CYBEROPTICS CORP
Form 10-K
March 28, 2014
Table of Contents

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

x ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) of the Securities Exchange Act of 1934 for the Year Ended December 31, 2013.

o TRANSITION PURSUANT TO SECTION 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from _____ to _____.

COMMISSION FILE NO. (0-16577)

CYBEROPTICS CORPORATION

(Exact name of registrant as specified in its charter)

Minnesota	**41-1472057**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
5900 Golden Hills Drive MINNEAPOLIS, MINNESOTA	**55416**
(Address of principal executive offices)	(Zip Code)

(763) 542-5000
(Registrant s telephone number, including area code)

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

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

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

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

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

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

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of accelerated filer or large accelerated filer in Rule 12b-2 of the Exchange Act.

Large accelerated filer o Accelerated filer o Non-accelerated filer o Smaller Reporting Company þ
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).
Yes o No þ

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant s most recently completed second fiscal quarter: $39,386,083.

As of February 28, 2014, there were 6,512,238 shares of the registrant s Common Stock, no par value, issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:
The responses to Part III items 10, 11, 12, 13 and 14 herein are incorporated by reference to certain information in the Company s definitive Proxy Statement for its Annual Meeting of Shareholders to be held May 19, 2014.

CYBEROPTICS CORPORATION
FORM 10-K
For the Fiscal Year Ended December 31, 2013

TABLE OF CONTENTS

PART I		
ITEM 1.	DESCRIPTION OF BUSINESS	3
ITEM 1A.	RISK FACTORS	13
ITEM 1B.	UNRESOLVED STAFF COMMENTS	18
ITEM 2.	PROPERTIES	18
ITEM 3.	LEGAL PROCEEDINGS	18
ITEM 4.	MINE SAFETY DISCLOSURES	18
PART II		
ITEM 5.	MARKET FOR REGISTRANT S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES	19
ITEM 6.	SELECTED FINANCIAL DATA (Not Applicable)	19
ITEM 7.	MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	20
ITEM 7A.	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK	28
ITEM 8.	FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA	29
ITEM 9.	CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE	54
ITEM 9A.	CONTROLS AND PROCEDURES	54
ITEM 9B.	OTHER INFORMATION	54
PART III		
ITEM 10.	DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE MATTERS	55
ITEM 11.	EXECUTIVE COMPENSATION	55
ITEM 12.	SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	55
ITEM 13.	CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	55
ITEM 14.	PRINCIPAL ACCOUNTANT FEES AND SERVICES	56
PART IV		
ITEM 15.	EXHIBITS AND FINANCIAL STATEMENT SCHEDULES	56
	SIGNATURES	59

Table of Contents

PART I.

ITEM 1. DESCRIPTION OF BUSINESS

Background

CyberOptics Corporation was founded in 1984 and is a leading provider of high-precision, proprietary 3D sensors for the electronics and general metrology markets. Our headquarters are located at 5900 Golden Hills Drive in Golden Valley, Minnesota. Our website address is www.cyberoptics.com. You can access, free of charge, our filings with the Securities and Exchange Commission, including our annual report on Form 10-K, our quarterly reports on Form 10-Q, current reports on Form 8-K and any other amendments to those reports, at our website, or at the Commission s website at www.sec.gov. Proxy materials for our upcoming 2014 annual shareholders meeting to be held on May 19, 2014 will be available electronically via the internet at the following address: http://www.idelivercommunications.com/proxy/cybe.

Our objective is to be the global technology leader in high precision three-dimensional (3D) sensors. We intend to deliver profitable growth by developing and manufacturing high precision proprietary 3D sensors and leveraging them in our key vertical markets of surface mount technology (SMT), semiconductor and general purpose metrology.

Our sensors and inspection systems assist the global SMT and semiconductor industries in meeting their rigorous demands for manufacturing quality. Using a variety of proprietary technologies such as lasers, optics and machine vision, combined with software, electronics and mechanical design, our products enable manufacturers to increase production volume, product yields and quality by measuring the characteristics and placement of components during the SMT electronic circuit board assembly process or by providing SMT electronic circuit board and semiconductor manufacturers with key metrics related to their manufacturing processes that allow them to improve production volumes and yields.

Most of our products (79% of revenue in 2013) are developed and sold for use in SMT electronic circuit board assembly or with equipment used in SMT electronic circuit board assembly. We sell products in these markets both as sensor components that are incorporated into products manufactured by other companies for sale to circuit board assembly companies, and as complete stand-alone inspection systems that are sold directly to circuit board assembly companies.

Our SMT sensor products are sold to manufacturers of pick-and-place machines to align electronic surface mount components during placement on the circuit board and to solder paste screen printer companies to align stencils with circuit boards. We also sell sensors to a manufacturer of photovoltaic equipment to perform accurate high-speed wafer alignment measurements within the wafer print nest and for fuel cell manufacturing.

Our SMT inspection system products are sold to electronic manufacturing services (EMS) and other manufacturers of SMT electronic circuit boards to control quality as in-line systems. These system products are used by manufacturers to measure screen printed solder paste, to inspect circuit boards and components after component placement, to confirm proper placement after full assembly of circuit boards and to inspect solder joints on printed circuit boards. Our embedded inspection sensors are sold to manufacturers of pick-and-place machines for integration into their equipment and offer some, but not all, of the inspection functionality of our SMT inspection systems. Manufacturers of DRAM and Flash memory also use our system products to inspect assembly of their memory modules.

Our semiconductor products assist with yield improvement and tool uptime in the semiconductor wafer fabrication process by providing highly accurate measurements of critical process factors. These measurements are impossible or very difficult to obtain without powering down the wafer fabrication equipment. Customers who use our products have better yields, through-put and tool up-time. Our products are more accurate when compared to the various manual techniques historically used by semiconductor manufacturers to obtain critical wafer fabrication process measurements.

On March 14, 2014, we acquired substantially all of the assets of Laser Design, Inc. (LDI), a 3D metrology company headquartered in Minneapolis, Minnesota for aggregate consideration of $2.7 million cash, plus the assumption of certain current liabilities. With revenues of approximately $6.0 million, LDI provides scanning systems and services to the estimated $825 million global 3D scanner and services metrology market. Global demand for 3D scanning is growing as this technology is deployed increasingly in markets ranging from automotive and aerospace to medical and consumer electronics.

Table of Contents

Market Conditions Recent Developments of the Business

We experienced reduced year over year demand for our surface mount technology (SMT) sensor and system products in 2013 due to weak conditions in the SMT capital equipment market, the sharp downturn in the laptop personal computer market where we historically have sold more of our SMT inspection systems, and slower than anticipated market acceptance of our new automated optical inspection (AOI) products. Reductions in sales of SMT sensor and system products were offset in part by higher sales of our WaferSense® semiconductor products, which grew by over 20% in 2013 to $5.7 million.

We have taken concrete steps to address our losses and move towards revenue growth and profitability. In November 2013, we reduced our workforce by almost 20%, mainly impacting employees working in the area of SMT inspection systems where we experienced large revenue declines in 2013. Critical engineering employees working on key next generation technologies and products were not impacted. Recent product introductions mark our first steps toward strengthening our competitive position in our current markets, particularly in the mobile computing and high performance segments of the SMT inspection systems market. We are encouraged by initial acceptance of our new SE600 solder paste inspection (SPI) system, which we believe has the improved performance and usability we need to gain SPI market share. We recorded our first sales of the SE600 SPI system in the fourth quarter of 2013. The SE600 is doing very well in a number of customer evaluations, including head to head competition against the industry leading SPI supplier, which makes us believe that we are capable of gaining share in the SPI market. We also continued to post solid sales of our new SE500ULTRA™ SPI system, which offers a 30% increase in inspection speed for high-volume production runs. We have earmarked additional funds to expand our marketing efforts, and have committed resources to developing new SMT products for conformal coating and memory inspection and will be launching a new WaferSense product for particle monitoring in reticle size.

We are developing a new high speed metrology grade 3D measurement technology that we expect to be market ready in 2014. Although our first commercial application of this technology is expected to be in our 3D AOI SMT inspection system, we also intend to expand sales of this technology into adjacent targeted markets that require high precision optical 3D inspection. Our acquisition of LDI is part of our strategic repositioning as a high-precision 3D sensor technology company, and provides us with access to the growing market for general purpose 3D metrology. The addition of LDI also will enable us to leverage the 3D sensor technology that we are developing in-house.

We are targeting double digit revenue growth in 2014 and 2015, excluding the revenue impact from the acquisition of LDI. Based on our outlook for higher sales and reduced expenses given our recent workforce reduction, we anticipate a significantly reduced operating loss in 2014. With cash and marketable securities of $23.2 million at the end of 2013, we believe we have the resources required to attain our growth objectives over the next several years.

Our ability to achieve our forecast and to implement our strategy effectively is subject to numerous uncertainties and risks, including the risks identified in Item 1A of this Annual Report on Form 10-K. We cannot assure you that our efforts will be successful.

Objective

Our vision is to be the global technology leader in high precision three-dimensional (3D) sensors. Our strategy is to deliver profitable growth by developing and manufacturing high precision proprietary 3D sensors and leveraging them in our key vertical markets of surface mount technology (SMT), semiconductor and general purpose metrology.

Our objective in the SMT market is to be the leading supplier of full-line defect monitoring and process control solutions that improve the quality and efficiency of our customers. We intend to further diversify and improve the performance and ease of use of our SPI and AOI products to expand in markets and geographies, including Europe and the Americas, where rigorous performance demands are essential. We eventually intend to tie these products and other new products designed for SMT production together as a full-line process control solution.

Our objective in the semiconductor market is to continue to invest in our WaferSense product line, a family of wireless, wafer-like precision measurement tools for in-situ setup, calibration and process optimization in semiconductor processing equipment. Our first WaferSense product, the Automatic Leveling Sensor (ALS) was introduced late in 2004. Since that time, we have introduced several new additions to the WaferSense family of products, including sensors for gapping (AGS), teaching (ATS), vibration (AVS) and particles (APS) that improve tool up-time and yield for semiconductor manufacturers. We intend to continue to enhance and expand the WaferSense product line in the future. In 2014, we intend to further leverage our particle sensing technology by launching a particle sensor in a reticle shaped form factor (ReticleSense™). The wireless, real-time capability of ReticleSense allows users to quickly identify geographic particle sources in reticle environments.

Table of Contents

Our acquisition of LDI is part of our strategic re-positioning as a high-precision 3D sensor technology company, and provides us with access to the growing market for general purpose 3D metrology. Global demand for 3D scanning is growing as this technology is deployed increasingly in markets ranging from automotive and aerospace to medical and consumer electronics. The addition of LDI also will enable us to leverage the 3D sensor technology that we are developing in-house. One of our objectives is to further leverage our 3D sensor technology by expanding into other high-growth markets both organically and through acquisition.

OPERATIONS AND PRODUCTS

We develop, manufacture and sell intelligent, non-contact sensors and systems for process control and inspection. Our products are used primarily in the SMT electronic circuit board assembly and semiconductor fabrication industries and enable manufacturers to increase operating efficiencies, product yields and quality. In addition to proprietary hardware designs that combine precision optics, various light sources and multiple detectors, our products incorporate software that controls the hardware and filters and converts raw data into application specific information. Our product offerings are sold to original equipment manufacturers (OEMs) and end-user customers who use our SMT sensors, inspection systems and WaferSense products for process and quality control in the circuit board manufacturing and semiconductor fabrication processes.

SMT Electronic Assembly Alignment Sensors

Our SMT electronic assembly alignment sensor products, which had historically generated the largest component of our sales until 2011, is a family of alignment sensors that are customized and incorporated into the equipment manufactured by our customers for use in SMT circuit board assembly. We work closely with our original equipment manufacturer customers to integrate sensors into their equipment.

Sales of these products, including service repairs, to Juki Corporation accounted for approximately 18% of our revenue in 2013 and 13% of our revenue in 2012. Sales of these products, including service repairs, to Assembleon B.V. accounted for approximately 7% of our revenue in 2013 and 12% of our revenue in 2012. Our revenues and operations are currently heavily influenced by the level of purchases from these two customers, reflecting their success in the market for pick-and-place machines, the cyclical nature of the SMT production industry and their ability to accurately forecast production requirements and need for our sensors.

LaserAlign®. Our LaserAlign sensor family has accounted for the vast majority of our sales in the SMT electronic assembly alignment sensors product line. These sensors are primarily sold for incorporation into pick-and-place machines manufactured and sold by a number of different OEM customers for use in SMT production lines.

The LaserAlign family of products aligns both large and extremely small surface mount and through-hole components, known as chip capacitors and resistors, during transport on a pick-and-place machine prior to placement. LaserAlign sensors are incorporated into the placement heads of pick-and-place machines to ensure accurate component placement at high production speeds. Various high-speed pick-and-place machines use between one and twenty LaserAlign sensors per machine. LaserAlign integrates an intelligent sensor, composed of a laser, optics and detectors with a microprocessor and software for making specific measurements. LaserAlign enables quick and accurate alignment of each component as it is being transported by the pick-and-place arm for surface mount or through-hole assembly. Using non-contact technology, LaserAlign facilitates orientation and placement of components at higher speeds than can be achieved using conventional mechanical or machine vision component centering systems.

The LaserAlign sensor is offered in several different configurations to satisfy the requirements of the machines on which it is used. The latest version of the LaserAlign sensor technology was introduced in 2013 as a sixth generation sensor for Juki Corporation. Revenue from new product shipments of LaserAlign sensors has been a principal contributor to revenue during the past five years and accounted for 20% of our revenue in 2013 and 18% of our revenue in 2012.

BoardAlign Camera (BA Camera). The BA Camera, which is incorporated directly into the placement head of a pick-and-place machine identifies fiducial markings on a circuit board and aligns the board in the pick-and-place machine prior to component placement. The BA Camera was first introduced in a sensor for Assembleon B.V. during 2003 and a second generation BA Camera, which was introduced in 2012, has been incorporated into the latest version of Assembleon B.V. s component placement machine. Revenue from shipments of BA Camera sensors to Assembleon B.V. accounted for 4% of our revenue in 2013 and 6% in 2012.

Table of Contents

InPrinter Inspection Camera. The InPrinter Inspection Camera, which is mounted directly in screen printers manufactured by DEK International GmbH, identifies fiducial markings on a circuit board to ensure accurate board registration prior to placement of solder paste, as well as to provide an upgraded capability for 2D solder paste and stencil inspection. The InPrinter Inspection Camera was introduced for DEK International GmbH during the third quarter of 2005. Revenue from shipments of the InPrinter Inspection Camera accounted for 5% of our revenue in 2013 and 3% in 2012.

Photovoltaic and Fuel Cell Alignment Sensors

Solar Wafer Alignment Camera. The Solar Wafer Alignment Camera performs accurate high-speed alignment measurements within the wafer print nest. This camera also has the ability to perform traditional wafer edge alignment of both monocrystalline and polycrystalline wafer materials. The Solar Wafer Alignment Camera was introduced for DEK International GmbH during the first quarter of 2010. DEK is also using the sensor for fuel cell applications. Revenue from shipments of the Solar Wafer Alignment Camera accounted for 1% of our revenue in 2013 and less than 1% of our revenue in 2012.

Embedded and OEM Inspection Solutions

Embedded Process Verification. Juki Corporation, our largest LaserAlign customer, has incorporated our embedded process verification, or EPV®, inspection technology into its KE-2070, KE-2080, FX and new RX-6 pick-and-place machines. Equipped with our EPV inspection technology, these platforms are the industry s first pick-and-place machines capable of inspecting for the presence or absence of electronic components on SMT circuit boards as they are placed. With EPV inspection technology, Juki s platforms are the only systems in the world that can visualize feeder action during the electronic component placement process with images of both component pick-and-placement and movie mode. EPV also provides line engineers with a tool for root cause failure analysis during the assembly process to improve circuit board yields and minimize costly rework or scrap. Our EPV technology is comprised of six ultra-small cameras mounted on a placement head for on-the-fly imaging with no cycle time penalty for the inspection process. The resulting inspection for missing components on the SMT circuit board operates at the full placement speed of the pick-and-place machine. The Juki platforms also will continue to deploy our LaserAlign sensors to ensure proper alignment and positioning of electronic components during circuit board assembly. Revenue from shipments of EPV accounted for 2% of our revenue in 2013 and less than 1% of our revenue in 2012.

3D Solder Paste Inspection Viscom OEM. Early in 2011, we entered into an agreement with Viscom GmbH to integrate our 3D solder paste inspection technology into Viscom s solder paste inspection platform. Sales of our 3D solder paste inspection sensor to Viscom began in the second half of 2011, and accounted for less than 1% of our revenue in 2013 and 2% of revenue in 2012.

SMT Inspection System Products

Our SMT inspection system products are used in the SMT electronic assembly industry for process control and inspection. These systems are sold directly to end-user manufacturing customers that use them in a production line or along-side a production line to maintain process and quality control. Our products incorporate proprietary sensors, off the shelf, translation or robotics hardware and conveyors and complete computer systems or processors with internally developed software.

Solder Paste Inspection (SPI) Products

We began selling in-line solder paste measurement machines in the mid-1990 s and have continued to develop and evolve our SPI family of products since then. In 2013, we introduced a new 3D solder paste inspection system, the SE600, which utilizes a dual-illumination sensor and an enhanced user interface.

SE600. The SE600 is an in-line system based on a dual-illumination sensor that measures in three dimensions (3D) the amount of solder paste applied to the circuit board after the first step of the SMT circuit board assembly process. Because of the small size of the components that must be placed on each pad of solder paste and the density of components placed on the circuit board, a significant amount of SMT assembly problems are related to the quality of solder paste deposition. Misplaced solder paste, excess or inadequate amounts of paste can lead to improper connections or bridges between leads causing an entire circuit board to malfunction. The SE600 inspects the height, area and volume of 100% of a circuit board at production line speeds and with resolution that allows it to measure the smallest chip scale packages and micro ball array component sites. The SE600 can be integrated into most SMT production lines, providing real time quality control immediately after a printed circuit board leaves the screen printer and before component placement commences.

SE500ULTRA. The SE500 was first introduced in 2009. In 2013, we introduced our latest-generation SE500 SPI system, the SE500ULTRA. The SE500ULTRA is based on the same proprietary 3D inspection technology as the SE600, but utilizes a single illumination sensor. The SE500ULTRA inspects at faster speeds than the SE600 and is intended for use in high-volume production environments. Because

the SE500ULTRA prioritizes speed, it does not provide the same level of resolution and measurement performance as the SE600.

Table of Contents

SE500II. The SE500II is based on our proprietary 3D inspection technology and is targeted at a different segment of the market; those customers requiring solder paste inspection, but not the full functionality and superior measurement performance of our SE600 or SE500ULTRA products.

Revenues from shipments of our SPI products accounted for 20% of our revenue in 2013 and 17% of our revenue in 2012.

Automated Optical Inspection (AOI) Products

We introduced our first in-line AOI products, the Flex series, in the fourth quarter of 2000, and have continued to develop and evolve our AOI offerings since then. These products inspect circuit boards after component placement to determine whether all components are present and have been placed correctly and can also be used to measure the quality of solder joints after reflow. We introduced our latest generation AOI system, the QX600, in the second quarter of 2013.

QX600. Our next generation QX600 AOI system features our strobe inspection module (SIM) sensor technology and advanced Autonomous Image Interpretation (Ai^2) software, which offers an industry leading level of low false call performance. The system was designed to provide significantly improved resolution and performance required for accurately inspecting the smallest circuit board components used in smart phones, tablets and other applications requiring higher resolution due to smaller component sizes. In 2013 and 2012, we introduced significant software enhancements for all of our AOI products that improve set-up and programming time and ease of use for the customer. Our QX600 is also available in a version that can accommodate larger circuit board sizes.

