights are subject to conditions and limitations at the sole discretion of our board of directors.

Additionally, we entered into registration rights agreements with our investors in connection with our Series C, D, E, F and G preferred stock private placements, which preferred stock converted into shares of common stock immediately prior to the closing of our initial public offering. As a result, the holders of approximately 1.45 million shares of our common stock are

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eligible to exercise certain rights with respect to the registration of such shares under the Securities Act. See "Description of Capital Stock Registration Rights."

# Shareholders' Agreement

Beginning in 2000, we entered into a shareholders' agreement with stockholders who purchased shares of our preferred stock, which agreement was amended to include additional investors and to make other changes at the time of each of our preferred stock private placements. The shareholders' agreement was most recently amended on January 14, 2011. The shareholders' agreement contains rights of first refusal and information rights and terminated in accordance with its terms upon the closing of our initial public offering.

# **Indemnification and Change in Control Agreements**

We have agreed to indemnify our directors and our executive officers under certain circumstances and have purchased directors' and officers' liability insurance. The indemnification agreements and our amended and restated certificate of incorporation and amended and restated bylaws require us to indemnify our directors and officers to the fullest extent permitted by Delaware law. See "Management Indemnification of directors and officers and limitation of liability" and " Indemnification agreements. We have also entered into change in control agreements with our executive officers. See "Management Agreements with Executive Officers."

#### **Stock Option Awards**

For information regarding stock option awards to our named executive officers and directors in 2013, see "Executive Compensation Summary Compensation Table" and "Executive Compensation Outstanding equity awards at fiscal year-end." In addition, on January 18, 2013, our board of directors granted a stock option for 91,333 shares of our common stock to Chih-Hsiang (Thompson) Lin, a stock option for 17,333 shares of our common stock to Stefan J. Murry, a stock option for 12,667 shares of our common stock to Hung-Lun (Fred) Chang and a stock option for 10,000 shares of our common stock to James L. Dunn, Jr., each with an exercise price of \$7.50 per share.

On September 26, 2013, our board of directors granted a stock option for 615,348 shares of our common stock to Chih-Hsiang (Thompson) Lin, a stock option for 12,000 shares of our common stock to Stefan J. Murry, a stock option for 9,000 shares of our common stock to Hung-Lun (Fred) Chang and a stock option for 5,000 shares of our common stock to James L. Dunn, Jr., each with an exercise price of \$9.96 per share.

On January 28, 2014, our board of directors granted a stock option for 30,000 shares of our common stock to Chih-Hsiang (Thompson) Lin, a stock option for 5,000 shares of our common stock to Stefan J. Murry, a stock option for 4,400 shares of our common stock to Hung-Lun (Fred) Chang and a stock option for 4,400 shares of our common stock to James L. Dunn, Jr., each with an exercise price of \$13.84 per share.

Each of the stock options described above vest over a four year period, with 25% of the shares subject to each such option vesting on the first anniversary of the vesting commencement date and one sixth of the remaining shares vesting on the first day of each succeeding six month period, in each case subject to the optionee's continued service. Such vesting is subject to acceleration in the event of our change of control or the optionee's death, disability or retirement.

# Review, Approval and Ratification of Transactions with Related Parties

Our audit committee charter requires, among other items, that transactions with directors, officers and holders of five percent or more of our common stock must be approved by our audit committee.

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# PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth the beneficial ownership information of our common stock as of January 31, 2014, and as adjusted to reflect the sale of the shares of common stock in this offering, for:

each person known to us to be the beneficial owner of more than 5% of our common stock outstanding;
each named executive officer;
each of our directors;
all of our executive officers and directors as a group; and
each selling stockholder.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities and include stock options and warrants that are immediately exercisable or exercisable within 60 days. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of common stock beneficially owned by them, subject to applicable community property laws. This information is not necessarily indicative of beneficial ownership for any other purpose.

In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding shares of common stock subject to options or warrants held by that person that are currently exercisable or exercisable within 60 days of January 31, 2014. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Beneficial ownership representing less than 1.0% is denoted with an asterisk (\*).

Percentage ownership calculations for beneficial ownership before this offering are based on 12,660,885 shares of common stock outstanding as of January 31, 2014. Percentage ownership

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calculations for beneficial ownership after this offering also include 1,275,235 shares we are offering hereby.

