CYBEROPTICS CORP
Form 10-K
March 15, 2012
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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, 2011.

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

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 x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

YES x 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 x 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. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company

Large accelerated filer o Accelerated filer o Non-accelerated filer o Smaller Reporting Company x

Indicate by checkmark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

YES o NO x

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: $66,159,182.

As of February 29, 2012, there were 6,933,116 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 21, 2012.

CYBEROPTICS CORPORATION

FORM 10-K

For the Fiscal Year Ended December 31, 2011

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PART I.

ITEM 1. DESCRIPTION OF BUSINESS

Background

CyberOptics® Corporation was founded in 1984 to commercialize technology for non-contact three-dimensional sensing. 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 2012 annual shareholders meeting to be held on May 21, 2012 will be available electronically via the internet at the following address: http://idelivercommunications.com/proxy/cybe.

We are a leading global supplier of optical process control sensors and inspection systems that are used to control the manufacturing process and to ensure the quality of electronic circuit boards manufactured by our customers using surface mount technology (SMT). We also manufacture and sell sensors that assist with yield improvement during semiconductor fabrication and process control sensors for photovoltaic (solar) cell fabrication. Our products assist the global SMT industry in meeting the rigorous quality demands for printed circuit board assembly and the global photovoltaic cell and semiconductor fabrication industries with their rigorous quality requirements. 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 and other properties both during and after the manufacturing process.

Our business is organized into two operating segments. Our Electronic Assembly segment designs, manufactures and sells alignment and embedded inspection sensors and stand-alone inspection systems for the electronic assembly and photovoltaic cell equipment markets. Our Semiconductor segment designs, manufactures and sells optical and other process control sensors and related equipment for the semiconductor capital equipment market.

Most of our products (89% of revenue in 2011) are developed and sold for use in SMT electronic circuit board assembly or with equipment used in SMT electronic circuit board assembly or photovoltaic cell manufacturing as part of our Electronic Assembly segment. 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 and photovoltaic cell

manufacturing companies, and as complete stand-alone “systems” that are sold directly to circuit board assembly companies.

Our alignment 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 alignment sensors to a manufacturer of photovoltaic cell equipment to perform accurate high-speed wafer alignment measurements within the wafer print nest.

Our stand-alone inspection system products are sold to original design manufacturers and other companies with surface mount assembly lines, to control quality as in-line systems. These stand-alone system products are used by manufacturers of circuit boards 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 and solder paste screen printers for integration into their equipment and offer some, but not all, of the inspection functionality of our stand-alone inspection systems. Manufacturers of DRAM and Flash memory also use our stand-alone system products to inspect assembly of their memory modules.

Our Semiconductor segment develops and sells products that assist with yield improvement in semiconductor fabrication, and for use with the robotic equipment that handles semiconductor wafers during the semiconductor fabrication process. In addition, we sell frame grabber products for general industrial applications. Semiconductor products were 11% of total revenues in 2011.

Market Conditions–Recent Developments of the Business

Our operations are heavily influenced by market conditions in worldwide electronic markets, and particularly in the SMT electronic assembly segment of these markets. Historically, these markets have been cyclical, with periods of strong growth followed by periods of excess capacity and reduced levels of capital spending.

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Our results were favorably impacted in 2006 and 2007 as the worldwide demand for cell phones, smart phones, laptops and other consumer electronics remained strong, driving the need for increased production of printed circuit boards and memory modules, and thereby increasing demand for our electronic assembly and semiconductor products. After peaking in the third quarter of 2007, our revenue declined sequentially each quarter through the first quarter of 2009, as our results were negatively impacted by reduced levels of capital spending for electronics manufacturing capacity brought about by the deepening weakness in the global economy. New orders dropped off sharply late in the fourth quarter of 2008 as the global economy fell into a severe recession, and our results for 2009 were adversely affected by the ongoing weakness in the global electronics market. The global electronics market strengthened significantly in 2010 and 2011 as the global economy continued to improve. The strengthening electronics market, combined with a significant increase in new product introductions led to a 7% increase in total revenue in 2011, reflecting a 31% increase in sales of our stand-alone solder paste inspection (SPI) and automated optical inspection (AOI) systems and a 37% increase in sales of WaferSense® products. Sale of alignment sensors weakened by 18% in 2011 due in part to a weak solar energy market.