QX500. We market our QX500 AOI systems for production lines requiring faster inspection speeds. The QX500 also features our SIM sensor technology and advanced Ai^2 software. The QX500 does not offer the resolution capability of the QX600, but was instead designed to provide the fastest AOI inspection times currently available in the market and also an industry leading level of low false call performance. The QX500 can also accommodate dual production lanes and larger circuit board sizes.

QX100 and QX100i. In 2012, we developed a new off-line AOI tabletop system (the QX100) and a lower cost in-line AOI system (the QX100i) based on the common SIM sensor technology used in our other QX AOI products. The QX100 is used for off-line inspection typically found in low volume high mix production environments not requiring 100% in-line inspection. These types of inspection environments are more prevalent in the Americas and European markets.

Revenues from shipments of our AOI products accounted for 21% of our revenue in 2013 and 31% of our revenue in 2012.

Semiconductor Products

Our principal semiconductor products, the WaferSense family of products, are a series of wireless sensors that provide measurements of critical factors in the semiconductor fabrication process. Other semiconductor products include sensors that inspect the presence and orientation of semiconductor wafers in cassettes and FOUPS during the fabrication process, and frame grabber and machine vision subsystems. We sell our semiconductor products to both OEM s and end-user customers through a network of independent sales representatives. Sales of our semiconductor products constituted 21% of our revenue in 2013 and 15% of our revenue in 2012.

WaferSense Sensors. We designed our WaferSense family of sensors to go where wafers go in semiconductor fabrication and provide measurements of critical factors that are currently impossible or extremely difficult to obtain without powering down the fabrication process equipment. Because the user is not required to break down semiconductor fabrication equipment when using our WaferSense products, our customers tell us that significant time is saved and accuracy is increased compared to the manual techniques currently used by many customers when checking the process parameters measured by our WaferSense products. As a result of WaferSense technology, up-time, through-put and process yield for semiconductor fabrication equipment is improved.

We introduced our first WaferSense product in late 2004 and have since continued to add new products to the WaferSense family. The automatic leveling sensor (ALS) is a wireless, vacuum-compatible sensor that can be placed in cassettes, FOUPS, on end effectors, aligners, in load locks and process chambers used in semiconductor fabrication to ensure that all stations are level and coplanar. The automatic gapping sensor (AGS) is a gapping tool that measures the gap in three places between the shower head and pedestal in semiconductor process equipment. The automatic teaching sensor (ATS), measures X-Y-Z offset from robotic transfers of wafers to the pedestal in semiconductor process equipment. The amount of gap and offset after robotic transfer of wafers to the shower pedestal can affect film thickness and uniformity when material is deposited on semiconductor wafers, impacting quality and product yields. The automatic vibration sensor (AVS) measures X-Y-Z acceleration for shock and vibration, which can generate wafer particles, scratches or wafer breakage, thereby reducing yield. The automatic particle sensor (APS), introduced in 2012, allows engineers to efficiently detect and classify particles and their exact sources in a process as wafers are transferred, slit valves actuate and chambers are cycled, pumped down and purged. APS is designed to be compatible with front-ends,

coater/developer tracks, and deposition and etch equipment. We have continued to enhance our WaferSense product line by introducing a comprehensive set of offerings to support the semiconductor industry s new 450mm wafer initiative. In 2014, we intend to further leverage our particle sensing technology by launching a particle sensor in a reticle shaped form factor (ReticleSense). The wireless, real-time capability of ReticleSense allows users to quickly identify geographic particle sources in reticle environments.

Table of Contents

Wafer Mapping and Alignment Sensors. We manufacture and sell laser based reflective sensors that improve the performance of robotic wafer handling equipment. During the fabrication process, semiconductor wafers are stored in slotted cassettes during transport to various fabrication tools. Robotic equipment removes the wafers from the cassettes and inserts them into a fabrication tool. Our wafer mapping sensors inspect for the presence of wafers in the cassettes and determine if the wafer is properly present and located in the cassette.

Frame Grabber Products and Machine Vision Subsystems. Frame grabber products are a machine vision component that captures, digitizes, and stores video images. These products are currently sold into a broad array of applications in a number of different industries, with an emphasis on semiconductor customers. We offer both digital and analog versions of frame grabbers under the Imagenation brand.

Markets and Customers

We sell the vast majority of our products into the electronics manufacturing markets (79% of total revenue in 2013). The value of automation is high in these markets because the products produced have high unit costs and are manufactured at speeds too high for effective human intervention. Moreover, the trend toward smaller electronic devices with higher circuit densities, smaller circuit paths and extremely small components requires manufacturing and testing equipment capable of extremely accurate alignment and multidimensional measurement such as achieved using non-contact optical sensors. Trends in the SMT market include further efforts to reduce the cost of the manufacturing process, with continued movement to low cost regions with equipment operated by less skilled engineers.

Our SMT alignment and inspection sensors are sold to OEM s serving the SMT circuit board assembly market and our SPI and AOI inspection systems are sold to end-user electronic assembly manufacturers in this market. Our AOI and SPI inspection system sales occur in all global geographies and are split fairly evenly between the Americas, Europe and Asia where a significant portion of the worldwide production capacity for circuit board assembly occurs. We manufacture our SMT sensors, including those used in our inspection systems and all of our semiconductor products in our Minneapolis, Minnesota headquarters facility. All final assembly and integration for our inspection system products takes place in our Singapore facility.

We sell our SMT sensor and inspection system products worldwide to many of the leading manufacturers of electronic circuit board assembly equipment, manufacturers of semiconductor DRAM memory and end-user electronic assembly manufacturers, including Asian original design manufacturers (ODM s) and electronic manufacturing service providers (EMS s), who manufacture cell phones, smart phones, notebook computers and server boards, among other electronic devices. We have sales and service offices in China and Singapore to serve the market for manufacturing production equipment in Asia. Our sales and service office in the United Kingdom serves the European market and we have sales and service team members based out of our home office in Minneapolis to serve the Americas market. We have partnered with Viscom, a German distributor with significant sales to the automotive industry, to better penetrate the European markets and with newer high performance products intend to expand our marketing efforts, particularly in the Americas and Europe.

Our semiconductor products accounted for 21% of our revenue in 2013. This market has many of the same characteristics as the SMT electronics assembly market and requires non-contact optical measurement tools that enable the production of more complex, higher density and smaller semiconductor devices. Our WaferSense family of precision measurement tools for process optimization in semiconductor processing equipment is sold directly to semiconductor fabrication facilities or through semiconductor capital equipment manufacturers to semiconductor fabrication facilities for use by process and equipment engineers during the production of semiconductor wafers. The world s largest semiconductor manufacturers purchase our products. We sell our wafer mapping and alignment sensors to manufacturers of equipment that transport wafers during the semiconductor manufacturing (front-end fabrication) process.

Export sales represent a large percentage of our total sales because the majority of new worldwide electronics and semiconductor capacity is being added outside the United States. In addition, a significant portion of our export sales to Europe include SMT electronic assembly alignment sensors that ultimately are sold by our OEM customer into Asia.

Table of Contents

The following table sets forth the percentage of total sales revenue represented by total export sales (sales for delivery to countries other than the United States, including sales delivered through distributors) by location during the past two years:

	December 31,	
	2013	2012
Asia	48%	51%
Europe	26%	30%
Other export sales (1)	4%	5%

(1) Includes export sales in the Americas, primarily export sales to Canada, Mexico and Latin America.

See Note 13 to our Consolidated Financial Statements contained in Item 8 of this Form 10-K. Most of our international export sales are negotiated, invoiced and paid in U.S. dollars. We manufacture our SMT system products in Singapore and a portion of our raw material purchases are denominated in Singapore dollars. We also have R&D and sales personnel located in Singapore and sales offices located in other parts of the world. Although currency fluctuations do not significantly affect our revenue, they can impact our costs and influence the price competitiveness of our products and the willingness of existing and potential customers to purchase units.

Sales and Marketing

Our SMT electronic assembly alignment and inspection sensors are sold to large OEM customers by direct sales staff located in Minnesota. Our inspection system products are primarily sold through independent representatives and distributors managed by direct sales personnel located in Singapore, as well as in the United Kingdom, U.S. and China. We have agreements with 43 independent representatives and distributors who focus on sales and service of our stand-alone system products to end-user customers. These agreements cover North and South America (13), Europe (12) and China and the rest of Asia (18).

We have established a separate worldwide sales representative organization for our WaferSense semiconductor products. We currently have agreements in place or in process with sales representatives in the U.S. (3), Europe (3) and the Pacific Rim (5). Our wafer mapping semiconductor products are sold to large OEM customers by a direct sales staff located in Oregon. We sell our semiconductor frame grabber products through direct sales staff located in Oregon, and through 13 sales representatives located throughout the world. These representatives are not under contract, but are authorized to sell frame grabber products and in many cases act as system integrators for our products.

We market our products through appearances at industry trade shows, advertising in industry journals, articles published in industry and technical journals and on the Internet. In addition, we have strategic relationships with certain key customers that serve as highly visible references.

Backlog

Our products are typically shipped two weeks to two months after the receipt of an order. Product backlog was $4.1 million on December 31, 2013, compared to $2.6 million on December 31, 2012. Backlog totaling $3.1 million is deliverable in the first quarter of 2014. Sales of some SMT inspection system products may require customer acceptance due to performance or other acceptance criteria included in the terms of sale. For these SMT product sales, revenue is recognized at the time of customer acceptance. Although our business is generally not of a highly seasonal nature, sales may vary based on the capital procurement practices in the electronics manufacturing and semiconductor industries. For example, production capacity expansion for anticipated holiday or back to school demands can result in higher levels of sales in our second and third quarters. Moreover, the second and third quarters tend to mark the peak buying periods for our Asian ODM customers. However, we are not able to quantify with any level of precision, the impact of these events on our sales in any given quarterly period. Our scheduled backlog at any time may vary significantly based on the timing of orders from OEM customers. Accordingly, backlog may not be an accurate indicator of performance in the future.

Research and Development

We differentiate our products primarily on the basis of customer benefits afforded by the use of clever and proprietary technology and on our ability to combine several different technical disciplines to address industry and customer needs. In addition, we actively seek ongoing strategic customer relationships with leading product innovators in our served markets and actively investigate the needs of, and seek input from, these customers to identify opportunities to improve manufacturing processes. Our engineers have frequent interactions with our customers to ensure adoption of current technologies. In some instances, we receive funding from these customers through development contracts that provide the customer with an exclusive selling period but allow us to retain technology and distribution rights.

Table of Contents

We commit substantial resources to the development of important next-generation products that, we believe, will position us to capture additional market share in our key SMT and semiconductor vertical markets. We maintain our commitment to research and development and product development even during periods when our markets are weak. During the past year, research and development efforts have been focused on a number of activities that are critical to our future growth and success, including the following:

- Development of our Multi-Reflection Suppression (MRS) technology, a high speed metrology grade 3D measurement capability using propriety components and algorithms that we believe will solve many of the reflecting issues impacting all triangulation sensor technologies. We anticipate that our first commercial application of this technology will be in a 3D AOI inspection system we intend to launch in the second half of 2014.

- Continued development of our AOI and SPI product families. In 2013, we introduced our next generation SE600 SPI system and our next generation QX600 AOI system, both designed with significantly improved resolution and performance required for accurately inspecting the smallest circuit board components used in smart phones, tablets and other applications requiring higher resolution due to smaller component sizes. We also introduced our new SE500ULTRA SPI system which offers a 30% increase in inspection speed for high-volume production environments.

- Began work on a new inspection system for conformal coating that leverages our SIM sensor technology and advanced Ai^2 software. Use of conformal coating on circuit boards is growing, particularly in the automotive, medical, smartphone and tablet segments of SMT electronic circuit board assembly.

- Continued enhancement of our WaferSense line of products by introducing a comprehensive set of offerings to support the semiconductor industry s new 450mm wafer initiative. We also began development of a new particle sensor in a reticle shaped form factor (ReticleSense) that leverages our current particle sensing technology. The wireless, real-time capability of ReticleSense allows users to quickly identify geographic particle sources in reticle environments.

Research and development expenses were $7.5 million in 2013 and $7.7 million in 2012. These amounts represented 23% of revenues in 2013 and 19% in 2012. Research and development expenses consist primarily of salaries, project materials, contract labor and other costs associated with ongoing product development and enhancement efforts. Research and development resource utilization is centrally managed based on market opportunities and the status of individual projects. In November 2013, we reduced our workforce by almost 20%, or approximately 30 employees, mainly impacting those employees working in the area of SMT inspection systems. Critical engineering employees working on key next generation technologies and products were not impacted.

Manufacturing

Our SMT electronic assembly alignment and inspection sensor products and our semiconductor sensor products are assembled at our Minneapolis, Minnesota headquarters facility. Our SMT inspection system products are assembled in Singapore. Much of our product manufacturing, which is primarily circuit board manufacturing, lens manufacturing and metal parts production, is contracted with outside suppliers. Our production personnel inspect incoming parts, perform final assembly, calibrate and perform final quality control testing of finished products. Our products are not well suited for the large production runs that would justify the capital investment necessary for complete internal manufacturing.

A variety of components used in our products are available only from single sources and involve relatively long order cycles, in some cases over one year. We believe we have identified alternative assembly contractors for most of our subassemblies. Use of those alternative contractors could require substantial rework of the product designs, resulting in periods during which we could not satisfy customer orders. An actual change in such contractors would likely require a period of training and testing. Accordingly, an interruption in a supply relationship or the production capacity of one or more of such contractors could result in the inability to deliver one or more products for a period of several months. To help prevent delays in the shipment of our products, we maintain in inventory, or on scheduled delivery from suppliers, what we believe to be a sufficient amount of certain components based on forecasted demand (forecast extends a minimum of 6 months).

Competition

We face competition from a number of companies in the machine vision, image processing and inspection systems market, some of which are larger and have greater financial resources.

Table of Contents

Our SMT electronic assembly alignment and inspection sensor products face competition in the market for alignment and inspection on pick-and-place machines primarily from manufacturers of vision (camera and software based) systems. Potential competitors in these markets include Cognex Corporation and the vision systems developed by OEMs using their own design staff for incorporation into their products. We compete in this market based on our ability to custom design products with stringent physical form requirements, speed, flexibility, low cost and ease of control. Although advances in vision systems have reduced some of the advantages of our products in some configurations, we continue to believe that our SMT electronic assembly alignment sensor products compete favorably on the basis of these factors and that our sensor products are better suited to align the smaller electronic component sizes currently available in the market.

The primary competition for sales of our SPI systems has been from Asian based companies such as KohYoung Technology (Korea), Parmi (Korea) and Test Research, Inc. (Taiwan). Because our SMT inspection system products have historically been sold to customers that produce laptop computers, the increase in tablet and other mobile computing devices and the decline in laptop sales have impacted capital purchasing of those customers and our sales. We believe our new SE600 SPI offering, with significantly improved resolution and performance required for accurately inspecting the smallest circuit board components used in smart phones, tablets and other applications requiring higher resolution due to smaller component sizes, will appeal to manufacturers of those devices, thereby helping us to gain market share.

Our AOI systems face competition from a large number of AOI companies, the most significant being MirTec, Ltd. (Korea), KohYoung Technology (Korea), Viscom (Germany), Test Research, Inc. (Taiwan) and Saki Corporation (Japan). Sales of AOI systems were hit particularly hard by the shift in the electronics market away from laptop computers. The AOI market accounts for approximately two-thirds of the total inspection systems market. We believe that our SIM sensor technology and Ai^2 software used in our QX family of products is differentiated from the competition and that these products compete effectively in this market based on cost, ease of use at rapid production line speeds and the low rate of false calls. We also believe that our new QX600 AOI inspection system products addresses market segments outside the laptop computer space.

The electronics manufacturing market has become increasingly competitive and concentrated in large global EMS and ODM companies, allowing them to drive more competition into the market and command more favorable terms when purchasing from suppliers, including capital equipment suppliers like CyberOptics. Due to the increased level of competition, we have been required to decrease the price of our SPI and AOI systems in some markets. These same pricing pressures also impact our OEM customers for our SMT alignment sensors, who in turn ask us to design newer products at a lower price point to allow them to remain competitive in the marketplace. We respond to these pricing pressures through continuous investment in research and development of cost reduced products with new features and enhancements that command better pricing in the market. We believe that the new SMT sensor and system products that we plan to introduce, particularly those based on our new 3D measurement technology, will strengthen our future competitive position, resulting in market share increases, and that technology trends toward smaller components and increased production speeds will continue to drive demand in the future.

We believe our WaferSense products are unique to the marketplace and primarily face competition from the manual techniques currently used by most customers to monitor their semiconductor fabrication equipment. Because the user is not required to break down semiconductor fabrication equipment, or pressurize a vacuum chamber, we believe that our WaferSense products will save significant time and increase measurement accuracy over the manual techniques currently used by customers and will improve tool up-time, through-put and process yield.

Although we believe our current products offer several advantages in terms of price and suitability for specific applications and although we have attempted to protect the proprietary nature of such products, it is possible that any of our products could be duplicated by other companies in the same general market.

Employees

As of December 31, 2013, we had 144 full-time employees worldwide, including 31 in sales, marketing and customer support, 44 in manufacturing, purchasing and production operations, 53 in engineering, research and development, and 16 in finance, administration and information services. Of these employees, 86 are located at our corporate headquarters in Minneapolis and 58 are located in other offices (5 in the United Kingdom, 2 in Oregon, 1 in California, 43 in Singapore, 3 in China, 2 in Taiwan and 2 in Japan). To date, we have been successful in attracting and retaining qualified technical personnel, although there can be no assurance that this success will continue. None of our employees are covered by collective bargaining agreements or are members of a union.

Table of Contents

Proprietary Protection

We rely on the technical expertise and know-how of our personnel and trade secret protection, as well as on patents, to maintain our competitive position. We attempt to protect intellectual property by restricting access to proprietary methods by a combination of technical and internal security measures. In addition, we make use of non-disclosure agreements with customers, consultants, suppliers and employees. Nevertheless, there can be no assurance that any of the above measures will be adequate to protect our proprietary technology.

We hold 69 patents (46 U.S. and 23 foreign) on a number of technologies, including those used in our 3D MRS technology, LaserAlign products, SIM sensor technology, inspection systems, embedded inspection technology and other products. Some of the patents relate to equipment such as pick-and-place machines, into which our products are integrated. In addition, we have 40 pending patents (14 U.S. and 26 foreign). We protect the proprietary nature of our software primarily through copyright and license agreements, but also through close integration with our hardware offerings. We utilize 14 registered trademarks (6 U.S. and 8 foreign) and have no trademark registrations pending. We also have 8 domain names and several common law trademarks. It is our policy to protect the proprietary nature of our new product developments whenever they are likely to become significant sources of revenue. No guarantee can be given that we will be able to obtain patent or other protection for other products.

As the number of our products increases and the functionality of those products expands, we may become increasingly subject to attempts to duplicate our proprietary technology and to infringement claims. In addition, although we do not believe that any of our products infringe the rights of others, there can be no assurance that third parties will not assert infringement claims in the future or that any such assertion will not require us to enter into a royalty arrangement or result in litigation.

Government Regulation

Many of our products contain lasers. Products containing lasers are classified as either, Class I, Class II or Class IIIb Laser Products under applicable rules and regulations of the Center for Devices and Radiological Health (CDRH) of the Food and Drug Administration. Such regulations generally require a self-certification procedure pursuant to which a manufacturer must file with the CDRH with respect to each product incorporating a laser device, periodic reporting of sales and purchases and compliance with product labeling standards. Our lasers are generally not harmful to human tissue, but could result in injury if directed into the eyes of an individual or otherwise misused. We are not aware of any incident involving injury or a claim of injury from our laser devices and believe that our sensors and sensor systems comply with all applicable laws for the manufacture of laser devices.