	Shares			Shares		
	· ·		Shares	beneficiall		
N			to be sold(11)	after the	U	
Names of Beneficial owner	Number	Percent	Number	Number	Percent	
5% or Greater Stockholders:						
Entities associated with Techgains Pan Pacific Corporation (1)	985,494	7.8%	500,000	485,494	3.5%	
Entities associated with Robinhood II, LP (2)	670,391	5.3%		670,391	4.8%	
Directors and Named Executive Officers:						
Chih-Hsiang (Thompson) Lin (3)	146,335	1.1%	11,531	134,804	*	
Che-Wei Lin	70,971	*		70,971	*	
William H. Yeh (4)	95,972	*		95,972	*	
Richard B. Black (5)	38,545	*		38,545	*	
Alex Ignatiev (6)	10,060	*		10,060	*	
Min-Chu (Mike) Chen (6)	7,414	*		7,414	*	
Alan Moore (6)	104,683	*		104,683	*	
Hung-Lun (Fred) Chang (7)	25,142	*		25,142	*	
Stefan J. Murry (8)	32,332	*	2,230	30,102	*	
James L. Dunn (9)	2,500	*	1,754		*	
All executive officers and directors as a group						
(14 persons) (10)	661,766	5.2%	17,138	643,301	4.6%	
Other Selling Stockholders:						
Ocean Elite Limited (12)	285,714	2.3%	150,000	135,714	*	
GRC II Corp. (13)	292,816	2.3%	292,816		*	
Grand River Capital Investment Company Limited (14)	202,072	1.6%	202,072		*	
Entities associated with GIZA Venture Fund V (TW) L.P. (15)	194,085	1.5%	83,708	110,377	*	
Budworth Investments Limited (16)	107,448	*	53,724	53,724	*	
Kummell Investments Limited (17)	102,284	*	102,284		*	
Harbinger III Venture Capital Corp. (18)	46,045	*	23,023	23,022	*	

Includes (i) 397,852 shares held of record by Techgains Pan Pacific Corporation, (ii) 225,876 shares held of record by Tekkang Management Consulting Inc., (iii) 155,883 shares held of record by Techgains Pacific Century Fund, LP. and (iv) 205,883 shares held of record by Techgains International Corporation. Mr. Yung Ho Lee has the sole power to direct investments and/or has the sole power to vote the securities owned by Techgains Pan Pacific Corporation, Tekkang Management Consulting Inc., Techgains Pacific Century Fund LP, and Techgains International Corporation, pursuant to Mr. Lee's position as the sole director of Techgains Pan Pacific Corporation, the sole director of Tekkang Management Consulting Inc., the sole director of the sole general partner of Techgains Pacific Century Fund, LP., and the sole director of Techgains International Corporation (collectively, the "Techgains Funds"). The principal address of each of the these entities is P.O. Box 3321, Road Town, Tortola, British Virgin Islands. Mr. Lee disclaims any and all pecuniary interests and beneficial ownership interests in the shares of our stock held by the Techgains Funds. Tekkang Management Consulting Inc. is the majority shareholder of Technology Associates Management Company Ltd., which holds 19,047 shares of our common stock. Tekkang Management Consulting Inc. does not have any power, whether by itself or shared with others, to direct investments or to vote our securities held by Technology Associates Management Company Ltd. Mr. Lee has no voting or investment control over the shares held of record by Technology Associates Management Company Ltd., and each of Mr. Lee and Tekkang Management Consulting Inc. disclaims any and all pecuniary interests and beneficial ownership interests in the shares of our stock held by Technology Associates Management Company Ltd.

(2) Includes (a) 421,073 shares held of record by Robinhood II, LP, (b) 244,441 shares held of record by Robinhood III, LP and (c) 4,877 shares held of record by Nancy T. Chang. Ms. Chang resigned as a member of our

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board of directors on March 22, 2013. Ms. Chang has the power to direct investments and/or has the sole power to vote the securities owned by Robinhood II, LP and Robinhood III, LP, as the sole beneficiary and president of the general partner of such entities. The principal address of the entities associated with Robinhood II, LP is 101 Wescott St. #603. Houston, Texas 77007.