We commit substantial resources to research and development efforts, which play a critical role in maintaining and advancing our position as a leading provider of optical sensors and systems. During the past several years, research and development efforts have been focused on a number of development activities that are critical to our future growth and success, including the following:

- Our new next generation QX500 family of AOI system products with improved resolution and speed.

- Dual lane and big board versions of both our SE500 and QX500 systems.

- A new mid-range SE350 SPI system based on the 3D inspection technology used in the SE500. The SE350 is a lower cost system for customers that do not require the full inspection functionality of the SE500.

- A new dual illumination sensor for the SE500 platform. This sensor offers customers an additional option providing enhanced solder paste measurement performance and repeatability.

- Our common hardware platforms and strobe inspection module (SIM) utilized in both our new QX500 AOI system and a new embedded inspection solution we have developed for DEK offering 100% 2D solder paste inspection with no cycle time penalty. We will further develop and enhance the capability of the SIM in 2012, as this technology is important to a number of existing and planned new products.

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Our recently introduced off-line AOI tabletop system (the QX100) and a soon to be introduced lower cost in-line version (the QX100i) based on the same sensor technology used in our QX500 AOI system.

- A new solar wafer alignment camera capable of performing accurate high-speed alignment measurements within the wafer print nest, including traditional wafer edge alignment of both monocrystalline and polycrystalline wafer materials.

- Continued investment in our WaferSense® line of products.

- Next generation LaserAlign products.

We believe that the first quarter of 2012 will be challenging for the electronics assembly, semiconductor and solar markets. Although we expect that our system sales may grow in the first quarter of fiscal 2012 compared to sales in 2011, we expect that sales of SMT sensors will remain soft, while sales of solar sensors, which accounted for $1.6 million of revenue in the first quarter of 2011, will be virtually nil. We ended 2011 with an order backlog of $4.9 million, compared to $6.3 million at the end of the third quarter. Given these factors, we anticipate earnings at or slightly above break-even in the first quarter ending March 31, 2012. We believe our performance will strengthen as the year progresses, reflecting what we believe will be continued demand for inspection systems, the introduction of new products, and a rebound in sales of solar sensors later in the year. The second and third quarters also tend to mark the peak buying periods for Asian original design manufacturer (ODM) customers. As a result, we are forecasting moderately improved sales and earnings for full-year fiscal 2012. In all, we believe our strategic emphasis on inspection systems and initiatives aimed at broadening our market reach will enable CyberOptics to report another growth year in 2012. Our current markets are cyclical. To a certain extent, our future growth is dependent on our ability to gain share in our current markets and to identify, focus on and achieve success in new markets. Nevertheless, 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.

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Objective

Our objective is to develop full-line defect monitoring and process control solutions that improve the quality and efficiency of our customers SMT manufacturing operations. We intend to build upon our innovative products in systems for solder paste inspection, automated optical inspection and component alignment, with new sensing products that will be embedded inside SMT production equipment. We eventually intend to tie these products together as a full-line process control solution riding on top of our current statistical process control (SPC) solutions. We believe our new embedded process verification (EPV) sensor and SIM will eventually gain acceptance among manufacturers of pick-and-place machines and solder paste screen printers as a further enhancement to inspection and control. Our research and development efforts are creating new inspection technologies for both OEM and end user markets which we believe will lower the cost of inspection and provide faster production through-put speeds, better ease of use, and improved resolution for inspecting progressively smaller electronic components.

During the last several years, our Semiconductor segment continued 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 gapping, teaching and vibration sensors that improve up-time and yield for semiconductor manufacturers. Currently we are working on the newest addition to the product line, a particle sensor, to be introduced in the first quarter of 2012.

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 assembly, semiconductor and photovoltaic cell 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 both to original equipment manufacturers that supply the SMT and photovoltaic cell fabrication industries and to end-user customers who use our SMT systems and WaferSense products directly for process and quality control in the circuit board manufacturing and semiconductor fabrication processes.

SMT Electronic Assembly Alignment Sensors

Our SMT electronic assembly alignment sensors product line, which has historically generated the largest component of our sales during the past ten years 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 16% of our revenue in 2011 and 21% of our revenue in 2010. Sales of these products, including service repairs, to Assembleon B.V. accounted for approximately 9% of our revenue in 2011 and 14% of our revenue in 2010. Accordingly, revenues and operations are currently heavily influenced by the level of purchases from these two customers and by the cyclical nature of the SMT production industry.