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, as amended, or the Dodd-Frank Act, the SEC adopted new disclosure requirements for public companies using certain minerals and metals, known as conflict minerals , in their products. Under these rules, we are required to perform due diligence and disclose our efforts to prevent the sourcing of such conflict minerals from the Democratic Republic of Congo or adjoining countries. These conflict minerals are commonly used in the manufacture of semiconductor devices. As a result of these new regulations, we expect to incur additional costs to comply with the disclosure requirements, including costs related to determining the source of any of the conflict minerals used in our products. These new requirements could also adversely affect the sourcing, availability and pricing of such minerals as used in the manufacture of our products and the pool of suppliers who provide conflict free metals may be limited. As a result, we may not be able to obtain materials for our products in sufficient quantities or at competitive prices. In addition, since our supply chain is complex, we may not be able to sufficiently verify the origins of all metals used in our products and confirm that they are conflict free, which may adversely affect our reputations with our customers and shareholders.

Table of Contents

ITEM 1A. RISK FACTORS

Our operations are subject to a number of risks and uncertainties that may affect our financial results, and the accuracy of the forward looking statements we make in this Form 10-K. We make statements regarding anticipated product introductions and performance, changes in markets, customers and customer order rates, expenditures in research and development, growth in revenue and improvement in profits, taxation levels, the effects of pricing, and competition, all of which represent our expectations and beliefs about future events. Our actual results may vary from these expectations because of a number of factors that affect our business, the most important of which include the following:

Our business has been and will continue to be significantly impacted by the global economy and uncertainty in the outlook for the global economy makes it more likely that our actual results will differ materially from expectations. In 2009, the world economy experienced the worst economic recession since the great depression of the 1930 s. The severe economic conditions were brought about by extreme disruptions in global credit and financial markets including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. These economic uncertainties affect businesses such as ours in a number of ways, making it difficult to accurately forecast and plan our future business activities. Further political instability or uncertainty could cause new tightening of credit in financial markets, may lead consumers and businesses to postpone spending, and may cause our customers to cancel, decrease or delay their existing and future orders with us. In addition, financial difficulties experienced by our suppliers or distributors could result in product delays, increased accounts receivable defaults and inventory challenges. The OEM s to which we sell our sensors supply SMT manufacturers, and those manufacturers, as well as the circuit board manufacturers that purchase our SMT inspection system products directly, are largely dependent on continued demand for consumer and commercial electronics, including cell phones, smart phones and computers. Demand for electronics is a function of the health of the economies in the United States and around the world. Our results would be adversely affected in the future, if these economies were to move into recession.

Our operating results have varied, and will likely continue to vary significantly, from quarter to quarter, causing volatility in our stock price. Our quarterly operating results have varied in the past and will likely continue to vary significantly from quarter to quarter, causing volatility in our stock price. Some of the factors that may influence our operating results and subject our stock to price and volume fluctuations include changes in customer demand for our sensors and inspection systems, which is influenced by economic conditions in the SMT and semiconductor device industries, demand for products that use circuit boards and semiconductors, market acceptance of our products and those developed by our customers, competition, seasonal variations in customer demand, the timing, cancellation or delay of customer orders, shipments and acceptance, product development costs, including increased research, development, engineering and marketing expenses associated with our introduction of new products and product enhancements.

Our operating results and financial position could be negatively affected by acquisitions, including our recently announced acquisition of Laser Design, Inc. On March 14, 2014, we acquired substantially all of the assets of Laser Design, Inc. (LDI), a 3D metrology company located in Minneapolis, Minnesota, for aggregate consideration of $2.7 million cash, plus the assumption of certain current liabilities. If the LDI business does not perform as anticipated, we may be forced to incur additional expense to enhance its development, sales or marketing capabilities, negatively impacting our earnings and financial position. In addition, we may be unable to successfully integrate LDI or other businesses that we choose to acquire in the future in a cost-effective and non-disruptive manner. Business acquisitions present a number of risks, including:

- diversion of management s attention from daily operational matters, current products and customers;
- lack of synergy, or the inability to realize expected synergies;
- failure to commercialize or meet the expected performance of the new technology or business;
- failure to retain key employees and customer or supplier relationships;
- lower-than-expected market opportunities or market acceptance of any new products; and
- unexpected reduction of sales of existing products by new products.

Our failure to realize the intended benefits of one or more acquisitions could have a material adverse effect on our business, liquidity, financial position and/or results of operations, including our assumption of unforeseen contingent liabilities.

Table of Contents

Sales to our largest OEM customers constituted a significant portion of our revenue in 2013 and loss of either of these customers, or a decline in the customer s business, would have a materially adverse impact on our results of operations. Sales to our two principal OEM sensor customers constituted 24% of our total revenue in 2013. Although we do not anticipate any impact on the level of business we conduct with them, our largest OEM customer, and a third OEM customer, have completed or are nearing completion of business combination transactions that could impact our business relationships. If the order rates of these customers are negatively impacted by global economic events beyond their control, competitive factors, or if they or new owners or management choose sensors or inspection systems manufactured by other suppliers, or otherwise terminate their relationships with us, our long-term results of operations would be significantly adversely affected.

The market for capital equipment for the electronics industry in which we operate is cyclical and we cannot predict with precision when market downturns will occur. We operate in a cyclical market the electronics capital equipment market that periodically adjusts independent of global economic conditions. We have been unable to predict with accuracy the timing or magnitude of periodic downturns in this market. These downturns, particularly the severe downturns in electronics production markets from 2001 through 2003, and from 2008 through 2009, have severely affected our operations and generated several years of unprofitable operations. Ultimately, we have difficulty determining the duration or severity of any market downturns, the strength of any subsequent recoveries, and the long-term impact that the market may have on our business.

World events beyond our control may affect our operations. Our operations and markets could be negatively affected by world events that effect economies and commerce in countries, such as China, Singapore and Japan, in which we do business. Natural disasters, such as the tsunami and earthquake that hit Japan and the floods that hit Thailand in 2011, have affected travel patterns and accessibility in these countries in the past and other natural occurrences, such as a bird flu outbreak, could affect the business we do in these countries in the future. Further, these countries may be affected by economic forces that are different from the forces that affect the United States and change the amount of business we conduct.

We generate approximately three quarters of our revenue from export sales that are subject to risks of international operations. Our export sales are subject to many of the risks of international operations including:

currency controls and fluctuations in currency exchange rates;
changes in local market business requirements and increased cost and development time required to modify and translate our products for local markets;
inability to recruit qualified personnel in a specific country or region;
difficulty in establishing and maintaining relationships with local vendors;
differing foreign technical standards;
differing regulatory requirements;
export restrictions and controls, tariffs and other trade barriers;
reduced protection for intellectual property rights;
changes in political and economic conditions;
potentially adverse tax assessments; and
terrorism, disease, or other events that may affect local economies and access.

Our development and assembly operations in Singapore, and our sales operations in Asia, are subject to unique risks because of the remote nature of the operations. Our Singapore development and manufacturing operations, and our Asian sales operations, present a number of risks related to the retention of personnel, management of product development and operations, management and access to customer and distributor interactions, control over administrative and business processes, regulatory and legal issues we may encounter and other matters relating to foreign operations. We cannot be certain that we will be able to retain software development and management personnel in Singapore, and sales personnel in other territories, who are reliable and who will accept employment terms that are attractive. Although most components for our system products are more readily available in Singapore, some of the hardware components used in our system products necessary for manufacture in Singapore may be difficult to import at efficient rates. Our financial performance, ability to serve our customers and ability to manufacture and sell products could be negatively impacted if we are unable to retain our Asian based employees, if it costs more than expected to retain these employees or hire other experienced employees in a timely manner, if we are unable to manage these employees appropriately, or if we are unable to locate suitable sources of supply for our products manufactured in Asia.

Table of Contents

We price our products in U.S. dollars, and as a result, our products may have difficulty competing in periods of increasing strength of the dollar. Most of our international export sales are negotiated, invoiced and paid in U.S. dollars, and accordingly, currency fluctuations do not affect our revenue per unit. However, significant fluctuations in the value of the U.S. dollar relative to other currencies could have an impact on the price competitiveness of our products relative to foreign competitors, which could impact the willingness of customers to purchase our products and have an impact on our results of operations.

Because of our significant operations in Singapore, our costs are negatively impacted when the U.S. dollar weakens relative to the Singapore dollar. A significant portion of our cost of revenues, research and development and sales and marketing costs are denominated in the Singapore dollar. In addition, other sales and marketing costs are denominated in British Pounds Sterling and the Chinese Yuan, resulting from our sales offices located in the UK and China. Our costs will increase, and our results will be negatively impacted in future periods, if the U.S. dollar weakens relative to the currencies of these countries.

We enter into foreign exchange forward contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies associated with our subsidiary in Singapore, which may result in losses. At December 31, 2013, our open foreign exchange forward contracts were in an unrealized loss position equal to $58,000 on a pre-tax basis due to a strengthening of the U.S. dollar in relation to the Singapore dollar in 2013. If the exchange rate between the U.S. dollar and the Singapore dollar were to remain unchanged over the next twelve months, we would realize this loss through our statement of operations. However, because we do not fully hedge all of our future anticipated cash flows in Singapore dollars, the portion of our costs that we do not hedge would be lower in relation to recent quarters. If the U.S. dollar were to weaken in future periods in relation to the Singapore dollar, the unrealized loss on our open foreign exchange forward contracts would be reduced, but costs that are not hedged would increase. The ultimate impact of any fluctuation in the relationship between the U.S. dollar and Singapore dollar is dependent on the level of Singapore denominated cash flows in future periods.

Our products could become obsolete. Our current products, as well as the products we have under development, are designed to operate with the technology that we believe currently exists or may exist for electronic components, printed circuit boards, memory modules, photovoltaic wafers and semiconductor manufacturing. The technology for these components and the consumer products into which they are incorporated change rapidly and, because it takes considerable time to develop new products, we must anticipate consumer and industry trends, as well as technological developments, in order to effectively compete. For example, our sales of SPI and AOI systems were negatively impacted in 2013 by ongoing changes in the electronics market, as consumers continue to favor smart phones, tablets and other mobile computer devices, in lieu of purchasing new laptop computers. While we have historically had success selling our inspection system offerings to manufacturers of notebook computers in China, manufacturers of mobile computing devices like smart phones and tablets have tended to prefer the offerings of our competitors. Further, because we do not have unlimited development resources, we might choose to forgo the pursuit of what becomes a leading technology or market and devote our resources to technologies and markets that are less successful. If we incorrectly anticipate technology developments or market trends, or have inadequate resources to develop our products to deal with changes in technology and markets, our products could become obsolete.

Advances in the SMT electronics assembly alignment sensor market have eliminated some of the advantages of our sensors. Our SMT electronic assembly alignment sensor products compete with products made by larger machine vision companies, other optical sensor companies, and by solutions internally developed by our customers. Advances in machine vision technology in recent years have eliminated some, but not all, of the advantages that have differentiated our products from some of these competitors, and advances in other technologies could eliminate other advantages.

The market for surface mount capital equipment has become more mature and price competitive, negatively impacting our margins. The electronics capital equipment market for surface mount technologies is becoming more mature, resulting in increased price pressure on suppliers of equipment. Consequently, our SMT electronic assembly inspection systems and alignment sensor products have become subject to increased levels of price competition and competition from other suppliers and technologies, including suppliers in Asia who have specifically designed their products to compete favorably against our products.

Because of the high cost of changing equipment, customers in our markets are sometimes resistant to purchasing our products even if they are superior. We believe that, because of the high cost of installation and integration of new inspection equipment into production lines, once an SMT customer has selected a vendor s capital equipment, the customer generally relies upon that capital equipment and, to the extent possible, subsequent generations of the same vendor s equipment. Accordingly, unless our systems offer performance or cost advantages that outweigh the expense of installing and integrating new systems, it may be difficult for us to achieve significant sales to a customer that currently uses a competitor s equipment.

Table of Contents

Competitors in Asia may be able to compete favorably with us based on lower production, employee costs and in some cases, governmental support. We compete with large multinational companies when selling our inspection system products, many of which are able to take advantage of greater financial resources and larger sales distribution networks. We also compete with new Asian based suppliers, many of which may have lower overall production and employee costs and are willing to offer their products at lower selling prices to customers. Further, we believe some competitors receive government sponsored research and manufacturing assistance that can cause their relative cost of development of new products to be lower, and are under less market pressure to forgo the short-term income impact of concentrated investment in research and development.

We are exposed to credit risk through sales to our OEM customers and distributors of our stand-alone system products. We sell our products through three key OEM customers, and usually have significant credit exposure with respect to these customers. In addition, we sell our stand-alone inspection system products through a network of international distributors. These distributors tend to be smaller in size with limited financial resources and access to capital. Although these distributors do not hold our products in inventory for re-sale, we are exposed to credit risk and would incur losses if they are unable to pay for the products they have purchased from us.

We are dependent upon outside suppliers for components of our products, and delays in or unavailability of those components would adversely affect our results. We use outside contractors to manufacture the components used in many of our products and some of the components we order require significant lead times that could affect our ability to sell our products if not available. In addition, if these components do not meet stringent quality requirements or become subject to obsolescence, there could be delays in product availability, and we could be required to make significant investments in designing replacement components.

We may fail to adequately protect our intellectual property and, therefore, lose our competitive advantage. Our future success and competitive position depend in part upon our ability to obtain and maintain proprietary technology for our principal product families, and we rely, in part, on patent and trade secret law and confidentiality agreements to protect that technology. If we fail to adequately protect our intellectual property, our competitors may be able to duplicate and enhance what we have created. We own or have licensed a number of patents, and have filed applications for additional patents. Any of our pending patent applications may be rejected, and we may be unable to develop additional proprietary technology that is patentable in the future. In addition, the patents that we do own or that have been issued or licensed to us may not provide us with competitive advantages and may be challenged by third parties. Further, third parties may also design around these patents. In addition to patent protection, we rely upon trade secret protection for our confidential and proprietary information and technology. We routinely enter into confidentiality agreements with our employees and other third parties. Even though these agreements are in place there can be no assurances that trade secrets and proprietary information will not be disclosed, that others will not independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets, or that we can fully protect our trade secrets and proprietary information. Violations by others of our confidentiality agreements and the loss of employees who have specialized knowledge and expertise could harm our competitive position and cause our sales and operating results to decline as a result of increased competition. Costly and time-consuming litigation might be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection might adversely affect our ability to continue our research or bring products to market.

Protection of our intellectual property rights, or the efforts of third parties to enforce their own intellectual property rights against us, may result in costly and time-consuming litigation, substantial damages, lost product sales and/or the loss of important intellectual property rights. We may be required to initiate litigation in order to enforce any patents issued to or licensed by us, or to determine the scope or validity of a third party s patent or other proprietary rights. Any litigation, regardless of outcome, could be expensive and time consuming, and could subject us to significant liabilities or require us to re-engineer our products or obtain expensive licenses from third parties. There can be no assurance that any patents issued to or licensed by us will not be challenged, invalidated or circumvented or that the rights granted thereunder will provide us with a competitive advantage. In addition, our commercial success depends in part on our ability to avoid infringing or misappropriating patents or other proprietary rights owned by third parties. From time to time, we may receive communications from third parties asserting that our products infringe, or may infringe, the proprietary rights of these third parties. These claims of infringement may lead to protracted and costly litigation, which could require us to pay substantial damages or have the sale of our products stopped by an injunction. Infringement claims could also cause product delays or require us to redesign our products and these delays could result in the loss of substantial revenues. We may also be required to obtain a license from the third party or cease activities utilizing the third party s proprietary rights. We may not be able to enter into such a license or such a license may not be available on commercially reasonable terms. Accordingly, the loss of important intellectual property rights could hinder our ability to sell our products, or make the sale of these products more expensive.

Table of Contents

Our efforts to protect our intellectual property may be less effective in certain foreign countries, where intellectual property rights are not as well protected as in the United States. The laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the United States, and many U.S. companies have encountered substantial problems in protecting their proprietary rights against infringement abroad. Consequently, there is a risk that we may be unable to adequately protect our proprietary rights in certain foreign countries. If this occurs, it would be easier for our competitors to develop and sell competing products in these countries.

The absence of significant market liquidity in our common stock could impact the ability of our shareholders to purchase and sell larger blocks, the attractiveness of our stock to institutional shareholders, and the market value of our common stock. There were 6,496,805 shares of our common stock outstanding as of December 31, 2013. Although our common stock is traded in the NASDAQ Global Market, in part because of the number of shares we have outstanding and available for trading, the daily trading volume in our stock is low, averaging less than 60,000 shares per day. Shareholders wishing to purchase or sell larger blocks of stock may not be able to do so quickly, and disposal by any shareholder of a significant block of stock could adversely affect the sale price in the marketplace. Further, institutional investors often have policies against investment in stock that is illiquid, and many institutional investors may elect not to purchase or hold our stock because of the inability to dispose of it. The reduced institutional interest, as well as the lack of current evaluations by securities analysts, has had and can be expected to continue to have a further adverse impact on the market price and liquidity of our common stock.

Table of Contents

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

We lease a 50,724 square foot mixed office and warehouse facility built to our specifications in Golden Valley, Minnesota, which functions as our corporate headquarters and primary manufacturing facility for our SMT and semiconductor sensor products, including the sensors used in our inspection system products. Our lease for the Golden Valley facility expires December 31, 2018, contains an escalation clause and two renewal options of three years each.

We lease a 19,805 square foot mixed office and warehouse facility in Singapore that serves as a sales, development and final assembly and integration facility for our inspection system products. Our lease for the Singapore facility expires July 24, 2016, contains an escalation clause and one three year renewal option. As of December 31, 2013, we also have operating leases in the United Kingdom and China, which expire in June 2018 and September 2014, respectively. We believe that our leased facilities are adequate for our anticipated needs for the foreseeable future.

ITEM 3. LEGAL PROCEEDINGS

We are not currently subject to any material pending or threatened legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

None.

Table of Contents

PART II.

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

Our common stock is traded on the Nasdaq Global Market. The following table sets forth, for the fiscal periods indicated, the high and low sales prices for our common stock as reported by the Nasdaq Global Market. These prices do not reflect adjustments for retail markups, markdowns or commissions.

	2013		2012	
Quarter	**High**	**Low**	**High**	**Low**
First	$ 7.90	$ 5.98	$ 9.75	$ 7.29
Second	$ 6.90	$ 5.26	$ 10.21	$ 7.81
Third	$ 6.82	$ 5.42	$ 8.64	$ 6.06
Fourth	$ 6.60	$ 4.91	$ 8.12	$ 6.17

As of February 28, 2014, there were approximately 200 holders of record of our common stock and approximately 3,000 beneficial holders. We have never paid a dividend on our common stock. Dividends are payable at the discretion of the Board of Directors out of funds legally available. Our Board has no current intention of paying dividends.

Company repurchase of equity securities:

Period	**(a) Total Number of Shares Purchased**	**(b) Average Price Paid per Share**	**(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)**	**(d) Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs (1)**
October 1, 2013 to October 31, 2013	110,853	$ 5.63	110,853	$ 341,429
November 1, 2013 to November 30, 2013	66,800	$ 5.11	66,800	$
Total	177,653	$ 5.43	177,653	$

(1) On October 30, 2012, we publicly announced a $3.0 million share repurchase program. We adopted a 10b5-1 trading plan to implement the program. As of December 31, 2013 the plan was completed and no further share repurchases will be made under the October 30, 2012 program. The amount reflected in column (d) represents the dollar value of shares that remain to be repurchased under the plan.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable

Table of Contents

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

Results of Operations for the Two Years Ended December 31, 2013:

General Overview

Our products are sold primarily into the electronics assembly, DRAM and flash memory, and semiconductor fabrication capital equipment markets. We sell products in these markets both to original equipment manufacturers of production equipment and to end-user customers that assemble circuit boards and semiconductor wafers and devices.