- (3) Includes stock options to purchase 74,882 shares of common stock that are exercisable within 60 days of January 31, 2014.
- (4) Includes 5,500 shares of restricted stock units which become fully vested on April 1, 2014. Also includes 17,664 shares of common stock held of record by Lina Yeh. Ms. Yeh is Mr. Yeh's spouse.
- Includes 5,500 shares of restricted stock units which become fully vested on April 1, 2014 and stock options to purchase 1,250 shares of common stock that are exercisable within 60 days of January 31, 2014. Also includes 8,162 shares of common stock held of record by Heather Black. Ms. Black is Mr. Black's spouse.
- (6) Includes 5,500 shares of restricted stock units which become fully vested on April 1, 2014.
- (7) Includes stock options to purchase 22,560 shares of common stock that are exercisable within 60 days of January 31, 2014.
- (8) Includes stock options to purchase 29,102 shares of common stock that are exercisable within 60 days of January 31, 2014.
- (9) Includes stock options to purchase 2,500 shares of common stock that are exercisable within 60 days of January 31, 2014. On March 6, 2014, Mr. Dunn exercised such stock options pursuant to a cashless net exercise based on the closing market price of \$25.15 on March 5, 2014, resulting in the issuance of 1,754 shares to Mr. Dunn.
- Includes (i) stock options to purchase 181,699 shares of common stock that are exercisable within 60 days of January 31, 2014 and (ii) 27,500 shares of restricted stock units which become fully vested on April 1, 2014. The number of stock options exercisable within 60 days of January 31, 2014 includes options to purchase 2,204 shares of common stock held by David C. Kuo. On March 4, 2014, Mr. Kuo exercised such stock options pursuant to a cashless net exercise based on the closing market price of \$25.11 on March 3, 2014, resulting in the issuance of 1,623 shares to Mr. Kuo. The number of shares to be sold includes 1,623 shares to be sold by Mr. Kuo. Mr. Kuo is our General Counsel, Vice President and Secretary.
- (11)

  None of the selling stockholders are registered broker dealers.
- (12) Victor I. Chang is the sole director of Ocean Elite Limited and has the sole voting and investment power over the shares held by Ocean Elite Limited.
- Benjamin C.M. Jen and Yuan-Chi Chao are members of the board of directors of GRC II Corp. and share voting and investment power over the shares held by GRC II Corp. Mr. Jen is a former member of our board of directors and resigned as a member on February 27, 2013.
- Benjamin C.M. Jen, Yuan-Chi Chao, Chia-Chueh Lu, Cheryl Lin and Siamak Zangeneh Salimpour are members of the board of directors of Grand River Capital Investment Company Limited and share voting and investment power over the shares held by Grand River Capital Investment Company Limited. Mr. Jen is a former member of our board of directors and resigned as a member on February 27, 2013.
- Includes (i) 102,317 shares held of record by GIZA Venture Fund V (TW) L.P. and (ii) 91,768 shares held of record by GIZA Venture Fund IV (TW) L.P. Zeev Holtzman (Chairman), Ori Kirshner (Managing Partner), Zvi Schechter (Managing Director) and Eyal Niv (Managing Director) share voting and investment power over the shares held by GIZA Venture Fund V (TW) L.P. and GIZA Venture Fund IV (TW) L.P.
- Teh-Chien Chou and Chih-Kai (C.K.) Cheng are members of the board of directors of Budworth Investments Limited and share voting and investment power over the shares held by Budworth Investments Limited. Mr. Cheng is a former member of our board of directors and resigned as a member on February 20, 2013. See "Certain Relationships and Related Party Transactions-Loans from Stockholders" for more detail on Mr. Cheng's relationship with our company.
- (17)
  Raymond Tang, Louise Garbarino and Jill Marie Franklin are members of the board of directors of Kummell Investments Limited and share voting and investment power over the shares held by Kummell Investments Limited.

(18)

Teh-Chien Chou is the President of Harbinger III Venture Capital Corp. and has voting and investment power over the shares held by Harbinger III Venture Capital Corp.