LaserAlign. Our LaserAlign sensor family has accounted for the vast majority of sales in the SMT electronic assembly alignment sensors product line. These sensors are sold for incorporation into component placement machines used in the SMT production lines that are manufactured by a number of different OEM customers.

The LaserAlign family of products aligns extremely small surface mount components, known as chip capacitors and resistors, during transport on a pick-and-place machine prior to placement on a circuit board. LaserAlign sensors are incorporated into the placement heads of component placement machines to ensure accurate component placement at high production speeds. Various high-speed component placement 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 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.

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The LaserAlign sensor is offered in several different configurations to satisfy the requirements of the different machines on which it is used. The latest version of the LaserAlign sensor technology was introduced in 2006 in a 5th 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 2011 and 27% in 2010.

BoardAlign Camera (BA Camera). The BA Camera, which is incorporated directly into the placement head of component placement machines, identifies fiducial markings on a circuit board and aligns the board in the component placement machine prior to component placement. The BA Camera was introduced in a sensor for Assembleon B.V. during 2003 and is incorporated into the latest version of Assembleon's component placement machine. We are currently working on a next generation BA Camera for Assembleon. Revenue from shipments of BA Camera sensors to Assembleon B.V. accounted for 4% of our revenue in 2011 and 7% in 2010.

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 3% of our revenue in 2011 and 5% in 2010.

Photovoltaic 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. Revenue from shipments of the Solar Wafer Alignment Camera accounted for 3% of our revenue in 2011.

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 robotic assembly platform. Equipped with our EPV inspection technology, the KE-2070 is the industry's first robotic assembly machine 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 KE-2070 platform is the only system 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 technology 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 KE-2070. The Juki KE-2070 platform also will continue to deploy CyberOptics' LaserAlignâ component placement sensors to ensure that electronic components placed on the circuit board are properly aligned and positioned. In 2011, new versions of this EPV technology were introduced into several other Juki platforms, including the KE-2080 and the FX-3.

2D Embedded Solder Paste Inspection. We are completing integration of our strobe inspection module or (SIM) into DEK's solder paste screen printer. Equipped with this module, which will be offered as an option, DEK screen printers will be able to improve yields and productivity by allowing solder paste screen printing concurrently with high-speed, 100% two dimensional inspection that does not decrease line or printer speed. Initial shipments of DEK screen printers with embedded inspection began in late 2011.

3D Solder Paste Inspection – Viscom OEM. Early in 2011 we entered into an agreement with Viscom GmbH to integrate SE500 3D solder paste inspection technology into Viscom's solder paste inspection platform. Sales of our SE500 3D solder paste inspection sensor to Viscom began in the second half of 2011.

SMT Stand-Alone Inspection Systems Products

Our SMT inspection systems product line consists of stand-alone measurement and inspection systems 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 substantial, off the shelf, translation or robotics hardware and conveyors and complete computer systems or processors with internally developed software. We are also working on a relationship with X-ray inspection manufacturers to further expand our footprint in the SMT inspection market.

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Solder Paste Inspection (SPI) Products

We began selling in-line solder paste measurement machines in the mid-1990's and cemented our SPI leadership position with the introduction of the SE300 in March 2000 and the SE300 Ultra in 2005. More recently, we have introduced a number of next generation SPI machines that we believe are not only extremely competitive, but improve our margins.

SE500. In 2009, we introduced our latest-generation SE500 SPI system. Based on a new cost-reduced platform, we believe the SE500 offers the best combination of inspection speed and accuracy available in the market. The SE500 is an in-line system that measures in three dimensions (3D) the amount of solder paste applied to the circuit board after the first step of the SMT 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 SE500 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 SE500 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. We further broadened our SE500 product line by developing systems capable of accommodating large board sizes and dual lane production lines.

We also recently introduced a new dual illumination sensor for the SE500 platform. This sensor offers customers an additional option providing enhanced solder paste measurement performance and repeatability.

SE350. In 2010, we introduced a new lower-cost SPI system, based on our industry leading 3D inspection technology, at a lower price point for a different segment of the inspection market; those customers requiring a solder paste inspection capability, but not the full functionality and superior measurement performance of our SE500 product. As our first mid-range offering, the SE350 has served as a vehicle to expand our served market. We also see potential for the SE350 to expand our market through sales to those companies who currently deploy no form of solder paste inspection. In 2012, we expect further cost reduction programs for the SE350 in addition to inspection cycle time and performance improvements allowing further penetration of the mid-range market segment.