We experienced reduced year over year demand for our surface mount technology (SMT) sensor and system products in 2013 due to weak conditions in the SMT capital equipment market, the sharp downturn in the laptop personal computer market where we historically have sold more of our SMT inspection systems, and slower than anticipated market acceptance of our new automated optical inspection (AOI) products. Customer acceptance of our new QX600 AOI inspection system products, which are expected to address market segments outside the laptop computer space, have been somewhat impacted by aggressive marketing by competitors. Reductions in sales of SMT sensor and system products were offset in part by higher sales of our WaferSense® semiconductor products, which grew by over 20% in 2013 to $5.7 million.

We have taken concrete steps to address our losses and move towards revenue growth and profitability. In November 2013, we reduced our workforce by almost 20%, mainly impacting employees working in the area of SMT inspection systems where we experienced large revenue declines in 2013. Critical engineering employees working on key next generation technologies and products were not impacted. Recent product introductions mark our first steps toward strengthening our competitive position in our current markets, particularly in the mobile computing and high performance segments of the SMT inspection systems market. We are encouraged by initial acceptance of our new SE600 solder paste inspection (SPI) system, which we believe has the improved performance and usability we need to gain SPI market share. We recorded our first sales of the SE600 SPI system in the fourth quarter of 2013. The SE600 is doing very well in a number of customer evaluations, including head to head competition against the industry leading SPI supplier, which makes us believe we are capable of gaining share in the SPI market. We also continued to post solid sales of our new SE500ULTRA SPI system, which offers a 30% increase in inspection speed for high-volume production runs. We have earmarked additional funds to expand our marketing efforts, and have committed resources to developing new SMT products for conformal coating and memory inspection and will be launching a new WaferSense product for particle monitoring in reticle size.

We are developing a new high speed metrology grade 3D measurement technology that we expect to be market ready in 2014. Our first commercial application of this technology is expected to be in a 3D AOI SMT inspection system that we anticipate launching by the end of 2014. We also intend to expand sales of this technology into adjacent targeted markets that require high precision optical 3D inspection. On March 14, 2014, we acquired substantially all of the assets of Laser Design Services, Inc. (LDI) a $6.0 million provider of 3D scanning products and measurement services headquartered in Minneapolis, Minnesota for aggregate consideration of $2.7 million cash, plus the assumption of certain current liabilities. The acquisition of LDI is part of our strategic repositioning as a high-precision 3D sensor technology company, and provides us with access to the growing market for general purpose 3D metrology. The addition of LDI also will enable us to leverage the 3D sensor technology that we are developing in-house.

We are targeting double digit revenue growth in 2014 and 2015, excluding the revenue impact from the acquisition of LDI. Based on our outlook for higher sales and reduced expenses given our recent workforce reduction, we anticipate a significantly reduced operating loss in 2014. With cash and marketable securities of $23.2 million at the end of 2013, we believe we have the resources required to attain our growth objectives over the next several years.

Our ability to achieve our forecast and to implement our strategy effectively is subject to numerous uncertainties and risks, including the risks identified in Item 1A of this Report on Form 10-K. We cannot assure you that our efforts will be successful.

Table of Contents

Revenues

Our revenues decreased by 20% to $33.3 million in 2013 from $41.6 million in 2012 and decreased by 32% in 2012 from $61.1 million in 2011. The following table sets forth, for the years indicated, revenues by product line (in thousands):

(In thousands)	2013	2012	2011
SMT Sensors	$ 10,792	$ 13,187	$ 20,844
Semiconductor Sensors	7,096	6,363	6,940
SMT Inspection Systems	15,420	22,094	33,303
Total	$ 33,308	$ 41,644	$ 61,087

Revenue from sales of SMT sensors decreased by $2.4 million or 18% to $10.8 million in 2013, and decreased by $7.7 million, or 37%, to $13.2 million in 2012, from $20.8 million in 2011. The decrease in sales of SMT sensors in 2013 and 2012 resulted largely from a sluggish global economy and weak SMT market conditions, causing manufacturers to delay plans for new capacity expansion. Our SMT sensor customers were also impacted by increased competition and particularly difficult conditions in key geographies. We anticipate new product introductions by SMT sensor customers will increase our sales of SMT sensors in future periods. In addition, sales of solar wafer alignment cameras for the photovoltaic cell market were minimal in 2013 and 2012, down from $2.1 million in 2011, reflecting the continued impact of over-capacity in the solar market.

Revenue from sales of our semiconductor sensors increased by $733,000 or 12% to $7.1 million in 2013, and decreased by $577,000, or 8%, to $6.4 million in 2012, from $6.9 million in 2011. The increase in sales of semiconductor products in 2013 was driven by higher sales of WaferSense products. Sales of these products were up 20% in 2013 to $5.7 million. Sales of WaferSense products in 2012 were roughly flat on a year over year basis at $4.8 million, mainly due to weak market conditions late in the year. We anticipate that the increased marketing we are devoting to WaferSense products will result in growing market awareness of these products and enhanced sales. The decrease in sales of semiconductor sensors in 2012 was driven by weak market conditions and continuing declines in sales of older wafer mapper and frame grabber products. We anticipate that sales of these products will continue to slowly decline in the future, given that the products are mature, and any new investment is expected to be minimal.

Revenue from sales of our SMT inspection system products decreased by $6.7 million or 30% to $15.4 million in 2013, and decreased by $11.2 million, or 34%, to $22.1 million in 2012, from $33.3 million in 2011. Revenue from sales of SPI systems decreased by $576,000 or 8% to $6.7 million in 2013, and decreased by $8.6 million, or 54%, to $7.2 million in 2012, from $15.8 million in 2011. Revenue from sales of AOI systems decreased by $5.8 million or 46% to $7.0 million in 2013, and decreased by $2.9 million, or 18%, to $12.8 million in 2012, from $15.7 million in 2011.

Sales of SMT inspection systems in 2013 and 2012 were impacted by weak conditions in the SMT capital equipment market, the sharp down-turn in the laptop computer market and slower than anticipated market acceptance of our new AOI products. Because our SMT inspection system products have historically been sold to customers that produce laptop computers, the increase in tablet and other mobile computing devices and decline in laptop sales, has impacted capital purchasing of those customers and our sales. Sales of AOI systems were hit particularly hard by the shift in the electronics market away from laptop computers. The AOI market accounts for approximately two-thirds of the total inspection systems market. Although we have designed our new QX600 AOI inspection system products to address market segments outside the laptop computer space, acceptance of those systems has been somewhat impacted by aggressive marketing by competitors. We believe that new system products that we plan to introduce, particularly those based on our new 3D measurement technology, will strengthen our future competitive position in the SMT inspection systems market, resulting in market share increases, and that technology trends toward smaller components and increased production speeds will continue to drive demand in the future.

Export revenue totaled $26.0 million or 78% of total revenue in 2013, compared to $35.5 million or 85% of total revenue in 2012. Export revenue as a percentage of total revenue declined in 2013 because export sales of SMT sensors were lower in 2013 when compared to 2012. In addition, lower sales of inspection systems in China due to the shift in the electronics market away from laptop computers also impacted our export revenue.

Cost of Revenues and Gross Margin

Cost of revenue decreased by $4.8 million or 20% to $18.7 million in 2013 from $23.5 million in 2012, and decreased by $9.6 million or 29% in 2012, from $33.0 million in 2011. The decreases in cost of revenue were due to the corresponding sales decreases of 20% in 2013 and 32% in 2012. Items included in cost of revenue that fluctuate with the level of sales include raw materials, direct labor and factory overhead costs. Total gross margin as a percentage of sales was 44% in both 2013 and 2012.

Table of Contents

Gross margin as a percentage of SMT and semiconductor sensor sales was 51% in 2013, compared to 47% in 2012, and 52% in 2011. The increase in gross margin percentage in 2013 was due largely to proportionately more sales of higher margin WaferSense products and initial sales of higher margin next generation SMT sensors, combined with a reduction in sales of older, lower margin sensor products. Gross margins in 2013 have also benefited from the efficiencies resulting from our restructuring activities last year. The decrease in gross margin percentage in 2012 was due largely to sluggish sales of certain higher margin SMT sensors, including the absence of revenues from solar wafer alignment cameras. Factory de-leverage also had an impact on gross margins in 2012.

Gross margin as a percentage of SMT inspection systems sales was 38% in 2013, compared to 41% in both 2012 and 2011. The decrease in gross margin percentage in 2013 was due largely to the shift in sales mix of our SMT inspection systems to lower margin SPI systems and away from higher margin QX AOI systems. Sales of our 2D AOI systems were hit particularly hard by the shift in the electronics market away from laptop computers and by our competitors stressing the importance of 3D versus 2D AOI.

Our markets are highly price competitive, particularly the electronic assembly market, resulting in continual pressure on our gross margins. We compensate for pricing pressure by introducing new products with more features and improved performance and through manufacturing cost reduction programs. For example, our latest SMT inspection system products combine a reduction in cost with enhanced performance. Other recently introduced products, including our next generation SMT and WaferSense sensors have more favorable margins than many of our existing products.

Operating Expenses

Operating expenses as a percentage of revenue were higher in 2013 when compared to 2012 due to the year over year decline in our revenue. We implemented restructuring actions in the fourth quarter of 2013 to reduce our expenses given the recent revenue declines.

Research and development expenses were $7.5 million or 23% of revenue in 2013, $7.7 million or 19% of revenue in 2012 and $7.8 million or 13% of revenue in 2011. The slight decrease in research and development expense in 2013 resulted from lower wages and benefits due to our 2013 and 2012 restructuring activities, offset in part by research and development efforts for new products, including our QX600 AOI system, our next-generation SE600 SPI system and development of our new MRS high speed metrology grade 3D measurement technology. The slight decrease in research and development expenses in 2012 resulted from savings of $200,000 related to consolidation of research and development for our semiconductor products in Minneapolis, lower project costs for proto-types and consulting, offset in part by higher expenses for additional wages, benefits and headcount additions to strengthen our inspection systems product development team.

Selling, general and administrative expenses were $12.3 million or 37% of revenue in 2013, $12.8 million or 31% of revenue in 2012 and $14.5 million or 24% of revenue in 2011. The decrease in selling, general and administrative expense in 2013 was due to a reduction in commissions for third party sales representatives due to the decline in SMT system sales, efficiencies from our restructuring activities last year, offset in part by an increase in professional fees related to our acquisition of LDI. The $1.7 million or 12% decrease in selling, general and administrative expense in 2012 was due to a reduction in commissions for third party sales representatives of $712,000, and a reduction in internal sales commissions and incentive bonuses of $715,000, resulting from the 32% decline in 2012 sales. Selling, general and administrative expense was reduced by $171,000 in 2013 and $73,000 in 2012 due to a reduction in our allowance for doubtful accounts, resulting from partial recovery of a receivable we reserved for in 2009.

Restructuring and Severance Costs

In the fourth quarter of 2013, we initiated a plan to reduce our global workforce by approximately 30 employees. Expenses for contract workers were also reduced. The workforce reduction was undertaken in response to soft sales, particularly SMT inspection systems, in order to strengthen our commitment to cost control, minimize losses and to improve focus on market support for our products. Annual expense savings starting in the first quarter of 2014 associated with the global workforce reduction and other cost containment actions is anticipated to total approximately $2.0 million. Critical engineering employees working on key next generation technologies and products were not impacted. A portion of the anticipated savings may be used to fund new growth initiatives in future periods. Restructuring and severance expense in the fourth quarter of 2013, primarily resulting from the workforce reduction, totaled $952,000.

In the third quarter of 2012, we consolidated research and development for our semiconductor products into our Minneapolis headquarters facility, resulting in a $217,000 restructuring charge for severance and relocation expenses. We believe this move streamlined our business and provided our sensor engineers in Minneapolis with more efficient access to our WaferSense technology and products. Additional severance costs of $523,000 were incurred in the fourth quarter of 2012 when we reduced our global workforce by approximately 10% or 20 employees in response to the sluggish economy and weak SMT, semiconductor and solar market conditions.

Table of Contents

A summary of our restructuring accrual follows:

(In thousands)	Fourth Quarter 2013 Workforce Reduction	Fourth Quarter 2012 Workforce Reduction	Semi R&D Consolidation	Total
Balance, December 31, 2011	$	$	$	$
Cost incurred		523	217	740
Payments made		331	217	548
Balance, December 31, 2012		192		192
Cost incurred	952			952
Payments made	441	192		633
Balance, December 31, 2013	$ 511	$	$	$ 511

The remaining accrued severance in the amount of $511,000 at December 31, 2013 will be paid prior to July 1, 2014.

Interest Income and Other

Interest income and other includes interest earned on investments and gains and losses associated with foreign currency transactions, including intercompany financing transactions associated with our subsidiaries in the United Kingdom and Singapore. We recognized a loss from foreign currency transactions, primarily intercompany financing transactions, of $117,000 in 2013, compared to a loss from foreign currency transactions of $11,000 in the prior year. In 2012, we also recognized a $42,000 permanent impairment loss on our investment in an equity security.

Provision for Income Taxes and Effective Income Tax Rate

We recorded an income tax benefit of $186,000 in 2013 reflecting an effective tax rate of 2.9%. The benefit resulted from a $536,000 reduction in our reserve for income taxes due to the expiration of the statute of limitations for various tax exposures, offset in part by the related impact on deferred taxes and our valuation allowance, minimal state income tax expense and foreign income tax expense associated with our subsidiaries in the United Kingdom and China. At December 31, 2013, we carried a full valuation allowance for all of our United States and Singapore based deferred tax assets. The valuation allowances may be reversed once our operations and outlook materially strengthen.

We recorded income tax expense of $3.6 million in 2012 because of the $5.7 million non-cash charge we recorded as a valuation allowance against substantially all of our United States and Singapore based deferred tax assets due to the decline in our level of profitability and near term financial outlook.

We file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. Our 2012 and 2011 federal income tax returns are still subject to examination by the Internal Revenue Service. During 2012, the Internal Revenue Service completed an audit of our 2010 federal income tax return. The audit resulted in no change to our reported level of taxable income or income tax liability, and had no impact on our financial condition. The statute of limitations for examination of our federal returns for years prior to 2010 expired in 2013. We are no longer subject to state and local income tax examinations by tax authorities for years before 2009.

Liquidity and Capital Resources

Our cash and cash equivalents decreased by $4.2 million in 2013, principally resulting from $2.2 million of cash used in operating activities, $1.7 million of proceeds from maturities and sales of marketable securities, net of purchases of marketable securities, purchases of fixed asset and capitalized patent costs totaling $749,000, and $3.0 million of cash used to repurchase common stock. Our cash and cash equivalents fluctuate in part because of maturities of marketable securities, and investment of cash balances in marketable securities, or from other sources of cash. Accordingly, we believe the combined balances of cash and marketable securities provide a more reliable indication of our available liquidity. Combined balances of cash and marketable securities decreased by $6.0 million to $23.2 million as of December 31, 2013 from $29.2 million as of December 31, 2012.

Table of Contents

Operating activities used $2.2 million of cash in 2013. Cash used by operations included the net loss of $6.2 million, which included non-cash expenses totaling $2.5 million for depreciation and amortization, provision for doubtful accounts, deferred taxes, non-cash losses from foreign currency transactions, realized losses on available-for-sale securities transactions and stock compensation expenses. Changes in operating assets and liabilities providing cash included decreases in inventories of $561,000, collection of the $1.3 million of income tax refunds previously recorded as a receivable, and an increase in accounts payable of $182,000. Changes in operating assets and liabilities using cash included an increase in accounts receivable of $382,000 and a decrease in accrued expenses of $253,000. The reduction in inventories was due to improved sales forecasting and better inventory management. The increase in accounts payable was due to the timing of year-end inventory purchases and vendor payments. The increase in accounts receivable was due to higher sales in the fourth quarter of 2013 compared to the fourth quarter of 2012. Accrued expenses were lower due to a reduction in our reserve for income taxes offset in part by higher restructuring accruals at December 31, 2013.

Operations provided virtually no cash in 2012, reflecting our net loss of $6.7 million, offset in part by non-cash expenses totaling $7.0 million for depreciation and amortization, provision for doubtful accounts, deferred income taxes, non-cash gains from foreign currency transactions, unrealized loss on available-for-sale equity security and stock compensation costs. Deferred income tax expense of $4.8 million, resulting from the valuation allowance we recorded in 2012, was the largest component of total non-cash expenses. Changes in operating assets and liabilities providing cash included decreases in accounts receivable of $5.9 million. Changes in operating assets and liabilities using cash included increases in inventory of $1.8 million, increases in refundable income taxes of $1.1 million, decreases in accounts payable of $1.7 million, decreases in advance customer payments of $299,000 and decreases in accrued expenses of $1.4 million. The decrease in accounts receivable and advance customer payments resulted from substantially lower sales levels and activity in the fourth quarter of 2012, compared to the fourth quarter of 2011. Inventories increased as 2012 sales levels were lower than anticipated. Higher income tax refunds receivable were due to income tax payments made in 2012 and an increase in refundable income taxes resulting from our loss in 2012. Accrued expenses and other liabilities decreased due to lower commission and incentive compensation accruals, resulting from lower levels of revenue and profitability, and payment of 2011 incentive compensation accruals in 2012. The decrease in accounts payable in 2012 resulted from a significant reduction in new raw material purchases as we worked to reduce inventory levels resulting from lower than anticipated sales.

Investing activities provided $991,000 of cash in 2013, compared to using $6.7 million of cash in 2012. Changes in the level of investment in marketable securities, resulting from the purchases, sales and maturities of those securities provided $1.7 million of cash in 2013, compared to using $5.2 million of cash in 2012. We used $749,000 of cash in 2013 for the purchase of fixed assets and capitalized patent costs, compared to using $1.5 million of cash for this purpose in 2012. The higher level of fixed asset purchases in 2012 was due to new network storage equipment, office improvement and research and development test equipment.

Financing activities used $2.9 million of cash in 2013, compared to providing $145,000 of cash in 2012. Common stock repurchases totaled $3.0 million in 2013, compared to $21,000 in 2012. Our share repurchase program concluded in the fourth quarter of 2013 and no further repurchases are anticipated. Cash received from financing activities in 2013 and 2012 include proceeds from the exercise of employee stock options and issuance of common stock under our Employee Stock Purchase Plan.

At December 31, 2013, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of establishing off-balance sheet arrangements or other contractually narrow or limited purposes.

Except for obligations under facility leases and purchase contracts, we had no material commitments for expenditures as of December 31, 2013. Purchase commitments for inventory can vary based on the volume of revenue and resulting inventory requirements. We entered into a new lease for our existing facility in Singapore that will run for a period of 36 months from July 2013 through July 2016. Our rent expense under the new lease will increase by approximately $60,000 per year. In March 2014, we acquired substantially all of the assets of LDI for aggregate consideration of $2.7 million cash, plus the assumption of certain current liabilities. We continually evaluate investment opportunities that come to our attention and could make another significant commitment in the future.

Our cash, cash equivalents and marketable securities totaled $23.2 million at December 31, 2013. We believe that on-hand cash, cash equivalents and marketable securities, coupled with anticipated future cash flow from operations, will be adequate to fund our cash flow needs for the foreseeable future, including contractual obligations discussed above.

Inflation and Foreign Currency Transactions

Changes in our revenues have resulted primarily because of changes in the level of unit shipments due to competitive factors and the relative strength or weakness of the worldwide electronics and semiconductor fabrication capital equipment markets. We believe that inflation has not had a significant effect on our operations.

Table of Contents

Most of our international export sales are negotiated, invoiced and paid in U.S. dollars. We manufacture our SMT inspection system products in Singapore and a portion of our raw material purchases are denominated in Singapore dollars. We also have R&D and sales personnel located in Singapore and sales offices located in other parts of the world. Although currency fluctuations do not significantly affect our revenue, they can impact our costs and influence the price competitiveness of our products and the willingness of existing and potential customers to purchase units.

We enter into foreign exchange forward contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies associated with our subsidiary in Singapore. These transactions are designated as cash flow hedges. The effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income (loss) and reclassified into earnings in the same period during which the hedged transaction affects earnings. The maximum length of time over which we hedge our exposure to the variability in future cash flows is 12 months and, accordingly, at December 31, 2013, all of our open foreign exchange forward contracts had maturities of one year or less. The dollar equivalent gross notional amount of our foreign exchange forward contracts designated as cash flow hedges at December 31, 2013 was approximately $6.5 million.