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# DESCRIPTION OF CAPITAL STOCK

#### General

The following description of our capital stock is intended as a summary only and is qualified in its entirety by reference to our amended and restated certificate of incorporation and amended and restated bylaws, which have been filed with the SEC as exhibits to the registration statement of which this prospectus is a part.

Our authorized capital stock consists of 45,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of undesignated preferred stock, par value \$0.001 per share.

#### Common Stock

As of December 31, 2013, there were 12,643,954 shares of our common stock outstanding and held of record by 358 stockholders. The actual number of holders of our common stock is greater than the number of record holders and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and nominees. The number of holders of record also does not include stockholders whose shares may be held in trust by other entities. Holders of our common stock are entitled to one vote for each share of common stock held of record for the election of directors and on all matters submitted to a vote of stockholders. Holders of our common stock are also entitled to receive dividends ratably, if any, as may be declared by our board of directors out of legally available funds, subject to any preferential dividend rights of any preferred stock then outstanding. Upon our dissolution, liquidation or winding up, holders of our common stock are entitled to share ratably in our net assets legally available after the payment of all our debts and other liabilities, subject to the preferential rights of any preferred stock then outstanding. Holders of our common stock have no subscription, preemptive, redemption or conversion rights. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future. Except with respect to the election of directors (which is determined by our stockholders by a plurality of the votes cast by the stockholders entitled to vote on the election) and as described below in "Provisions of our Certificate of Incorporation and Bylaws and Delaware Anti-Takeover Law," a majority vote of common stockholders is generally required to take action under our amended and restated certificate of incorporation and amended and restated bylaws.

# **Preferred Stock**

Our board of directors is authorized, without action by the stockholders, to designate and issue up to an aggregate of 5,000,000 shares of preferred stock in one or more series. The board of directors can fix the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible future financings and acquisitions and other corporate purposes could, under certain circumstances, have the effect of delaying, deferring or preventing a change in control of our company and might harm the market price of our common stock.

Our board of directors will make any determination to issue such shares based on its judgment as to our company's best interests and the best interests of our stockholders. We have no current plans to issue any shares of preferred stock.

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# Warrants

As of December 31, 2013, we had outstanding warrants to purchase:

15,999 shares of our common stock at an exercise price of \$6.25 per share.

9,999 shares of our common stock at an exercise price of \$15.00 per share.

6,667 shares of our common stock at an exercise price of \$10.50 per share.

# **Registration Rights**

There are approximately 1.45 million shares of our common stock entitled to registration rights, excluding the shares issuable upon the exercise of warrants for our common stock and assuming that the underwriters' option is not exercised. The registration rights granted under these registration rights agreements are subject to conditions and limitations, including our right to limit the number of shares included in such a registration upon advisement of the managing underwriter and our right not to effect a requested registration if the aggregate price to the public is less than \$2,000,000.

#### Demand registration rights

At any time more than 180 days after our initial public offering on September 26, 2013, the holders of a majority of the shares of registrable common stock, subject to exceptions, are entitled to demand registration of all or any of such shares and require us to file a registration statement under the Securities Act at our expense.

# S-3 demand registration rights

The holders of the shares of registrable common stock, subject to exceptions, are entitled to demand registration rights pursuant to which they may require us to file, as soon as practicable, one registration statement under the Securities Act on Form S-3 in any 12-month period with respect to these shares. We have the ability to delay the filing of a registration statement under specified conditions, such as if we are in possession of material non-public information that would not be in our best interests to disclose.

# Piggyback registration rights

If we propose to register any of our securities under the Securities Act for our own account or the account of any other holder, the holders of the shares of registrable common stock are entitled to notice of such registration and are entitled to include these shares in the registration, subject to exceptions, including our right to limit the number of shares included in the registration.

We will pay all registration expenses, other than underwriting discounts and commissions and certain other expenses (including all fees and expenses of the consultants, advisors, attorneys, special experts and other third parties engaged by the holders of the shares of registrable common stock, and all relevant taxes, including transfer taxes), related to the foregoing demand, S-3 or piggyback registration rights. The registration rights agreements contain customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the registration

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statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

# Provisions of Our Certificate of Incorporation and Bylaws and Delaware Anti-Takeover Law

Our amended and restated certificate of incorporation and amended and restated bylaws include a number of provisions that may have the effect of encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board composition and filling vacancies

In accordance with our amended and restated certificate of incorporation, our board of directors is divided into three classes serving staggered three year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of  $66^2/3\%$  or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board of directors, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum.