Revenues from shipments of our SE500, SE350 and SE300 Ultra products accounted for 26% of our revenue in 2011 and 29% of our revenue in 2010.

Automated Optical Inspection (AOI) Products

We introduced our first in-line AOI products, the Flex series, in the fourth quarter of 2000. We introduced the latest version of the Flex series, the Flex Ultra HR, in 2007. Subsequently, we introduced our next-generation QX500 AOI system in the second quarter of 2010. 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 the reflow oven.

QX500. Our latest generation AOI system, the QX500 is designed to inspect the placement of the smallest components on circuit boards and features a cost reduced design that uses our strobe inspection module (SIM) sensor technology and next-generation common hardware platform. The QX500 features the fastest AOI inspection times currently available in the market and also utilizes our unique SAM™ software technology which offers an industry leading level of low false call performance. In 2011 we broadened our product line by introducing additional versions of the QX500 accommodating dual production lanes and capable of inspecting larger circuit board sizes. Late in 2011, we introduced a new tabletop AOI system (the QX100) for off-line inspection based on our SIM sensor technology. In 2012, we expect to introduce new versions of the QX in-line systems that offer higher resolution and a significant improvement in programming time, allowing for increased use in the low volume, high-mix applications more prevalent in the Americas and European markets.

Revenues from shipments of our QX500 product family and Flex Ultra AOI products accounted for 26% of our revenue in 2011 and 13% of our revenue in 2010.

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 original equipment manufacturers and to end-user customers through a network of distributors. Sales of our semiconductor products constituted 11% of our revenue in 2011 and 2010.

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WaferSense® Sensors. Our WaferSense family of sensors are intended 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), to be introduced early in 2012, will allow 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 being designed to be compatible with front-ends, coater/developer tracks, deposition and etch equipment.

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 and photovoltaic cell manufacturing markets (89% of total revenue in 2011 came from our Electronic Assembly segment). 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 less skilled engineers operating equipment. Our alignment and inspection sensors and embedded inspection solutions are sold to OEM's serving the SMT circuit board assembly market and our stand-alone SPI and AOI systems are sold to end-user electronic assembly manufacturers in this market. Our solar wafer alignment camera is sold to DEK on an OEM basis for use in their photovoltaic cell manufacturing equipment.

We sell our semiconductor products into the semiconductor capital equipment market for use in the fabrication of semiconductor devices. 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 for use by process and equipment engineers during the production of semiconductor wafers. We sell our wafer mapping and alignment sensors to manufacturers of equipment that transport wafers during the semiconductor manufacturing (front-end fabrication) process.

A large proportion of our stand-alone inspection system sales are originating in the low cost geographies of Asia where a significant portion of the new worldwide production capacity for circuit board assembly has been added. In order to bring our development and final assembly and integration for our stand-alone inspection system products closer to the markets in Asia where the majority of our sales occur, to reduce cost, and to free development personnel at our home office in Minneapolis to focus on sensor technology development, we initiated a plan in 2008 to transition a portion of our development, and all final assembly and integration operations for our stand-alone system products, to Singapore. This transition was substantially complete by the end of the first quarter of 2009. We previously established sales offices in Singapore in 2001 and China in 2004 to serve the growing market for manufacturing production equipment in Asia and to increase the percentage of worldwide production lines that use inspection in their production process to improve production yields and reduce cost.

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We sell our products worldwide to many of the leading manufacturers of electronic circuit board assembly equipment, manufacturers of semiconductor DRAM memory, semiconductor capital equipment manufacturers 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 manufacture our OEM alignment and inspection sensors, embedded inspection solutions, the sensors used in our stand-alone inspection systems and all of our semiconductor products in our Minneapolis, Minnesota headquarters facility. All final assembly and integration for our stand-alone system products takes place in our Singapore facility.

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 are electronic assembly alignment sensors that ultimately are sold by our OEM customer into Asia.

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,	
	2011	2010
Asia	56%	55%
Europe	25%	27%
Other export sales (1)	4%	4%

(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. Virtually all export sales are negotiated, invoiced and paid in U.S. dollars. Accordingly, although changes in exchange rates do not affect revenue and income per unit, they can influence the willingness of customers to purchase units.

Sales and Marketing

Our electronic assembly and photovoltaic cell alignment and inspection sensors are sold to large OEM customers by direct sales staff located in Minnesota. Our stand-alone system products are primarily sold through independent representatives and distributors managed by direct sales personnel located in Singapore, as well as in the UK, U.S. and China. We have agreements with 42 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 (15), Europe (12) and China and the rest of Asia (15).