At December 31, 2013, our open foreign exchange forward contracts were in an unrealized loss position equal to $58,000 on a pre-tax basis due to a strengthening of the U.S. dollar in relation to the Singapore dollar during the time from when we first entered into these contracts through December 31, 2013. If the exchange rate between the U.S. dollar and the Singapore dollar were to remain unchanged over the next twelve months, we would realize this pre-tax loss through our statement of operations. If the U.S. dollar were to further strengthen, the unrealized losses on our open foreign exchange forward contracts would increase. However, if the U.S. dollar strengthens, our costs, when converted from Singapore dollars to U.S. dollars, would decline, and because we do not fully hedge all of our future anticipated cash flows that are denominated in Singapore dollars, the decline in costs would normally exceed the increased loss from hedging. Conversely, if the U.S. dollar were to weaken in future periods in relation to the Singapore dollar, the loss on our open foreign exchange forward contracts would be reduced, but our costs would increase and the increased costs in U.S. dollar terms would normally exceed the reduction in the loss from hedging. The ultimate impact of any fluctuation in the relationship between the U.S. dollar and Singapore dollar is dependent on the level of Singapore denominated cash flows in future periods.

Critical Accounting Policies and Estimates

Our discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate these estimates, including those related to revenue recognition, bad debts, warranty obligations, inventory valuation, intangible assets, and income taxes. We base these estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions. The estimates and judgments that we believe have the most effect on our reported financial position and results of operations are as follows:

Revenue Recognition.

Revenue from all customers, including distributors, is recognized when all significant contractual obligations have been satisfied and collection of the resulting receivable is reasonably assured. Generally, revenues are recognized upon shipment under FOB shipping point terms, and include shipping and handling costs. Estimated returns and warranty costs are recorded at the time of sale. Sales of some surface mount technology (SMT) system products may require customer acceptance due to performance or other acceptance criteria included in the terms of sale. For these SMT product sales, revenue is recognized at the time of customer acceptance. Our multiple deliverable arrangements typically include the sale of an SMT inspection system, installation and training, and in some cases, an extended warranty. Revenue from installation and training are recognized as the services are provided. Revenue from extended warranties is recognized ratably over the warranty period.

When a sale involves multiple elements, revenue is allocated to each respective element at inception of an arrangement using the relative selling price method. Selling price is determined based on a selling price hierarchy, consisting of vendor specific objective evidence (VSOE), third party evidence or estimated selling price. Management s best estimate of the selling price of an SMT machine is based on the cost build-up of the product and a reasonable margin based on geographic location and market conditions. We use VSOE to establish fair value for extended warranty, installation and training services. If VSOE is not available to establish fair value for extended warranty, installation and training services, we estimate a selling price based on the cost-build-up for the particular service and a reasonable gross margin. Costs related to products delivered are recognized in the period revenue is recognized. Cost of revenues consists primarily of direct labor, manufacturing overhead, raw materials and components and excludes amortization of intangible assets.

Table of Contents

Allowance for Doubtful Accounts.

We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. In making the determination of the appropriate allowance for doubtful accounts, we consider specific accounts, historical write-offs, changes in customer relationships and credit worthiness and concentrations of credit risk. Specific accounts receivable are written-off once a determination is made that the account is uncollectible. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. The allowance for doubtful accounts is $705,000 at December 31, 2013 and $775,000 at December 31, 2012.

Allowance for Warranty Expenses.

We provide for the estimated cost of product warranties at the time revenue is recognized. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of component suppliers, warranty obligations are affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required. The allowance for warranties was $513,000 at December 31, 2013 and $694,000 at December 31, 2012.

Inventory Write Downs.

We write down inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. We formulate our assumptions regarding future demand and market conditions based on order trends and input from customers regarding their future requirements. If actual market conditions are less favorable than those projected, or if in the future we decide to discontinue sales and marketing of any of our products, additional inventory write-downs may be required. Excess and obsolete inventories have been written down by $757,000 at December 31, 2013 and $489,000 at December 31, 2012.

Valuation of Intangible and Long-Lived Assets.

We assess the impairment of identifiable intangible assets, long lived assets and related goodwill whenever events or changes in circumstances indicate the carrying value may not be recoverable. In addition, goodwill is tested for impairment annually. Factors we consider important, which could trigger an impairment review include the following:

- Significant under-performance relative to expected historical or projected future operating results.
- Significant changes in the manner of our use of the acquired assets or the strategy for our overall business.
- Significant negative industry or economic trends.
- Significant decline in our stock price for a sustained period; and our market capitalization relative to net book value.
- For intangible and long-lived assets, if the carrying value exceeds the undiscounted cash flows from such asset.
- For goodwill, if the carrying value of our net assets (net book value) exceeds fair value.

When we determine that the carrying value of intangibles, long-lived assets and related goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we measure any potential impairment based on a projected discounted cash flow method using a discount rate that we believe is commensurate with the risk inherent in our current business model. Annually, we also test for impairment of goodwill by estimating our fair value utilizing the income approach. The income approach is a valuation technique under which we estimate future cash flows using financial forecasts. Future estimated cash flows are discounted to their present value to calculate fair value. When considering fair value, we also give consideration to the control premium in excess of our current market capitalization that might be obtained from a third party acquirer. These assumptions require significant judgment and actual results may differ from assumed or estimated amounts.

At December 31, 2013 and 2012 we have goodwill equal to $569,000. Our recent analyses performed in 2013 and 2012 indicate that this goodwill is not impaired. However, our conclusion could change in the future, if our assumptions about future economic conditions, revenue growth or profitability change. Any resulting impairment charge could have a material effect on our financial position and results of operations in the future.

Table of Contents

Income Taxes.

Significant judgment is required in determining worldwide income tax expense based upon tax laws in the various jurisdictions in which we operate. We have established reserves for uncertain tax positions by applying the more likely than not threshold (i.e., a likelihood of occurrence greater than fifty percent). The recognition threshold is met when an entity concludes that a tax position, based solely on its technical merits, is more likely than not to be sustained upon examination by the relevant taxing authority. Those tax positions failing to qualify for initial recognition are recognized in the first interim period in which they meet the more likely than not standard, or are resolved through negotiation or litigation with the taxing authority, or upon expiration of the statute of limitations. De-recognition of a tax position that was previously recognized occurs when an entity subsequently determines that a tax position no longer meets the more likely than not threshold of being sustained. All tax positions are analyzed periodically and adjustments are made as events warrant modification, such as the completion of audits or the expiration of statutes of limitations, which may result in future charges or credits to income tax expense.

As part of the process of preparing consolidated financial statements, management is required to estimate income taxes in each of the jurisdictions in which we operate. This process involves estimating the current tax liability, as well as assessing temporary differences arising from the different treatment of items for financial statement and tax purposes. These differences result in deferred tax assets and liabilities, which are recorded on our balance sheet.

We currently have significant deferred tax assets as a result of temporary differences between taxable income on our tax returns and U.S. GAAP income, research and development tax credit carry forwards and federal, state and foreign net operating loss carry forwards. A deferred tax asset generally represents future tax benefits to be received when temporary differences previously reported in our financial statements become deductible for income tax purposes, or when net operating loss carry forwards or credits are applied against future taxable income, or when tax credit carry forwards are utilized on our tax returns. We assess the realizability of our deferred tax assets and the need for a valuation allowance based on the guidance provided in current financial accounting standards.

Significant judgment is required in determining the realizability of our deferred tax assets. The assessment of whether valuation allowances are required considers, among other matters, the nature, frequency and severity of any current and cumulative losses, forecasts of future profitability, the duration of statutory carry forward periods, our experience with loss carry forwards not expiring unused and tax planning alternatives.

At December 31, 2013 we concluded that a $9.6 million valuation allowance is needed for all of our United States and Singapore based deferred tax assets due to the decline in our level of profitability and our near term financial outlook. In analyzing the need for a valuation allowance, we first considered our history of cumulative operating results for income tax purposes over the past three years in each of the tax jurisdictions where we operate, our financial performance in recent quarters, statutory carry forward periods and tax planning alternatives. Finally, we considered both our near and long-term financial outlook and timing regarding when we might return to profitability. After considering all available evidence both positive and negative, we concluded that the valuation allowance is needed for all of our U.S. and Singapore based deferred tax assets. A similar analysis was performed in 2012, resulting in a $6.3 million valuation allowance at December 31, 2012 for substantially all of our U.S. and Singapore based deferred tax assets.

Deferred tax assets at December 31, 2013, include $156,000 for net operating loss carry forwards incurred in the UK by CyberOptics Ltd., which was acquired in 1999. A valuation allowance has not been recorded against these deferred tax assets. The utilization of these net operating loss carry forwards is dependent on CyberOptics Ltd. s ability to generate sufficient UK taxable income during the carry forward period.

Derivatives and Hedging.

We enter into foreign exchange forward contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies associated with our subsidiary in Singapore. These transactions are designated as cash flow hedges and are recorded in the accompanying balance sheet at fair value. The effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income (loss) and reclassified into earnings in the same period during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings. The maximum length of time over which we hedge our exposure to the variability in future cash flows is 12 months. Accordingly, at December 31, 2013 and December 31, 2012, all of our open foreign exchange forward contracts had maturities of one year or less. The dollar equivalent gross notional amount of our foreign exchange forward contracts designated as cash flow hedges was approximately $6.5 million at December 31, 2013 and $8.3 million at December 31, 2012.

Table of Contents

We estimate hedge ineffectiveness on a quarterly basis by considering the difference between the prices of a hypothetical forward contract maturing on the last day of a given month, to the prices of a series of hypothetically perfect daily forward contracts. Hedge ineffectiveness and the amounts excluded from effectiveness testing recognized in earnings on cash flow hedges were not material for the years ended December 31, 2013 and 2012. At December 31, 2013, the fair value of our foreign exchange forward contracts representing a loss in the amount of $58,000 was recorded in accrued expenses in the accompanying consolidated balance sheet. At December 31, 2012, the fair value of foreign exchange forward contracts representing a gain in the amount of $153,000 was recorded in other current assets in the accompanying consolidated balance sheet.

The fair value for our foreign exchange forward contracts is based on foreign currency spot and forward rates obtained from reputable financial institutions with resulting valuations periodically validated by obtaining foreign currency spot rates and forward quotes from other industry standard sources or third party or counterparty quotes.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

Table of Contents

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

CONSOLIDATED BALANCE SHEETS
CYBEROPTICS CORPORATION

(In thousands, except share information)	December 31, 2013	December 31, 2012
ASSETS		
Cash and cash equivalents	$ 3,101	$ 7,340
Marketable securities	9,402	11,438
Accounts receivable, less allowance for doubtful accounts of $705 at December 31, 2013 and $775 at December 31, 2012	6,562	6,129
Inventories	11,331	12,533
Income tax refunds receivable		1,325
Other current assets	1,104	1,338
Deferred tax assets	77	100
Total current assets	31,577	40,203
Marketable securities, long-term	10,742	10,435
Equipment and leasehold improvements, net	1,272	1,719
Intangible and other assets, net	136	189
Goodwill	569	569
Other assets	194	142
Deferred tax assets	85	363
Total assets	$ 44,575	$ 53,620
LIABILITIES AND STOCKHOLDERS EQUITY		
Accounts payable	$ 2,630	$ 2,476
Advance customer payments	552	563
Accrued expenses	2,241	1,840
Deferred tax liability		29
Total current liabilities	5,423	4,908
Deferred rent	352	408
Deferred warranty revenue	165	146
Deferred tax liability	6	
Reserve for income taxes	150	686
Total liabilities	6,096	6,148
Commitments and contingencies		
Stockholders equity:		
Preferred stock, no par value, 5,000,000 shares authorized, none outstanding		
Common stock, no par value, 25,000,000 shares authorized, 6,496,805 shares issued and outstanding at December 31, 2013 and 6,969,772 shares issued and outstanding at December 31, 2012	28,968	31,410
Accumulated other comprehensive loss	(540)	(157)
Retained earnings	10,051	16,219
Total stockholders equity	38,479	47,472
Total liabilities and stockholders equity	$ 44,575	$ 53,620

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THE CONSOLIDATED FINANCIAL STATEMENTS.

Table of Contents

CONSOLIDATED STATEMENTS OF OPERATIONS
CYBEROPTICS CORPORATION

(In thousands, except per share amounts)	Year Ended December 31, 2013	2012
Revenues	$ 33,308	$ 41,644
Cost of revenues	18,658	23,465
Gross margin	14,650	18,179
Research and development expenses	7,519	7,748
Selling, general and administrative expenses	12,345	12,802
Restructuring and severance costs	952	740
Loss from operations	(6,166)	(3,111)
Interest income and other	(188)	(24)
Loss before income taxes	(6,354)	(3,135)
Income tax provision (benefit)	(186)	3,576
Net loss	$ (6,168)	$ (6,711)
Net loss per share Basic	$ (0.91)	$ (0.97)
Net loss per share Diluted	$ (0.91)	$ (0.97)
Weighted average shares outstanding Basic	6,798	6,946
Weighted average shares outstanding Diluted	6,798	6,946

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THE CONSOLIDATED FINANCIAL STATEMENTS.

Table of Contents

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
CYBEROPTICS CORPORATION

(In thousands)	Year Ended December 31, 2013	2012
Net loss	$ (6,168)	$ (6,711)
Other comprehensive income (loss), before tax:		
Foreign currency translation adjustments	(211)	376
Unrealized gains (losses) on available-for-sale securities:		
Unrealized gains (losses)	34	(79)
Reclassification adjustment for other-than-temporary impairment included in net loss		42
Reclassification adjustment for (gains) losses included in net loss	21	(8)
Total unrealized gains (losses) on available-for-sales securities	55	(45)
Unrealized gains (losses) on foreign exchange forward contracts:		
Unrealized gains (losses)	(280)	591
Reclassification adjustment for losses included in net loss	53	74
Total unrealized gains (losses) on foreign exchange forward contracts	(227)	665
Other comprehensive income (loss), before tax	(383)	996
Income tax provision related to items of other comprehensive income (loss)		227
Other comprehensive income (loss), net of tax	(383)	769
Total comprehensive loss	$ (6,551)	$ (5,942)

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THE CONSOLIDATED FINANCIAL STATEMENTS.

Table of Contents

CONSOLIDATED STATEMENTS OF CASH FLOWS
CYBEROPTICS CORPORATION

(In thousands)	Year Ended December 31, 2013	2012
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (6,168)	$ (6,711)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	1,673	1,843
Provision for doubtful accounts	(51)	(165)
Deferred taxes	279	4,808
Foreign currency transaction (gains) losses	87	(12)
Realized (gains) losses on available-for-sale securities	21	(8)
Unrealized loss on available-for-sale equity security		42
Stock compensation costs	447	449
Changes in operating assets and liabilities:		
Accounts receivable	(382)	5,945
Inventories	561	(1,801)
Income tax refunds receivable	1,325	(1,129)
Other assets	31	154
Accounts payable	182	(1,696)
Advance customer payments	8	(299)
Accrued expenses	(253)	(1,412)
Net cash provided by (used in) operating activities	(2,240)	8
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from maturities of available-for-sale marketable securities	8,341	13,241
Proceeds from sales of available-for-sale marketable securities	5,047	3,154
Purchases of available-for-sale marketable securities	(11,648)	(21,630)
Additions to equipment and leasehold improvements	(681)	(1,350)
Additions to patents	(68)	(113)
Net cash provided by (used in) investing activities	991	(6,698)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from exercise of stock options	25	27
Common stock repurchases	(2,979)	(21)
Proceeds from issuance of common stock under employee stock purchase plan	65	139
Net cash provided by (used in) financing activities	(2,889)	145
Effects of exchange rate changes on cash and cash equivalents	(101)	94
Net decrease in cash and cash equivalents	(4,239)	(6,451)
Cash and cash equivalents beginning of period	7,340	13,791
Cash and cash equivalents end of period	$ 3,101	$ 7,340

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THE CONSOLIDATED FINANCIAL STATEMENTS.

Table of Contents

CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY
CYBEROPTICS CORPORATION

(In thousands)	Common Stock Shares	Common Stock Amount	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders Equity
BALANCE, DECEMBER 31, 2011	6,933	$ 30,965	$ (926)	$ 22,930	$ 52,969
Excess tax benefit from exercise of stock options, net of deferred tax shortfall related to stock options and restricted stock units		(149)			(149)
Exercise of stock options, vesting of restricted stock units, net of shares exchanged as payment	15	27			27
Share issuances for compensation purposes	5	41			41
Stock compensation		408			408
Issuance of common stock under Employee Stock Purchase Plan	20	139			139
Repurchase of common stock	(3)	(21)			(21)
Market value adjustments of marketable securities, net of reclassification adjustment			(41)		(41)
Unrealized gain on foreign exchange forward contracts, net of reclassification adjustment			434		434
Cumulative translation adjustment			376		376
Net loss				(6,711)	(6,711)
BALANCE, DECEMBER 31, 2012	6,970	$ 31,410	$ (157)	$ 16,219	$ 47,472
Exercise of stock options, vesting of restricted stock units, net of shares exchanged as payment	18	25			25
Share issuances for compensation purposes	5	30			30
Stock compensation		417			417
Issuance of common stock under Employee Stock Purchase Plan	13	65			65
Repurchase of common stock	(509)	(2,979)			(2,979)
Market value adjustments of marketable securities, net of reclassification adjustment			55		55
Unrealized loss on foreign exchange forward contracts, net of reclassification adjustment			(227)		(227)
Cumulative translation adjustment			(211)		(211)
Net loss				(6,168)	(6,168)
BALANCE, DECEMBER 31, 2013	6,497	$ 28,968	$ (540)	$ 10,051	$ 38,479

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THE CONSOLIDATED FINANCIAL STATEMENTS.

Table of Contents

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
CYBEROPTICS CORPORATION

NOTE 1 BUSINESS DESCRIPTION AND SIGNIFICANT ACCOUNTING POLICIES

Description of Business

We are a leading global supplier of sensors and inspection systems that provide process yield and throughput improvement solutions for the global electronic assembly and semiconductor capital equipment markets.

Principles of Consolidation

The consolidated financial statements include the accounts of CyberOptics Corporation and its wholly-owned subsidiaries. In these Notes to the Consolidated Financial Statements, these companies are collectively referred to as CyberOptics, we, us, or our. All significant inter-company accounts and transactions have been eliminated in consolidation.

Use of Estimates

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

Cash Equivalents

We consider all highly liquid investments purchased with an original maturity of 90 days or less to be cash equivalents. Cash and cash equivalents consist of funds maintained in demand deposit accounts, money market accounts, corporate debt instruments and U.S. government backed obligations. Some cash and cash equivalent balances may exceed federally insured limits.

Marketable Securities

All marketable securities are classified as available-for-sale and consist of U.S. government backed obligations, certificates of deposit, corporate debt instruments, asset backed securities or equity securities. Marketable securities are classified as short-term or long-term in the balance sheet based on their maturity date and expectations regarding sales.

Available-for-sale securities are carried at fair value, with unrealized gains and losses reported as a separate component of stockholders equity until realized. These fair values are primarily determined using quoted market prices. The carrying amounts of securities, for purposes of computing unrealized gains and losses, are determined by specific identification. The cost of securities sold is also determined by specific identification.

We monitor the carrying value of our investments compared to their fair value to determine whether an other-than-temporary impairment has occurred. If a decline in fair value is determined to be other-than-temporary, an impairment charge related to that specific investment is recorded in current operations.

Cash and marketable securities held by foreign subsidiaries totaled $903,000 at December 31, 2013 and $3,585,000 at December 31, 2012.