No written consent of stockholders

Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting.

Meetings of stockholders

Our amended and restated bylaws provide that only a majority of the members of our board of directors then in office, the Chairman of the board of directors or the Chief Executive Officer may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance notice requirements

Our amended and restated bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary before the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days or more than 120 days before the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in our amended and restated bylaws.

Amendment to bylaws and certificate of incorporation

As required by the Delaware General Corporation Law, any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors

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and, if required by law or our amended and restated certificate of incorporation, thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, directors, limitation of liability and the amendment of our amended and restated bylaws and amended and restated certificate of incorporation must be approved by not less than  $66^2/3\%$  of the outstanding shares entitled to vote on the amendment, and not less than  $66^2/3\%$  of the outstanding shares of each class entitled to vote thereon as a class. Our bylaws may be amended by the affirmative vote of a majority vote of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of at least  $66^2/3\%$  of the outstanding shares entitled to vote on the amendment, or, if the board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

# Blank check preferred stock

Our amended and restated certificate of incorporation authorizes 5,000,000 shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors' broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

#### Choice of Forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for: (a) any derivative action or proceeding brought on our behalf; (b) any action asserting a breach of fiduciary duty; (c) any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended or restated bylaws; or (d) any action asserting a claim against us that is governed by the internal affairs doctrine. However, several lawsuits involving other companies are currently pending challenging the validity of choice of forum provisions in certificates of incorporation, and it is possible that a court could rule that such provision is inapplicable or unenforceable.

# Anti-takeover effects of the Delaware general corporation law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, or Section 203. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a 3-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among

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other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or did own within the three years before the determination of interested stockholder status, 15% or more of the corporation's voting stock. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

before the stockholder became interested, the board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or

at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

# **NASDAQ Global Market Listing**

Our common stock is listed on the NASDAQ Global Market under the trading symbol "AAOI."

# Transfer Agent and Registrar

Continental Stock Transfer & Trust Company acts as the transfer agent and registrar for our common stock. The transfer agent and registrar's address is 17 Battery Place, 8th Floor, New York, New York 10004.

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# SHARES ELIGIBLE FOR FUTURE SALE

Future sales of substantial amounts of our common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. Upon completion of this offering, we will have outstanding an aggregate of 13,919,189 shares of common stock, assuming the issuance by us of the 1,275,235 shares of common stock offered in this offering and no other exercise of outstanding options or warrants. Of these shares, (i) the 4,140,000 shares sold in our initial public offering and (ii) the 2,700,000 shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144(a) under the Securities Act, whose sales would be subject to certain limitations and restrictions described below.

The remaining 8,275,852 shares of common stock held by existing stockholders were issued and sold by us in reliance on exemptions from the registration requirements of the Securities Act. Of these shares,

approximately 0.2 million shares are eligible for immediate sale;

approximately 6.0 million shares will become eligible for sale on March 25, 2014 upon the expiration of lock-up agreements executed in connection with our initial public offering, subject in some cases to volume and other restrictions of Rules 144 and 701 under the Securities Act and various vesting agreements; and

approximately 0.9 million shares will be eligible for sale upon the expiration of 90-day lock-up agreements entered into in connection with this offering, subject in some cases to volume and other restrictions of Rules 144 and 701 under the Securities Act and various vesting agreements.

In addition, holders of stock options could exercise such options and sell certain of the shares issued upon exercise. Of the 1,467,902 shares of common stock that were subject to stock options outstanding as of December 31, 2013, options to purchase 275,486 shares were vested as of December 31, 2013.

# **Lock-Up Agreements**

In connection with our initial public offering, we and all directors and officers, as well as holders of substantially all of our outstanding stock and stock options (including the selling stockholders) agreed that, subject to certain exceptions, without the prior written consent of Raymond James and Piper Jaffray, as representatives on behalf of the underwriters, we and they would not, until March 25, 2014, dispose of any shares of our stock or options, warrants or other securities with respect to our stock, enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock, or file or cause to be filed any registration statement with the Securities and Exchange Commission relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock (other than any registration statement on Form S-8). There are no agreements between Raymond James and Piper Jaffray, as representatives on behalf of the underwriters, our company and any of our securityholders or affiliates releasing them from these lock-up agreements prior to March 25, 2014 except with respect to the shares being sold in this offering.