Inventories

Inventories are stated at the lower of cost or market, with cost determined using the first-in, first-out (FIFO) method. Appropriate consideration is given to deterioration, obsolescence, and other factors in evaluating net realizable value. Demonstration inventories are stated at cost less accumulated amortization, generally based on a 36 month useful life.

Accumulated amortization for demonstration inventories totaled $908,000 at December 31, 2013 and $897,000 at December 31, 2012.

Allowance for Doubtful Accounts

Allowances for doubtful accounts are maintained for estimated losses resulting from the inability of our customers to make required payments. In making the determination of the appropriate allowance for doubtful accounts, we consider specific accounts, historical write-offs, changes in customer relationships and credit worthiness and concentrations of credit risk. Specific accounts receivable are written-off once a determination is made that the account is uncollectible.

34

Table of Contents

Equipment and Leasehold Improvements

Equipment and leasehold improvements are stated at cost. Significant additions or improvements extending asset lives are capitalized, while repairs and maintenance are charged to expense as incurred. In-progress costs are capitalized with depreciation beginning when assets are placed in service. Depreciation is recorded using the straight-line method over the estimated useful lives of the equipment, ranging from three to ten years. Leasehold improvements are amortized using the straight-line method over the shorter of the asset useful life or the underlying lease term. Gains or losses on dispositions are included in current operations.

Goodwill

Goodwill represents the excess of purchase price over the fair value of net assets acquired in a business combination. We evaluate the carrying value of goodwill during the fourth quarter of each year and between annual evaluations if events occur or circumstances change that indicate goodwill might be impaired. Goodwill is tested by comparing our fair value, as determined based on our future estimated discounted cash flows, to our net book value.

Patents

Patents consist of legal and patent registration costs for protection of our proprietary technology. We amortize patent costs on a straight-line basis, based upon their estimated life.

Long Lived Assets

Intangible assets subject to amortization and other long lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. An impairment loss would be recognized when future undiscounted cash flows expected to result from use of the asset and eventual disposition are less than the carrying amount.

Revenue Recognition

Revenue from all customers, including distributors, is recognized when all significant contractual obligations have been satisfied and collection of the resulting receivable is reasonably assured. Generally, revenues are recognized upon shipment under FOB shipping point terms, and include shipping and handling costs. Taxes collected from customers and remitted to governmental authorities are excluded from revenues. Estimated returns and warranty costs are recorded at the time of sale. Sales of some SMT system products may require customer acceptance due to performance or other acceptance criteria included in the terms of sale. For these SMT product sales, revenue is recognized at the time of customer acceptance. Our multiple deliverable arrangements typically include the sale of an SMT inspection system, installation and training, and in some cases, an extended warranty. Revenue from installation and training and extended warranty are recognized as the services are provided, typically within one month of shipment in the case of installation and training. Extended warranties are typically for a second or third year of coverage beyond the basic one year warranty included with all SMT sales.

When a sale involves multiple elements, revenue is allocated to each respective element at inception of an arrangement using the relative selling price method. Selling price is determined based on a selling price hierarchy, consisting of vendor specific objective evidence (VSOE), third party evidence or estimated selling price. Management s best estimate of the selling price of an SMT machine is based on the cost build-up of the product and a reasonable margin based on geographic location and market conditions. We use VSOE to establish selling price for extended warranty, installation and training services. If VSOE is not available to establish selling price for extended warranty, installation and training services, we estimate a selling price based on the cost build-up for the particular service and a reasonable gross margin. Costs related to products delivered are recognized in the period revenue is recognized. Cost of revenues consists primarily of direct labor, manufacturing overhead, raw materials and components and excludes amortization of intangible assets.

Foreign Currency Translation

Financial position and results of operations of our international subsidiaries are measured using local currency as their functional currency. Assets and liabilities of these operations are translated at the exchange rates in effect at each fiscal year-end. Statements of operations accounts are translated at the average rates of exchange prevailing during the year. Translation adjustments arising from the use of differing exchange rates from period to period are included as a cumulative translation adjustment in stockholders equity.

Foreign Currency Transactions

Foreign currency transaction gains and losses are included in interest income and other in the statement of operations. We recognized foreign currency transaction losses of $117,000 in 2013 and $11,000 in 2012.

Table of Contents

Research and Development

Research and development (R&D) costs, including software development, are expensed when incurred. Software development costs are required to be expensed until the point that technological feasibility and proven marketability of the product are established; costs otherwise capitalizable after such point also are expensed because they are insignificant. All other R&D costs are expensed as incurred. R&D expenses consist primarily of salaries, project materials, contract labor and other costs associated with ongoing product development and enhancement efforts.

Derivatives and Hedging

We enter into foreign exchange forward contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies associated with our subsidiary in Singapore. These transactions are designated as cash flow hedges and are recorded in the accompanying balance sheet at fair value. The effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income (loss) and reclassified into earnings in the same period during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings. Cash flows from derivative instruments are classified in the statement of cash flows in the same category as the cash flows from the items subject to designated hedge relationships.

Advertising Costs

We expense all advertising costs as incurred. Advertising expense incurred was $113,000 in 2013 and $96,000 in 2012.

Warranty Costs

We provide for the estimated cost of product warranties (which generally cover products for one year) at the time revenue is recognized.

Income Taxes

We evaluate uncertain tax positions using the more likely than not threshold (i.e., a likelihood of occurrence greater than fifty percent). The recognition threshold is met when an entity concludes that a tax position, based solely on its technical merits, is more likely than not to be sustained upon examination by the relevant taxing authority. Those tax positions failing to qualify for initial recognition are classified as a gross unrecognized tax benefit until the first interim period in which they meet the more likely than not standard, or are resolved through negotiation or litigation with the taxing authority, or upon expiration of the statute of limitations. De-recognition of a tax position that was previously recognized occurs when an entity subsequently determines that a tax position no longer meets the more likely than not threshold of being sustained.

Only the portion of the unrecognized tax benefit that is expected to be paid within one year is classified as a current liability. As a result, liabilities expected to be resolved without the payment of cash (e.g. resolution due to the expiration of the statute of limitations) or are not expected to be paid within one year are not classified as current. It is our policy to record estimated interest and penalties as income tax expense and tax credits as a reduction in income tax expense.

Deferred income taxes are recorded to reflect the tax consequences in future years of differences between the financial reporting and tax bases of assets and liabilities. Income tax expense is the sum of the tax currently payable and the change in the deferred tax assets and liabilities during the period, excluding changes in deferred tax assets recorded to equity and goodwill. Valuation allowances are established when, in the opinion of management, there is uncertainty that some portion or all of the deferred tax assets will not be realized. We assess the realizability of our deferred tax assets and the need for a valuation allowance based on all positive and negative evidence.

Net Loss Per Share

Net loss per basic and diluted share is computed by dividing net loss by the weighted average number of common shares outstanding during the period. Common equivalent shares consist of common shares to be issued upon exercise of stock options, restricted stock units and from participation in our employee stock purchase plan, as calculated using the treasury stock method. All potentially dilutive common equivalent shares are excluded from the calculation of net loss per diluted share due to their anti-dilutive effect.

Fair Value of Financial Instruments

The carrying amounts of financial instruments such as cash equivalents, accounts receivable, income tax refunds receivable, other assets, accounts payable, accrued expenses and other current liabilities approximate their related fair values due to the short-term maturities of these instruments.

Table of Contents

Stock-Based Compensation

All equity-based payments to employees, including grants of employee stock options, are required to be recognized as an expense in our consolidated statements of operations based on the grant date fair value of the award. We utilize the straight-line method of expense recognition over the award s service period for our graded vesting options. The fair value of stock options has been determined using the Black-Scholes model. The compensation expense recognized for all equity based awards is net of estimated forfeitures, which is based on historical data. We have classified equity based compensation within our statement of operations in the same manner as our cash based employee compensation costs. We elected to use the alternative transition guidance known as the short-cut method to determine our pool of windfall tax benefits at January 1, 2006.

See Note 6 to the Consolidated Financial Statements for additional information on stock-based compensation.

Recent Accounting Developments

In February 2013, the FASB issued amended disclosure requirements for amounts classified out of other comprehensive income to improve the transparency of reporting these reclassifications (ASU No. 2013-02, *Comprehensive Income (Topic 220): Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income)*. The amended guidance requires an entity to provide information about the amounts reclassified out of accumulated other comprehensive income by component. In addition, an entity is required to present, either on the face of the statement where net income is presented or in the notes, significant amounts reclassified out of accumulated other comprehensive income by the respective line items of net income but only if the amount reclassified is required under U.S. GAAP to be reclassified to net income in its entirety in the same reporting period. For other amounts that are not required under U.S. GAAP to be reclassified in their entirety to net income, an entity is required to cross-reference to other disclosures required under U.S. GAAP that provide additional detail about those amounts. We adopted the amended guidance effective January 1, 2013. Our adoption of the amended disclosure requirements will have no impact on our consolidated financial results as the amendments relate only to changes in financial statement presentation.

In July 2013, the FASB issued guidance regarding the presentation of an unrecognized tax benefit when a net operating loss carry forward, a similar tax loss, or a tax credit carry forward exists (ASU No. 2013-11, *Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carry forward, a Similar Tax Loss, or a Tax Credit Carry forward Exists*). Under certain circumstances, unrecognized tax benefits should be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carry forward, a similar tax loss, or a tax credit carry forward. The guidance is a change in financial statement presentation only and has no material impact on consolidated financial results. The guidance is effective beginning January 1, 2014 on either a prospective or retrospective basis.

NOTE 2 MARKETABLE SECURITIES

Our investments in marketable securities are classified as available-for-sale and consist of the following:

	December 31, 2013			
(In thousands)	**Cost**	**Unrealized Gains**	**Unrealized Losses**	**Fair Value**
Short-Term				
U.S. government and agency obligations	$ 6,299	$ 10	$	$ 6,309
Corporate debt securities and certificates of deposit	3,091	2		3,093
Marketable securities short-term	$ 9,390	$ 12	$	$ 9,402
Long-Term				
U.S. government and agency obligations	$ 4,783	$ 7	$	$ 4,790
Corporate debt securities and certificates of deposit	3,417	1	(5)	3,413
Asset backed securities	2,474	2	(1)	2,475
Equity security	42	22		64
Marketable securities long-term	$ 10,716	$ 32	$ (6)	$ 10,742

Table of Contents

	December 31, 2012			
(In thousands)	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Short-Term				
U.S. government and agency obligations	$ 7,358	$ 10	$ (35)	$ 7,333
Corporate debt securities and certificates of deposit	4,100	5		4,105
Marketable securities short-term	$ 11,458	$ 15	$ (35)	$ 11,438
Long-Term				
U.S. government and agency obligations	$ 9,033	$ 23	$ (23)	$ 9,033
Corporate debt securities and certificates of deposit	1,192	4	(1)	1,195
Asset back securities	165			165
Equity security	42			42
Marketable securities long-term	$ 10,432	$ 27	$ (24)	$ 10,435

Our investments in marketable debt securities all have maturities of less than five years. At December 31, 2013, marketable debt securities valued at $15,587,000 were in an unrealized gain position totaling $22,000 and marketable debt securities valued at $4,493,000 were in an unrealized loss position totaling $6,000 (all had been in an unrealized loss position for less than twelve months). At December 31, 2012, marketable debt securities valued at $19,012,000 were in an unrealized gain position totaling $42,000 and marketable debt securities valued at $2,819,000 were in an unrealized loss position totaling $59,000 (all had been in an unrealized loss position for less than twelve months).

At December 31, 2013, our equity security valued at $64,000 was in a $22,000 unrealized gain position. In 2012, we recognized a $42,000 impairment charge for our equity security resulting from a decline in market value which we determined to be other than temporary.

Net pre-tax unrealized gains for marketable securities of $38,000 at December 31, 2013 and net pre-tax unrealized losses for marketable securities of $17,000 at December 31, 2012 were recorded as a component of accumulated other comprehensive loss in stockholders equity. We received proceeds from the sale of marketable securities of $5,047,000 in 2013 and $3,154,000 in 2012. Gains and losses from the sale of marketable securities totaled a $21,000 loss in 2013 and an $8,000 gain in 2012.

Investments in marketable securities classified as cash equivalents of $327,000 at December 31, 2013 and $2,824,000 at December 31, 2012 consist of the following:

	December 31, 2013			
(In thousands)	Cost	Unrealized Gains	Unrealized Losses	Recorded Basis
Corporate debt securities and certificates of deposit	$ 327	$	$	$ 327
	$ 327	$	$	$ 327

	December 31, 2012			
(In thousands)	Cost	Unrealized Gains	Unrealized Losses	Recorded Basis
Corporate debt securities and certificates of deposit	$ 2,824	$	$	$ 2,824
	$ 2,824	$	$	$ 2,824

NOTE 3 DERIVATIVES

We enter into foreign exchange forward contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies associated with our subsidiary in Singapore. These transactions are designated as cash flow hedges and are recorded in the accompanying balance sheet at fair value. The effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income (loss) and reclassified into earnings in the same period during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings. Hedge ineffectiveness and the amounts excluded from effectiveness testing recognized in earnings on cash flow hedges were not material for the years ended December 31, 2013 and December 31, 2012.

Table of Contents

The maximum length of time over which we hedge our exposure to the variability in future cash flows is 12 months. Accordingly, at December 31, 2013 and December 31, 2012, all of our open foreign exchange forward contracts had maturities of one year or less. The dollar equivalent gross notional amount of our foreign exchange forward contracts designated as cash flow hedges was approximately $6.5 million at December 31, 2013 and $8.3 million at December 31, 2012.

Reclassifications of amounts from accumulated other comprehensive loss into earnings include accumulated gains (losses) at the time earnings are impacted by the forecasted transaction. The location in the consolidated statements of operations and consolidated statements of comprehensive loss and amounts of gains and losses related to derivative instruments designated as cash flow hedges are as follows:

	Year Ended December 31, 2013		
(In thousands)	**Pretax Loss Recognized in Other Comprehensive Loss on Effective Portion of Derivative**	**Pretax Loss Recognized in Earnings on Effective Portion of Derivative as a Result of Reclassification from Accumulated Other Comprehensive Loss**	**Ineffective Portion of Gain (Loss) on Derivative and Amount Excluded from Effectiveness Testing Recognized in Earnings**
Cost of revenues	$ (169)	$ (16)	$
Research and development	(63)	(20)	
Selling, general and administrative	(48)	(17)	
Total	$ (280)	$ (53)	$

	Year Ended December 31, 2012		
(In thousands)	**Pretax Loss Recognized in Other Comprehensive Loss on Effective Portion of Derivative**	**Pretax Loss Recognized in Earnings on Effective Portion of Derivative as a Result of Reclassification from Accumulated Other Comprehensive Loss**	**Ineffective Portion of Gain (Loss) on Derivative and Amount Excluded from Effectiveness Testing Recognized in Earnings**
Cost of revenues	$ 410	$ (57)	$
Research and development	103	(12)	
Selling, general and administrative	78	(5)	
Total	$ 591	$ (74)	$

Amounts recorded in accumulated other comprehensive loss for the after tax net unrealized gain or loss associated with cash flow hedging instruments was a loss of $116,000 as of December 31, 2013 and a gain of $111,000 as of December 31, 2012. We expect to reclassify the December 31, 2013 pre-tax net unrealized loss of $60,000 recorded in accumulated other comprehensive loss to earnings over the next 12 months with the impact offset by cash flows from underlying hedged items. The fair value of our foreign exchange forward contracts representing a loss in the amount of $58,000 as of December 31, 2013 has been recorded in accrued expenses. The fair value of our foreign exchange forward contracts representing a gain in the amount of $153,000 as of December 31, 2012 has been recorded in other current assets.

Additional information with respect to the impact of derivative instruments on other comprehensive income (loss) is included in Note 4. Additional information with respect to the fair value of derivative instruments is included in Note 5.

Our foreign exchange forward contracts contain credit risk to the extent that our bank counter-parties may be unable to meet the terms of the agreements. We minimize such risk by limiting our counter-parties to major financial institutions. We do not expect material losses as a result of defaults by other parties.

Table of Contents

NOTE 4 COMPREHENSIVE INCOME (LOSS)

Taxes related to items of other comprehensive income (loss) are as follows:

	Year Ended December 31, 2013			Year Ended December 31, 2012		
(In thousands)	**Before Tax**	**Tax Effect**	**Net of Tax Amount**	**Before Tax**	**Tax Effect**	**Net of Tax Amount**
Foreign currency translation adjustments	$ (211)	$	$ (211)	$ 376	$	$ 376
Net changes related to available-for-sale securities:						
Unrealized gains (losses)	34		34	(79)	(18)	(61)
Reclassification adjustment for other-than-temporary impairment loss included in net loss				42	15	27
Reclassification adjustment for (gains) losses included in net loss	21		21	(8)	(1)	(7)
Total net changes related to available-for-sale securities	55		55	(45)	(4)	(41)
Net changes related to foreign exchange forward contracts:						
Unrealized gains (losses)	(280)		(280)	591	206	385
Reclassification adjustment for losses included in net loss	53		53	74	25	49
Total net changes related to foreign exchange forward contracts	(227)		(227)	665	231	434
Other comprehensive income (loss)	$ (383)	$	$ (383)	$ 996	$ 227	$ 769

Reclassification adjustments are made to avoid double counting for items included in comprehensive income (loss) that are also recorded as part of net loss. Reclassifications to earnings related to cash flow hedging instruments are discussed in Note 3. Income taxes are not provided for foreign currency translation adjustments relating to permanent investments in international subsidiaries. We have recorded a valuation allowance against all of our United States and Singapore based deferred tax assets. Accordingly, we do not expect to record a tax provision for items of other comprehensive income (loss) until such time as the valuation allowance is substantially reduced. The effect of the reclassifications from comprehensive income (loss) to earnings by line items is as follows:

Details about Components of Accumulated Other Comprehensive Loss	**Year Ended**		**Affected Line Item in the Statements of Operations**
(In thousands)	**2013**	**2012**	
Unrealized gains (losses) on available-for-sale securities	$ (21)	$ 8	Interest income and other
		1	Income tax provision (benefit)
	$ (21)	$ 7	Net of tax
Unrealized losses on foreign exchange forward contracts	$ (16)	$ (57)	Cost of revenues
	(20)	(12)	Research and development expenses
	(17)	(5)	Selling, general and administrative expenses
	(53)	(74)	Total before tax
		(25)	Income tax provision (benefit)
	$ (53)	$ (49)	Net of tax

Table of Contents

At December 31, 2013 and December 31, 2012 components of accumulated other comprehensive loss is as follows:

(In thousands)	Foreign Currency Translation Adjustments	Available-for-Sale Securities	Foreign Exchange Forward Contracts	Accumulated Other Comprehensive Loss
Balances at December 31, 2011	$ (621)	$ 18	$ (323)	$ (926)
Other comprehensive income (loss) before reclassifications	376	(61)	385	700
Amounts reclassified from accumulated other comprehensive loss		20	49	69
Total change for the period	376	(41)	434	769
Balances at December 31, 2012	$ (245)	$ (23)	$ 111	$ (157)
Other comprehensive income (loss) before reclassifications	(211)	34	(280)	(457)
Amounts reclassified from accumulated other comprehensive loss		21	53	74
Total change for the period	(211)	55	(227)	(383)
Balances at December 31, 2013	$ (456)	$ 32	$ (116)	$ (540)

NOTE 5 FAIR VALUE MEASUREMENTS

We determine the fair value of our assets and liabilities based on the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. We use a fair value hierarchy with three levels of inputs, of which the first two are considered observable and the last unobservable, to measure fair value. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1). The next highest priority is based on quoted prices for similar assets or liabilities in active markets or quoted prices for identical or similar assets or liabilities in non-active markets or other observable inputs (Level 2). The lowest priority is given to unobservable inputs (Level 3). The following provides information regarding fair value measurements for our marketable securities and foreign exchange forward contracts as of December 31, 2013 and December 31, 2012 according to the three-level fair value hierarchy.