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The agreements do not contain any pre-established conditions to the waiver by Raymond James and Piper Jaffray on behalf of the underwriters of any terms of the lock-up agreements. Any determination to release shares subject to the lock-up agreements would be based on a number of factors at the time of the determination, including but not necessarily limited to the market price of the common stock, the liquidity of the trading market for the common stock, general market conditions, the number of shares proposed to be sold and the timing, purpose and terms of the proposed sale.

In addition, in connection with this offering, we and all directors and officers, and all of the selling stockholders have signed lock-up agreements under which we and they have agreed not to sell, transfer or dispose of, directly or indirectly, any shares of our common stock of any securities convertible into or exercisable or exchangeable for shares of our common stock without the prior written consent of Raymond James and Piper Jaffray for a period of 90 days after the date of this prospectus. The agreements are subject to certain exceptions as set forth in the section of this prospectus entitled "Underwriters."

#### **Rule 144**

In general, under Rule 144 as currently in effect, a person who is not our affiliate and has not been our affiliate at any time during the preceding 90 days and who is not a party to a lock-up agreement as described above will be entitled to sell any shares of our common stock that such person has beneficially owned for at least six months, including the holding period of any prior owner other than one of our affiliates, without regard to manner of sale, volume limitations or notice provisions of Rule 144. These sales of our common stock by any such person would be subject to the availability of current public information about us if the shares to be sold were beneficially owned by such person for less than one year.

In addition, under Rule 144, a person may sell shares of our common stock acquired from us immediately upon the closing of this offering, without regard to volume limitations or the availability of public information about us, if:

the person is not our affiliate and has not been our affiliate at any time during the preceding 90 days; and

the person has beneficially owned the shares to be sold for at least one year, including the holding period of any prior owner other than one of our affiliates.

Subject to the lock-up agreements described above, our affiliates who have beneficially owned shares of our common stock for at least six months, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

1% of the number of shares of our common stock then outstanding, which will equal approximately 139,192 shares immediately after this offering; and

the average weekly trading volume in our common stock on the NASDAQ Global Market during the four calendar weeks preceding the date of filing of a Notice of Proposed Sale of Securities Pursuant to Rule 144 with respect to the sale.

Sales under Rule 144 by our affiliates are also subject to manner of sale provisions and notice requirements and to the availability of current public information about us.

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# **Rule 701**

Rule 701 of the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144, but without compliance with certain restrictions of Rule 144. Most of our employees, executive officers, directors or consultants who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701. Subject to any applicable lock-up agreements, Rule 701 provides that affiliates may sell their Rule 701 shares under Rule 144 without complying with the holding period, public information, volume limitation or notice requirements of Rule 144.

# **Stock Options**

We filed a registration statement on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our stock plans.

# **Registration Rights**

Upon the closing of this offering, no holder of our common stock will be eligible to exercise rights with respect to the registration of shares under the Securities Act.

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# MATERIAL U.S. FEDERAL TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

This section summarizes the material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock by a non-U.S. holder. For purposes of this summary, a "non-U.S. holder" is any beneficial owner that for U.S. federal income tax purposes is not a U.S. person. The term "U.S. person" means:

an individual citizen or resident of the U.S.;

a corporation or entity treated as a corporation for U.S. federal income tax purposes, created or organized under the laws of the U.S. or any state, including the District of Columbia, or otherwise treated as such for U.S. federal income tax purposes;

an estate whose income is subject to U.S. federal income tax regardless of source; or

a trust (i) whose administration is subject to the primary supervision of a court within the U.S. and which has one or more U.S. persons who have authority to control all substantive decisions of the trust or (ii) which has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Generally, an individual may be treated as a resident of the U.S. in any calendar year for U.S. federal income tax purposes by, among other ways, being present in the U.S. for at least 31 days in that calendar year and for an aggregate of at least 183 days during a three-year period ending in the current calendar year. For purposes of this calculation, such individual would count all of the days in which the individual was present in the current year, one-third of the days present in the immediately preceding year, and one-sixth of the days present in the second preceding year. Residents are taxed for U.S. federal income tax purposes as if they were citizens of the U.S.