		Fair Value Measurements at December 31, 2013 Using		
(In thousands)	Balance December 31, 2013	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Marketable securities:				
U.S. government and agency obligations	$ 11,099	$	$ 11,099	$
Corporate debt securities and certificates of deposit	6,506		6,506	
Asset backed securities	2,475		2,475	
Equity security	64	64		
Total marketable securities	$ 20,144	$ 64	$ 20,080	$
Derivative instruments-liabilities:				
Foreign exchange forward contracts	$ 58	$	$ 58	$

Table of Contents

(In thousands)	Balance December 31, 2012	Fair Value Measurements at December 31, 2012 Using Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Marketable securities:				
U.S. government and agency obligations	$ 16,366	$	$ 16,366	$
Corporate debt securities and certificates of deposit	5,300		5,300	
Asset backed securities	165		165	
Equity security	42	42		
Total marketable securities	$ 21,873	$ 42	$ 21,831	$
Derivative instruments-assets:				
Foreign exchange forward contracts	$ 153	$	$ 153	$

During the years ended December 31, 2013 and 2012 there were no transfers within the three level hierarchy. A significant transfer is recognized when the inputs used to value a security have been changed which merit a transfer between the disclosed levels of the valuation hierarchy.

The fair value for our U.S. government and agency obligations, corporate debt securities and certificates of deposit and asset backed securities are determined based on valuations provided by external investment managers who obtain them from a variety of industry standard data providers. The fair value for our equity security is based on a quoted market price obtained from an active market.

The fair value for our foreign exchange forward contracts is based on foreign currency spot and forward rates obtained from reputable financial institutions with resulting valuations periodically validated by obtaining foreign currency spot rate and forward quotes from other industry standard sources or third party or counterparty quotes. The fair value of our foreign exchange forward contracts representing a loss in the amount of $58,000 as of December 31, 2013 has been recorded in accrued expenses. The fair value of our foreign exchange forward contracts representing a gain in the amount of $153,000 as of December 31, 2012 has been recorded in other current assets.

The carrying amounts of financial instruments such as cash equivalents, accounts receivable, income tax refunds receivable, other assets, accounts payable, and all current liabilities approximate their related fair values due to the short-term maturities of these instruments. Non-financial assets such as equipment and leasehold improvements, goodwill and intangible assets are subject to non-recurring fair value measurements if they are deemed impaired. We had no re-measurements of non-financial assets to fair value in 2013 or 2012.

NOTE 6 ACCOUNTING FOR STOCK-BASED COMPENSATION

Share Based Compensation Information

(In thousands)	2013	2012
Pre-tax equity compensation expense	$ 447	$ 449
Income tax benefits related to equity based compensation	$	$

Pre-tax equity based compensation expense for 2013 includes $373,000 for stock options and restricted stock units, $44,000 for our employee stock purchase plan, and $30,000 for 5,000 shares issued to board members for compensation purposes (weighted average grant date fair value of $6.08). Pre-tax equity based compensation expense for 2012 includes $354,000 for stock options and restricted stock units, $54,000 for our employee stock purchase plan, and $41,000 for 5,000 shares issued to board members for compensation purposes (weighted average grant date fair value of $8.17).

We use historical data to estimate pre-vesting forfeitures. At December 31, 2013, the total unrecognized compensation cost related to non-vested equity based compensation arrangements was $674,000 and the related weighted average period over which it is expected to be recognized is 2.22 years. The total fair value of shares that vested in 2013 was $267,000 and in 2012 was $178,000.

Table of Contents

The fair value of stock options granted to our employees was estimated on the date of grant using the Black-Scholes model. The Black-Scholes valuation model incorporates ranges of assumptions that are disclosed in the table below. The risk-free interest rate is based on the United States Treasury yield curve at the time of grant with a remaining term equal to the expected life of the awards. We estimated the expected term for our graded vesting options, representing the length of time in years that the options are expected to be outstanding, using historical experience. Expected volatility was computed based on historical fluctuations in the daily price of our common stock.

For stock options granted in the two year period ended December 31, 2013, we utilized the fair value of our common stock on the date of grant and employed the following key assumptions in computing fair value using the Black-Scholes option-pricing model:

	2013	2012
Risk-free interest rates	1.51%	0.70% - 0.86%
Expected life in years	5.31 - 5.48	4.95 - 5.20
Expected volatility	46.58%	45.81% - 46.47%
Dividend yield	0.00%	0.00%
Weighted average fair value on grant date	$2.34	$3.01

Stock Options

We have two stock incentive plans that are administered under the supervision of the Compensation Committee of the Board of Directors. As of December 31, 2013, there are 1,022,799 shares of common stock reserved in the aggregate for issuance of options and other stock based benefits under these plans, including restricted stock units and share grants to employees, officers and others. Reserved shares underlying canceled options are available for future grant under our active plan. Options are granted at an option price per share equal to or greater than the market value of our common stock on the date of grant. Generally, options granted to employees vest over a four-year period and expire seven or ten years after the date of grant. The plans allow for option holders to tender shares of our common stock as consideration for the option price, provided that the tendered shares have been held by the option holder at least six months. As of December 31, 2013, there were 389,373 shares of common stock available under this plan for future issuance to employees, officers and others.

The following is a summary of stock option activity for the year ended December 31, 2013:

	Options Outstanding	Weighted Average Exercise Price Per Share
Outstanding, December 31, 2012	544,153	$ 8.68
Granted	86,750	5.39
Exercised	(5,000)	4.99
Expired	(38,170)	11.09
Forfeited	(1,250)	8.71
Outstanding, December 31, 2013	586,483	$ 8.07
Exercisable, December 31, 2013	338,197	$ 8.92

The intrinsic value of an option is the amount by which the fair value of the underlying stock exceeds its exercise price. For options outstanding at December 31, 2013, the weighted average remaining contractual term of all outstanding options was 4.00 years and their aggregate intrinsic value was $255,000. At December 31, 2013, the weighted average remaining contractual term of options that were exercisable was 2.71 years and their aggregate intrinsic value was $168,000. The aggregate intrinsic value of stock options exercised was $4,300 in 2013 and $10,000 in 2012. We received proceeds of $25,000 from the exercise of stock options in 2013. No tax benefit was realized from the exercise of these stock options. New shares are issued for all option exercises, upon vesting of restricted stock units, for share issuances to board members and others or for issuances under our Employee Stock Purchase Plan.

Table of Contents

Restricted Stock Units

Our 1998 Stock Incentive Plan also permits our Compensation Committee to grant other stock-based benefits, including restricted stock units. Restricted stock units are valued at a price equal to the market value of our common stock on the date of grant, vest over a four year period provided the employee is still working for the company and entitle the holders to one share of our common stock for each restricted stock unit. There were 15,750 restricted stock units granted in 2013 and their weighted average grant date fair value was $5.39 each. There were 36,528 restricted stock units granted in 2012 and their weighted average grant date fair value was $7.37 each. The aggregate fair value of outstanding restricted stock units based on the closing share price of our common stock as of December 31, 2013 was $300,000. The aggregate fair value of restricted stock units that vested, based on the closing share price of our common stock on the vesting date, was $78,000 for the year ended December 31, 2013 and $69,000 for the year ended December 31, 2012.

A summary of activity in non-vested restricted stock units for the year ended December 31, 2013 is as follows:

Non-vested restricted stock units	Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2012	44,555	$ 7.61
Granted	15,750	5.39
Vested	(12,946)	7.76
Forfeited	(416)	8.71
Non-vested at December 31, 2013	46,943	$ 6.82

Employee Stock Purchase Plan

We have an Employee Stock Purchase Plan available to eligible U.S. employees. Under terms of the plan, eligible employees may designate from 1% to 10% of their compensation to be withheld through payroll deductions, up to a maximum of $6,500 in each plan year, for the purchase of common stock at 85% of the lower of the market value of our common stock on the first or last day of the offering period. There were 12,656 shares issued under this plan in the year ended December 31, 2013 and 19,759 shares issued in the year ended December 31, 2012. As of December 31, 2013, 153,926 shares remain available for future issuance under this plan.

Stock Grant Plan for Non-Employee Directors

Our stock grant plan for non-employee directors provides for automatic grants of 1,000 shares of our common stock to each of our non-employee directors upon their re-election to the Board of Directors. The plan provides for a total of 30,000 shares of our common stock for issuance to directors and will expire on May 19, 2018. Share issuances under the stock grant plan for non-employee directors were 5,000 shares of common stock in the year ended December 31, 2013 and 5,000 shares in the year ended December 31, 2012. The shares issued in 2013 had a fair market value on the date of grant equal to $30,000. The shares issued in 2012 had a fair market value on the date of grant equal to $41,000. As of December 31, 2013, 6,000 shares of common stock are reserved in the aggregate for future issuance under this plan.

NOTE 7 NET LOSS PER SHARE

Net loss per basic and diluted share is computed by dividing net loss by the weighted average number of common shares outstanding during the period. Common equivalent shares consist of common shares to be issued upon exercise of stock options, restricted stock units and from participation in our employee stock purchase plan, as calculated using the treasury stock method. All potentially dilutive common equivalent shares are excluded from the calculation of net loss per diluted share due to their anti-dilutive effect. As a result, no common equivalent shares were included in the calculation of net loss per diluted share for the years ended December 31, 2013 or December 31, 2012. The components of net loss per basic and diluted share are as follows:

(In thousands except per share amounts)	Net Loss	Weighted Average Shares Outstanding	Per Share Amount
Year Ended December 31, 2013:			
Basic	$ (6,168)	6,798	$ (0.91)
Dilutive effect of common equivalent shares			
Dilutive	$ (6,168)	6,798	$ (0.91)

Table of Contents

(In thousands except per share amounts)	Net Loss	Weighted Average Shares Outstanding	Per Share Amount
Year Ended December 31, 2012:			
Basic	$ (6,711)	6,946	$ (0.97)
Dilutive effect of common equivalent shares			
Dilutive	$ (6,711)	6,946	$ (0.97)

The calculation of diluted net loss per common share excludes 614,000 potentially dilutive shares for the year ended December 31, 2013 and 592,000 potentially dilutive shares for the year ended December 31, 2012, because their effect would be anti-dilutive.

NOTE 8 OTHER FINANCIAL STATEMENT DATA

Inventories consist of the following:

(In thousands)	December 31, 2013	2012
Raw materials and purchased parts	$ 6,690	$ 8,152
Work in process	1,135	1,322
Finished goods	3,506	3,059
Total inventories	$ 11,331	$ 12,533

Equipment and leasehold improvements consist of the following:

(In thousands)	December 31, 2013	2012
Equipment	$ 10,265	$ 10,800
Leasehold improvements	1,598	1,538
	11,863	12,338
Accumulated depreciation and amortization	(10,591)	(10,619)
	$ 1,272	$ 1,719

Total depreciation and amortization expense related to equipment and leasehold improvements was $949,000 for the year ended December 31, 2013 and $958,000 for the year ended December 31, 2012.

Intangible assets consist of the following:

	December 31, 2013			December 31, 2012		
(In thousands)	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Patents	$ 2,915	$ (2,779)	$ 136	$ 2,847	$ (2,658)	$ 189

Amortization expense for the years ended December 31, 2013 and 2012 is as follows:

(In thousands)	Years Ended December 31, 2013	2012
Patents	$ 121	$ 154

As of December 31, 2013, the weighted average remaining life for our patents was approximately 2.1 years. Amortization of patents has been classified as research and development expense in the accompanying statement of operations. Estimated aggregate amortization expense based on current patent costs for the next three years is expected to be as follows: $81,000 in 2014, $42,000 in 2015, and $13,000 in 2016.

Table of Contents

Accrued expenses consist of the following:

(In thousands)	December 31, 2013	2012
Wages and benefits	$ 862	$ 770
Warranty liability	513	694
Restructuring and severance costs	511	192
Other	355	184
	$ 2,241	$ 1,840

Warranty costs:

We provide for the estimated cost of product warranties, which generally are for one year, at the time revenue is recognized. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of component suppliers, warranty obligations are affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required and could be material. Our warranty liability is included as a component of accrued expenses. At the end of each reporting period we revise our estimated warranty liability based on these factors.

A reconciliation of the changes in our estimated warranty liability is as follows:

(In thousands)	Year Ended December 31, 2013	2012
Balance at beginning of period	$ 694	$ 985
Accrual for warranties	642	745
Warranty revision	(5)	(2)
Settlements made during the period	(818)	(1,034)
Balance at end of period	$ 513	$ 694

Deferred warranty revenue:

The current portion of our deferred warranty revenue is included as a component of advance customer payments. A reconciliation of the changes in our deferred warranty revenue is as follows:

(In thousands)	Year Ended December 31, 2013	2012
Balance at beginning of period	$ 582	$ 806
Revenue deferrals	299	230
Amortization of deferred revenue	(437)	(454)
Total deferred warranty revenue	444	582
Current portion of deferred warranty revenue	(279)	(436)
Long-term deferred warranty revenue	$ 165	$ 146

NOTE 9 GOODWILL

We assess our goodwill for impairment in the fourth quarter of each year, and whenever events or changes in circumstances indicate that the carrying value may not be recoverable. In each quarter of 2013, our stock market capitalization fell below our net book value for a period of more than 30 days, indicating that the value of our goodwill might be impaired.

In evaluating whether goodwill was impaired, we compared our fair value to our net book value or carrying value (Step 1 of the impairment test). In calculating fair value, we used the income approach. The income approach is a valuation technique under which we estimate future cash flows using financial forecasts. Future estimated cash flows are discounted to their present value to calculate fair value. When considering fair value, we also gave consideration to the control premium in excess of our current market capitalization that might be obtained from a third party acquirer. In the situation where net book value or carrying value exceeds fair value, the amount of impairment loss must be measured. The measurement of impairment (Step 2 of the impairment test) is calculated by determining the implied fair value of goodwill, which equals the excess of any remaining fair value over the fair values assigned to other assets and liabilities. Goodwill impairment is measured as the excess of the carrying amount of goodwill over its implied fair value.

Table of Contents

In determining fair value under the income approach, our expected cash flows are affected by various assumptions. Fair value on a discounted cash flow basis uses our business plan and projections as the basis for expected future cash flow forecasts, with an estimation of residual growth rates thereafter. For our 2013 and 2012 goodwill impairment tests we utilized a 15% discount rate and our terminal value was based on a multiple equal to 6 times our projected future earnings before interest, taxes, depreciation and amortization. We believe the significant assumptions used in our 2013 and 2012 goodwill impairment tests, including a 15% discount rate, are reflective of the assumptions currently used in the marketplace to evaluate fair value. Our recent analyses indicate that our goodwill at December 31, 2013 and 2012 in the amount of $569,000 is not impaired.

NOTE 10 INCOME TAXES

Loss before income taxes consists of the following:

	Year Ended December 31,	
(In thousands)	**2013**	**2012**
Sources of income (loss) before income taxes:		
United States	$ (7,636)	$ (4,717)
Foreign	1,282	1,582
Total loss before income taxes	$ (6,354)	$ (3,135)

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

	Year Ended December 31,	
(In thousands)	**2013**	**2012**
Current:		
Federal	$ (448)	$ (1,010)
State	28	(3)
Foreign	(45)	(219)
Total current	$ (465)	$ (1,232)
Deferred:		
Federal	$ 122	$ 4,377
State		409
Foreign	157	22
Total deferred	$ 279	$ 4,808
Total provision (benefit) for income taxes	$ (186)	$ 3,576

A reconciliation of the statutory rate to the effective income tax rate is as follows:

	Year Ended December 31,	
	2013	**2012**
Federal statutory rate	34.0%	34.0%
State income taxes, net of federal benefit	0.7	1.0
Domestic manufacturing tax deduction		(4.7)
U.S. Subpart F income	(0.7)	(1.8)
Stock based compensation		(0.5)
Research and experimentation credit	1.6	
Foreign rate difference	7.2	37.9
Reserve for income taxes	7.1	1.8
Valuation allowance	(45.9)	(181.1)
Other, net	(1.1)	(0.6)
Effective tax rate	2.9%	(114.0)%

Our effective tax rate for 2013 and 2012 reflects the impact of having a significant portion of our operations in Singapore where corporate income tax rates are substantially lower than the United States. Lower tax rates in foreign jurisdictions negatively impacted our income tax rate by 7.2% in 2013 and 37.9% in 2012.

Table of Contents

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits (UTB) is as follows:

(In thousands)	Year Ended December 31, 2013	2012
Gross UTB balance at beginning of year	$ 1,500	$ 1,599
Additions based on tax positions related to the current year	188	92
Additions for tax positions of prior years	123	39
Reductions for tax positions of prior years	(45)	(75)
Reductions due to lapse of applicable statute of limitations	(358)	(155)
Gross UTB balance at end of year	$ 1,408	$ 1,500
Net UTB balance at end of year	$ 150	$ 686

The ending net UTB results from adjusting the gross balance for items such as federal, state, and non-U.S. deferred items, interest and penalties, and deductible taxes. The net UTB is a long-term income tax reserve within our Consolidated Balance Sheets. We recognize interest and penalties related to unrecognized tax benefits in tax expense. Accrued interest and penalties on a gross basis were $12,000 as of December 31, 2013 and $169,000 as of December 31, 2012.

During the year ended December 31, 2013 we recorded a $450,000 decrease in liabilities for uncertain tax positions that was recorded as income tax benefit. Estimated gross interest and penalties included in this amount total $158,000. During the year ended December 31, 2012 we recorded a $56,000 decrease in liabilities for uncertain tax positions that was recorded as income tax benefit. Estimated gross interest and penalties included in this amount total $23,000.

We file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. Our 2012 and 2011 federal income tax returns are still subject to examination by the Internal Revenue Service. During 2012, the Internal Revenue Service completed an audit of our 2010 federal income tax return. The audit resulted in no change to our reported level of taxable income or income tax liability, and had no impact on our financial condition. The statute of limitations for examination of our federal returns for years prior to 2010 expired in 2013. We are no longer subject to state and local income tax examinations by tax authorities for years before 2009.

Deferred tax assets and liabilities consist of the following:

(In thousands)	December 31, 2013 Assets	Liabilities	December 31, 2012 Assets	Liabilities
Fixed asset and intangible amortization, net	$ 520	$ 75	$ 683	$ 109
Inventory allowances	636		466	15
Accrued liabilities	287		328	
Warranty accrual	178		241	
Deferred revenue	419		332	
Accounts receivable allowance	244		269	
Federal and state tax credits	3,014		2,569	
Federal and state net operating loss carry forwards	3,138		634	
Foreign net operating loss carry forwards	838		882	
Stock based compensation	437		411	
Unrealized gains and losses - other comprehensive income (loss)	8		7	72
Other, net	139		141	
Subtotal	9,858	75	6,963	196
Valuation allowance	(9,627)		(6,333)	
Total deferred tax assets and liabilities	$ 231	$ 75	$ 630	$ 196

We currently have significant deferred tax assets as a result of temporary differences between taxable income on our tax returns and U.S. GAAP income, research and development tax credit carry forwards and federal, state and foreign net operating loss carry forwards. A deferred tax asset generally represents future tax benefits to be received when temporary differences previously reported in our financial statements become deductible for income tax purposes, or when net operating loss carry forwards are applied against future taxable income, or when tax credit carry forwards are utilized on our tax returns. We assess the realizability of our deferred tax assets and the need for a valuation allowance based on the guidance provided in current financial accounting standards.

Table of Contents

Significant judgment is required in determining the realizability of our deferred tax assets. The assessment of whether valuation allowances are required considers, among other matters, the nature, frequency and severity of any current and cumulative losses, forecasts of future profitability, the duration of statutory carry forward periods, our experience with loss carry forwards not expiring unused and tax planning alternatives.