This summary does not consider the tax consequences for partnerships, entities classified as a partnership for U.S. federal income tax purposes, or persons who hold their interests through a partnership or other entity classified as a partnership for U.S. federal income tax purposes. If a partnership, including any entity treated as a partnership for U.S. federal income tax purposes, is a beneficial owner of common stock, the tax treatment of a partner in the partnership will depend upon the status of the partner and the activities of the partnership. Partnerships that are beneficial owners of our common stock, and partners in such partnerships, should consult their tax advisors regarding the tax consequences to them of the ownership and disposition of our common stock.

This summary applies only to non-U.S. holders who acquire our common stock pursuant to this offering and who hold our common stock as a capital asset (generally property held for investment). This summary generally does not address tax considerations that may be relevant to particular investors because of their specific circumstances, or because they are subject to special rules. Certain former U.S. citizens or long-term residents, controlled foreign corporations, passive foreign investment companies, corporations that accumulate earnings to avoid U.S. federal income tax, life insurance companies, tax-exempt organizations, dealers in securities or currencies, brokers, banks or other financial institutions, certain trusts, hybrid entities, pension funds and investors that hold our common stock as part of a hedge, straddle or conversion transaction are among those categories of potential investors that are subject to special rules not covered in this discussion. This summary does not address any U.S. federal gift tax consequences, or state or local or non-U.S. tax consequences. This summary does not provide a complete analysis of all potential tax considerations. The information provided below is based

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on existing authorities. These authorities may change, or the Internal Revenue Service, or IRS, might interpret the existing authorities differently. In either case, the tax considerations of owning or disposing of common stock could differ from those described below.

INVESTORS CONSIDERING THE PURCHASE OF COMMON STOCK SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL INCOME AND ESTATE TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE CONSEQUENCES OF OTHER U.S. FEDERAL, STATE, OR LOCAL OR NON-U.S. LAWS AND ANY APPLICABLE TAX TREATIES.

#### **Dividends**

Payments of cash and other property that we make to our shareholders with respect to our common stock will constitute dividends to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those dividends exceed our current and accumulated earnings and profits, the dividends will constitute a return of capital and will first reduce a holder's basis, but not below zero, and then will be treated as gain from the sale of stock.

The gross amount of any dividend (out of earnings and profits) paid to a non-U.S. holder of common stock generally will be subject to U.S. withholding tax at a rate of 30% unless the holder is entitled to an exemption from or reduced rate of withholding under an applicable income tax treaty. In order to receive an exemption or a reduced treaty rate, prior to the payment of a dividend, a non-U.S. holder must provide us with an IRS Form W-8BEN (or successor form) certifying qualification for the exemption or reduced rate.

Dividends received by a non-U.S. holder that are effectively connected with a U.S. trade or business conducted by the non-U.S. holder (and dividends attributable to a non-U.S. holder's permanent establishment in the U.S. if an income tax treaty applies) are exempt from this withholding tax. To obtain this exemption, prior to the payment of a dividend, a non-U.S. holder must provide us with an IRS Form W-8ECI (or successor form) properly certifying this exemption. Effectively connected dividends (or dividends attributable to a permanent establishment in the U.S. if an income tax treaty applies), although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits. In addition, dividends received by a corporate non-U.S. holder that are effectively connected with a U.S. trade or business of the corporate non-U.S. holder (or dividends attributable to a corporate non-U.S. holder's permanent establishment in the U.S. if an income tax treaty applies) may also be subject to a branch profits tax at a rate of 30% (or such lower rate as may be specified by an applicable income tax treaty).

A non-U.S. holder who provides us with an IRS Form W-8BEN or an IRS Form W-8ECI will be required to periodically update such form.

A non-U.S. holder of common stock that is eligible for a reduced rate of withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts currently withheld if an appropriate claim for refund is timely filed with the IRS.

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# **Gain on Disposition of Common Stock**

A non-U.S. holder will generally not be subject to U.S. federal income tax on any gains realized on the sale, exchange or other disposition of common stock unless:

the gain is effectively connected with a U.S. trade or business of the non-U.S. holder (or attributable to a permanent establishment in the U.S. if an income tax treaty applies), in which case the non-U.S. holder generally will be required to pay tax on the net gain derived from the sale under regular graduated U.S. federal income tax rates and, if the non-U.S. holder is a corporation, the branch profits tax may apply, at a 30% rate or such lower rate as may be specified by an applicable income tax treaty;

the non-U.S. holder is an individual who is present in the U.S. for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met, in which case the non-U.S. holder will be required to pay a flat 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the U.S. and such non-U.S. holder's country of residence) on the net gain derived from the disposition, which tax may be offset by U.S. source capital losses, if any, provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or

our common stock constitutes a U.S. real property interest by reason of our status as a "U.S. real property holding corporation" for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding the disposition or the holder's holding period for our common stock. We believe that we are not currently, and we are not likely to become, a "U.S. real property holding corporation" for U.S. federal income tax purposes.

If we become a U.S. real property holding corporation after this offering, so long as our common stock is regularly traded on an established securities market and continues to be so traded, a non-U.S. holder will not be subject to U.S. federal income tax on gain recognized from the sale, exchange or other disposition of shares of our common stock as a result of such status unless (i) such holder actually or constructively owned more than 5% of our common stock at any time during the shorter of (A) the five-year period preceding the disposition, or (B) the holder's holding period for our common stock, and (ii) we were a U.S. real property holding corporation at any time during such period when the more than 5% ownership test was met. If any gain on your disposition is taxable because we are a U.S. real property holding corporation and your ownership of our common stock exceeds 5%, you will be taxed on such disposition generally in the manner applicable to U.S. persons. Any such non-U.S. holder that owns or has owned, actually or constructively, more than 5% of our common stock is urged to consult that holder's own tax advisor with respect to the particular tax consequences to such holder for the gain from the sale, exchange or other disposition of shares of our common stock if we were to be or to become a U.S. real property holding corporation.

#### **Backup Withholding and Information Reporting**

Generally, we must report annually to the IRS the amount of dividends paid, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the recipient. Pursuant to tax treaties or other agreements, the IRS may make its reports available to tax authorities in the non-U.S. holder's country of residence.

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Payments of dividends or of proceeds on the disposition of stock made to a non-U.S. holder may be subject to additional information reporting and backup withholding. Backup withholding will not apply if the non-U.S. holder establishes an exemption, for example, by properly certifying its non-U.S. person status on an IRS Form W-8BEN (or successor form). Notwithstanding the foregoing, backup withholding may apply if either we or our paying agent has actual knowledge, or reason to know, that the holder is a U.S. person.

Backup withholding is not an additional tax. Rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a credit or refund may be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

# **Legislation Relating to Foreign Accounts**

Under legislation enacted in 2010, a 30% U.S. federal withholding tax will be imposed on dividends on stock of U.S. corporations, and on the gross proceeds from the disposition of such stock, paid to a "foreign financial institution" (as specially defined for this purpose), unless such institution enters into an agreement with the U.S. Treasury to collect and provide to the U.S. Treasury substantial information regarding its U.S. account holders and certain account holders that are foreign entities with U.S. owners. A 30% U.S. federal withholding tax will also apply to dividends paid on stock of U.S. corporations and on the gross proceeds from the disposition of such stock paid to a non-financial foreign entity unless such entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity. The withholding taxes described above generally will apply to dividend payments made after December 31, 2013 and payments of gross proceeds made after December 31, 2016. Under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of such withholding taxes. Investors are urged to consult with their own tax advisors regarding the possible application of these rules to their investment in our common stock.

# U.S. Federal Estate Tax

The estates of nonresident alien individuals are generally subject to U.S. federal estate tax on property with a U.S. situs. Because we are a U.S. corporation, our common stock will be U.S. situs property and therefore will be included in the taxable estate of a nonresident alien decedent. The U.S. federal estate tax liability of the estate of a nonresident alien may be affected by a tax treaty between the U.S. and the decedent's country of residence.