We have concluded that a valuation allowance is needed for all of our United States and Singapore based deferred tax assets due to the losses we have sustained since 2011 and our near term financial outlook. In analyzing the need for a valuation allowance, we considered our history of operating results for income tax purposes over the past three years in each of the tax jurisdictions where we operate, statutory carry forward periods and tax planning alternatives. Finally, we considered both our near and long-term financial outlook and timing regarding when we might return to profitability. After considering all available evidence both positive and negative, we concluded that the valuation allowance is needed for all of our U.S. and Singapore based deferred tax assets. A similar analysis was performed in 2012, resulting in a valuation allowance at December 31, 2012 for substantially all of our United States and Singapore based deferred tax assets. We reduced our valuation allowance by $178,000 in 2012 for the effect of various state tax credit carry forwards that expired unused. At December 31, 2013, we had federal R&D tax credit carryforwards of $3,213,000 that will begin to expire in 2019 and a federal net operating loss carry forward of $8,242,000 that will expire begin to expire in 2022, if unused.

Deferred tax assets at December 31, 2013, include $156,000 for net operating loss carry forwards incurred in the UK by CyberOptics Ltd., which was acquired in 1999. A valuation allowance has not been recorded against these deferred tax assets. The utilization of these net operating loss carry forwards is dependent on CyberOptics Ltd. s ability to generate sufficient UK taxable income during the carry forward period. We reduced our deferred tax asset for UK net operating loss carry forwards by $8,000 in 2013 and $14,000 in 2012 due to reductions in the future UK income tax rate.

Cash refunds received for income taxes, net of payments, were $1,269,000 for the year ended December 31, 2013. Cash payments for income taxes, net of refunds received, were $170,000 for the year ended December 31, 2012.

Management is considering a repatriation of some portion of the undistributed earnings of its Singapore based subsidiary. Any such repatriation is not expected to have a significant impact on our financial position or results of operations.

NOTE 11 OPERATING LEASES

We lease a 50,724 square foot mixed office and warehouse facility in Golden Valley, Minnesota. The lease has a term of 90 months and expires on December 31, 2018. The lease contains an escalation clause and two renewal options of three years each. Rental expense, including the effects of lease incentives, is recognized on a straight-line basis over the term of the lease. We are also required to pay insurance, property taxes and other operating expenses related to the leased facility.

We lease a 19,805 square foot mixed office and warehouse facility in Singapore. The lease for our facility in Singapore expires in July 2016, contains an escalation clause and one three year renewal option. Rental expense is recognized on a straight-line basis over the three year lease term. In addition, we lease facilities for the operations of our other subsidiaries under operating leases that expire at various times through June 2018.

Total rent expense was $1,141,000 for the year ended December 31, 2013 and $1,160,000 for the year ended December 31, 2012. At December 31, 2013, the future minimum lease payments required under non-cancelable operating lease agreements are as follows:

Year ending December 31,		**(In thousands)**
2014	$	782
2015		782
2016		651
2017		482
2018		495
Total	$	3,192

Table of Contents

NOTE 12 401(K) AND OTHER DEFINED CONTRIBUTION PLANS

We have a retirement savings plan pursuant to Section 401(k) of the Internal Revenue Code (the Code), whereby eligible employees may contribute a portion of their earnings, not to exceed annual amounts allowed under the Code. In addition, we may also make contributions at the discretion of the Board of Directors. We provided matching contributions to employees totaling $218,000 in 2013 and $246,000 in 2012.

We also contribute to defined contribution retirement savings plans on behalf of our employees in the United Kingdom. We made contributions to these plans totaling $39,000 in 2013 and $35,000 in 2012.

NOTE 13 SIGNIFICANT CUSTOMERS, GEOGRAPHIC AREAS, AND BUSINESS SEGMENTS

The following summarizes our revenue by product line:

(In thousands)	2013	2012
SMT Sensors	$ 10,792	$ 13,187
Semiconductor Sensors	7,096	6,363
SMT Inspection Systems	15,420	22,094
Total	$ 33,308	$ 41,644

The following summarizes certain significant customer information:

(In thousands)	Significant Customer	Revenues	Percentage of Revenues
Year ended December 31, 2013	A	$ 5,870	18%
	B	$ 2,257	7%
Year ended December 31, 2012	A	$ 5,428	13%
	B	$ 4,886	12%

As of December 31, 2013, accounts receivable from significant customer A were $578,000 and accounts receivable from significant customer B were $604,000. As of December 31, 2012, accounts receivable from significant customer A were $312,000 and accounts receivable from significant customer B were $414,000.

Our LaserAlign® sensor family has historically accounted for a significant portion of our revenues and profitability. Revenue from product shipments of LaserAlign sensors accounted for 20% of our total revenue in 2013 and 18% of our total revenue in 2012. Our revenue, results of operations and cash flows would be negatively impacted if our LaserAlign customers are unsuccessful selling the products into which our sensors are incorporated, design their products to function without our sensors, purchase sensors from other suppliers, or otherwise terminate their relationships with us.

Export sales as a percentage of total sales were 78% for the year ended December 31, 2013 and 85% for the year ended December 31, 2012. Export sales are attributed to the country where the product is shipped. Substantially all of our export sales are negotiated, invoiced and paid in U.S. dollars.

Revenue by geographic area is summarized as follows:

(In thousands)	Year Ended December 31, 2013	2012
United States	$ 7,339	$ 6,165
Americas	999	1,511
Netherlands	2,257	4,920
Other Europe	6,505	7,435
China	2,645	8,356
Japan	6,690	6,403
Other Asia	6,465	6,273
Other	408	581
Total export sales	$ 33,308	$ 41,644

Table of Contents

Long-lived assets include equipment and leasehold improvements attributable to each geographic area s operations. Long-lived assets at December 31, 2013 and 2012 are as follows:

(In thousands)	2013	2012
Long-lived assets:		
United States	$ 816	$ 929
Europe	23	5
Asia and other	433	785
Total long-lived assets	$ 1,272	$ 1,719

NOTE 14 RESTRUCTURING AND SEVERANCE COSTS

In the fourth quarter of 2013, we initiated a plan to reduce our global workforce by approximately 30 employees. Expenses for contract workers were also reduced. The workforce reduction was undertaken in response to soft sales, particularly SMT inspection systems, in order to strengthen our commitment to cost control, minimize losses and to improve focus on market support for our products. Restructuring and severance expenses in the fourth quarter of 2013, primarily resulting from the workforce reduction, totaled $952,000.

In the third quarter of 2012, we consolidated research and development for our semiconductor products into our Minneapolis headquarters facility, resulting in a $217,000 restructuring charge for severance and relocation expenses. We believe this move streamlined our business and provided our sensor engineers in Minneapolis with more efficient access to our WaferSense® technology and products. Additional severance costs of $523,000 were incurred in the fourth quarter of 2012 when we reduced our global workforce by approximately 10% or 20 employees in response to the sluggish economy and weak SMT, semiconductor and solar market conditions.

A summary of our restructuring accrual follows:

(In thousands)	Fourth Quarter 2013 Workforce Reduction	Fourth Quarter 2012 Workforce Reduction	Semi R&D Consolidation	Total
Balance, December 31, 2011	$	$	$	$
Cost incurred		523	217	740
Payments made		331	217	548
Balance, December 31, 2012		192		192
Cost incurred	952			952
Payments made	441	192		633
Balance, December 31, 2013	$ 511	$	$	$ 511

The remaining accrued severance in the amount of $511,000 at December 31, 2013 will be paid prior to July 1, 2014.

NOTE 15 CONTINGENCIES

We are periodically a defendant in miscellaneous claims and disputes in the ordinary course of business. While the outcome of these matters cannot be predicted with certainty, management presently believes the disposition of these matters will not have a material effect on our financial position, results of operations or cash flows.

In the normal course of business to facilitate sales of our products and services, we at times indemnify other parties, including customers, with respect to certain matters. In these instances, we have agreed to hold the other parties harmless against losses arising out of intellectual property infringement or other types of claims. These agreements may limit the time within which an indemnification claim can be made, and almost always limit the amount of the claim. It is not possible to determine the maximum potential amount under these indemnification agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made, if any, under these agreements have not had a material impact on our operating results, financial position or cash flows.

Table of Contents

NOTE 16 SHARE REPURCHASE

In October 2012 our Board of Directors authorized a $3.0 million share repurchase program. We adopted a 10b5-1 trading plan to implement the program. In 2013, we spent $3.0 million to repurchase 508,535 shares of our common stock. The share repurchase program concluded in the fourth quarter of 2013 and no more share repurchases will be made under the October 2012 authorization.

NOTE 17 SUBSEQUENT EVENT - ACQUISITION

On March 14, 2014 we acquired substantially all of the assets of Laser Design, Inc. (LDI), a privately held company based in Minneapolis, Minnesota for aggregate consideration of $2.7 million in cash plus the assumption of certain current liabilities. With revenues of approximately $6.0 million, LDI provides scanning systems and services to the global 3D scanner and services metrology market.

The assets acquired consist primarily of accounts receivable, inventory, equipment, intangibles and contract rights. At the date of issuance of the financial statements, the initial business combination accounting was not complete for this acquisition. The impact of the acquisition is not expected to be material to our consolidated financial position or results of operations.

NOTE 18 QUARTERLY FINANCIAL INFORMATION (UNAUDITED)
(In thousands, except per share amounts)

2013	March 31	June 30	September 30	December 31
Revenues	$ 6,713	$ 9,317	$ 8,726	$ 8,552
Gross margin	2,939	4,074	4,006	3,631
Loss from operations (2)	(2,024)	(1,171)	(961)	(2,010)
Net loss	(2,146)	(1,200)	(774)	(2,048)
Net loss per share - Basic (1)	(0.31)	(0.17)	(0.11)	(0.31)
Net loss per share - Diluted (1)	(0.31)	(0.17)	(0.11)	(0.31)

2012	March 31	June 30	September 30	December 31
Revenues	$ 11,280	$ 13,003	$ 11,558	$ 5,803
Gross margin	5,235	5,529	5,081	2,334
Income (loss) from operations (3)	92	98	(589)	(2,712)
Net income (loss) (4)	92	143	(447)	(6,499)
Net income (loss) per share - Basic (1)	0.01	0.02	(0.06)	(0.93)
Net income (loss) per share - Diluted (1)	0.01	0.02	(0.06)	(0.93)

(1) The summation of quarterly per share amounts may not equal the calculation for the full year, as each quarterly calculation is performed discretely.
(2) Includes a restructuring and severance charge of $952,000 in the fourth quarter of 2013.
(3) Includes restructuring charges of $217,000 in the third quarter and $523,000 in the fourth quarter of 2012.
(4) Includes a $5.7 million non-cash charge in the fourth quarter of 2012 to record a valuation allowance against our deferred tax assets.

Table of Contents

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
CyberOptics Corporation

We have audited the accompanying consolidated balance sheets of CyberOptics Corporation (a Minnesota corporation) and subsidiaries (the Company) as of December 31, 2013 and 2012, and the related consolidated statements of operations, comprehensive loss, stockholders equity and cash flows for each of the two years in the period ended December 31, 2013. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company s internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of CyberOptics Corporation and subsidiaries as of December 31, 2013 and 2012, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2013 in conformity with accounting principles generally accepted in the United States of America.

GRANT THORNTON LLP

Minneapolis, Minnesota
March 28, 2014

Table of Contents

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

NONE.

ITEM 9A. CONTROLS AND PROCEDURES

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934 (the Exchange Act)). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective in ensuring that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in applicable rules and forms and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, in a manner that allows timely decisions regarding required disclosure.

(i). **MANAGEMENT S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in the Securities Exchange Act of 1934 Rule 13a-15(f), and for performing an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2013. Internal control over financial reporting is a process designed by, or under the supervision of, the registrant s principal executive and principal financial officers, or persons performing similar functions, and effected by the registrant s board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles (GAAP) and includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the registrant; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the registrant are being made only in accordance with authorizations of management and directors of the registrant; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the registrant s assets that could have a material effect on the financial statements.

Management performed an assessment of the effectiveness of the Company s internal control over financial reporting as of December 31, 2013 based upon criteria in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on our assessment, management determined that the Company s internal control over financial reporting was effective as of December 31, 2013 based on the criteria in *Internal Control-Integrated Framework* issued by the COSO.

Because the Company is a smaller reporting company, this annual report on Form 10-K does not include an attestation report of the Company s registered public accounting firm regarding internal control over financial reporting.

(ii). During the quarter ended December 31, 2013, there has been no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

NONE.

Table of Contents

PART III.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information contained under the headings Proposal I Election of Directors, Information About our Board of Directors and its Committees and Other Corporate Governance Matters and Section 16(a) Beneficial Ownership Reporting Compliance of the Company s definitive proxy statement for its annual meeting of shareholders to be held May 19, 2014 (hereafter, the Proxy Statement), is hereby incorporated by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information under the headings Information About our Board of Directors and its Committees and Other Corporate Governance Matters Compensation of Independent Directors, and Executive Compensation of the Proxy Statement is hereby incorporated by reference.

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

The information contained under the heading Shares Outstanding of the Proxy Statement is hereby incorporated by reference.

The following table describes shares of our common stock that are available as of December 31, 2013 for purchase under outstanding stock-based awards, or reserved for issuance under stock-based awards or other rights that may be granted in the future, under our equity compensation plans:

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding those reflected in column (a))
Equity compensation plans approved by security holders			
1998 Stock Incentive Plan (1)	561,426	$ 6.53	389,373
Stock Option Plan for Non-Employee Directors	72,000	14.80	
Stock Grant Plan for Non-Employee Directors	N/A	N/A	6,000
Employee Stock Purchase Plan (2)	N/A	N/A	153,926
Total	633,426	$ 7.47	549,299

(1) In addition to options, shares may be issued in the form of restricted stock awards, performance awards and other stock-based awards.
(2) Shares are issued based on employees elections to participate in the plan.

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

The information under the headings Information About our Board of Directors and its Committees and Other Corporate Governance Matters Committees of Our Board Audit Committee of the Proxy Statement is hereby incorporated by reference.

Table of Contents

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information under the heading Independent Accountants and Payment of Fees and Information About our Board of Directors and its Committees and Other Corporate Governance Matters Committees of Our Board Audit Committee of the Proxy Statement is hereby incorporated by reference.

PART IV.

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) Financial Statements: The Consolidated Financial Statements included in Item 8 to this Form 10-K consist of the following:

Consolidated Balance Sheets as of December 31, 2013 and 2012.
Consolidated Statements of Operations for the years ended December 31, 2013 and 2012.
Consolidated Statements of Comprehensive Loss for the years ended December 31, 2013 and 2012.
Consolidated Statements of Cash Flows for the years ended December 31, 2013 and 2012.
Consolidated Statements of Stockholders Equity for the years ended December 31, 2013 and 2012.
Notes to the Consolidated Financial Statements.

Table of Contents

(b) LIST OF EXHIBITS

Exhibit Number	Description
2.0	Asset purchase agreement by and among LDI Acquisition Corp., Laser Design Inc., GKS Services Corp., Innovative Design Group, Inc. 3D Scanning Technologies, Ltd., and certain shareholders of Laser Design, Inc. dated as of January 14, 2014.
3.1	Articles of Incorporation of the Company, as amended (incorporated by reference to Exhibit 3.1 to the Company s Annual Report on Form 10-K for the year ended December 31, 1997).
3.2	Bylaws of the Company (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K dated September 8, 2008).
4.1	CyberOptics Corporation Stock Option Plan for Non-Employee Directors, as amended (incorporated by reference to Exhibit 4.2 of the Company s Registration Statement on Form S-8 filed August 10, 2006 (file no 333-136500)).
4.2	CyberOptics Corporation 1998 Stock Incentive Plan, as amended (incorporated by reference to Exhibit 4.1 to the Company s Registration Statement on Form S-8 filed August 14, 2012 (file no. 333-183296)).
4.3	CyberOptics Corporation Employee Stock Purchase Plan (incorporated by reference to Exhibit 4.1 of the Company s Registration Statement on Form S-8 filed August 10, 2011 (file no 333-176196)).
4.4	CyberOptics Corporation Stock Grant Plan for Non-Employee Directors (incorporated by reference to Exhibit 4.1 of the Company s Registration Statement on Form S-8 filed August 14, 2008 (file no 333-153015)).
10.1	Lease Agreement between FirstCal Industrial 2 Acquisitions LLC and the Company dated March 27, 2006 (incorporated by reference to Exhibit 10.1 to the Company s quarterly report on Form 10-Q for the quarter ended March 31, 2006).

10.2	First Amendment to Lease effective as of March 14, 2011, by and between Hines REIT Minneapolis Industrial, LLC and CyberOptics Corporation (incorporated by reference to Exhibit 10.1 to the Company s quarterly report on Form 10-Q for the quarter ended March 31, 2011).
*10.3	Severance Pay Agreement with Kathleen P. Iverson (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K dated May 19, 2008).
*10.4	Severance Pay Agreement with Jeffrey A. Bertelsen (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K dated May 19, 2008).
*10.5	Amendment to Severance Pay Agreement with Jeffrey A. Bertelsen (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K dated May 18, 2009).

Table of Contents

10.6	Tenancy Agreement between NIDEC Component Technology Co. LTD and CyberOptics PTE LTD (Singapore) Term 15 May 2011 to 24 July 2013 (incorporated by reference to Exhibit 10.1 to the Company s quarterly report on Form 10-Q for the quarter ended September 30, 2010).
*10.7	Severance Pay Agreement with Daniel Good (incorporated by reference to Exhibit 10.6 to the Company s Annual Report on Form 10-K for the year ended December 31, 2010).
*10.8	Amendment to Severance Pay Agreement with Kathleen P. Iverson (incorporated by reference to Exhibit 10.8 to the Company s annual report on Form 10-K for the year ended December 31, 2011).
*10.9	Clarification to Severance Pay Agreement with Jeffrey A. Bertelsen (incorporated by reference to Exhibit 10.9 to the Company s annual report on From 10-K for the year ended December 31, 2011).
*10.10	Clarification to Severance Pay Agreement with Daniel Good (incorporated by reference to Exhibit 10.10 to the Company s annual report on From 10-K for the year ended December 31, 2011).
*10.11	Separation agreement with Kathleen P. Iverson dated December 20, 2013
*10.12	Employment agreement with Subodh Kulkarni dated January 13, 2014
10.13	Tenancy agreement between RBC Investor Services Trust Singapore Limited and CyberOptics Singapore Private Limited dated April 4, 2013 (incorporated by reference to Exhibit 10 to the Company s quarterly report on Form 10-Q for the quarter ended March 31, 2013).
21.0	Subsidiaries of the Company.
23.1	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.0	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	Financial statements formatted in Extensible Business Reporting Language: (i) the Consolidated Balance Sheets, (ii) the Consolidated Statement of Operations, (iii) the Consolidated Statements of Comprehensive Loss, (iv) the Consolidated Statements of Cash Flows, (v) the Consolidated Statements of Stockholder s Equity, and (vi) the Notes to the Consolidated Financial Statements.

* Management Contract or Compensatory Plan or Arrangement

Table of Contents

SIGNATURES

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

CYBEROPTICS CORPORATION

/s/ SUBODH KULKARNI
By Subodh Kulkarni, Chief Executive Officer

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

Name	***Title***	***Date***
/s/ SUBODH KULKARNI *Subodh Kulkarni*	*President and CEO* *(Principal Executive Officer)*	*March 28, 2014*
/s/ ALEX B. CIMOCHOWSKI *Alex B. Cimochowski*	*Director*	*March 28, 2014*
/s/ MICHAEL M. SELZER, JR. *Michael M. Selzer, Jr.*	*Director*	*March 28, 2014*
/s/ IRENE M. QUALTERS *Irene M. Qualters*	*Director*	*March 28, 2014*
/s/ CRAIG D. GATES *Craig D. Gates*	*Director*	*March 28, 2014*
/s/ JEFFREY A. BERTELSEN *Jeffrey A. Bertelsen*	*Vice President, CFO, and COO* *(Principal Financial Officer and Principal Accounting Officer)*	*March 28, 2014*