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 (7). 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 Portland, 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 $4.9 million on December 31, 2011, compared to $7.2 million on December 31, 2010. Backlog totaling $4.1 million is deliverable in the first quarter of 2012. Sales of some stand-alone 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, photovoltaic cell 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.

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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. CyberOptics was founded by research scientists and has retained relationships with academic institutions to ensure that the most current information on technological developments is obtained. 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.

As a technology based company, we commit substantial resources to research and development efforts, which play a critical role in maintaining and advancing our position as a leading provider of optical sensors and systems. During the past several years, research and development efforts have been focused on a number of development activities critical to our future growth and success, including the following:

- Our new next generation QX500 family of AOI system products with improved resolution and speed.

- Dual lane and big board versions of both our SE500 and QX500 systems.

- A new mid-range SE350 SPI system based on the 3D inspection technology used in the SE500. The SE350 is a lower cost system for customers that do not require the full inspection functionality of the SE500.

- A new dual illumination sensor for the SE500 platform. This sensor offers customers an additional option providing enhanced solder paste measurement performance and repeatability.

- Our common hardware platforms and strobe inspection module (SIM) utilized in both our new QX500 AOI system and a new embedded inspection solution we have developed for DEK offering 100% 2D solder paste inspection with no cycle time penalty. We will further develop and enhance the capability of the SIM in 2012, as this technology is important to a number of existing and planned new products.

- Our recently introduced off-line AOI tabletop system (the QX100) and a soon to be introduced lower cost in-line version (the QX100i) based on the same sensor technology used in our QX500 AOI system.

- A new solar wafer alignment camera capable of performing accurate high-speed alignment measurements within the wafer print nest, including traditional wafer edge alignment of both monocrystalline and polycrystalline wafer materials.

- Continued investment in our WaferSense® line of products.

- Next generation LaserAlign products.

Research and development expenses were $7.8 million in 2011 and $7.4 million in 2010. These amounts represented 13% of revenues in 2011 and 2010. 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. We expect research and development expenses to increase in 2012 as we continue to focus on new products, including new stand-alone inspection offerings based on our 3D SPI technology and 2D inspection technology utilizing our strobe inspection module (SIM), new embedded inspection solutions for both solder paste and automated optical inspection and new WaferSense products.

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Manufacturing

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.

Our electronic assembly and photovoltaic cell alignment sensor products and our semiconductor products are assembled at our Minneapolis, Minnesota headquarters facility. Our stand-alone SMT inspection system products are assembled in Singapore.

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

Although we believe that our products offer unique capabilities, competitors offer technologies and systems that perform some of the visual inspection and alignment functions performed by our products. 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.

Our electronic assembly sensor products face competition in the market for alignment and inspection on component placement machines primarily from manufacturers of vision (camera and software based) systems. Potential competitors in these markets include Cognex Corporation and Electro Scientific Industries, Inc. In addition, our products compete with 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. Our electronic assembly alignment sensor products have historically

competed favorably on the basis of these factors, and particularly on the basis of speed and product cost. We believe our sensor products are also better suited to align the smaller electronic component sizes currently available in the market. Nevertheless, advances in terms of speed by vision systems have reduced some of the advantages of our products in some configurations. We have introduced newer configurations that we believe allow our alignment sensors, and the component placement machines in which they are incorporated, to compete favorably based on the speed and accuracy of their performance, as well as their price.

The primary competition for sales of our next generation SE500 and SE350 SPI systems has been from Asian based companies such as KohYoung Technology (Korea), Parmi (Korea) and Test Research, Inc. (Taiwan). We believe the SE500 and SE350 compete favorably against these competitive products on the basis of performance, reliability and price and that the new dual illumination sensor will allow us to better compete for those customers who require an enhanced level of solder paste measurement performance and repeatability.

Our AOI system products (QX500 family of products, QX100 and QX100i) face competition from a large number of AOI companies, the most significant being MirTec, Ltd. (Korea), Viscom (Germany), Saki Corporation (Japan) and Omron, Ltd. (Japan). We believe that the technology used in the QX500 family of products, QX100 and QX100i is differentiated from the competition and that these products compete effectively in this market based on measurement accuracy, cost, ease of use at rapid production line speeds and the low rate of false calls.

The electronics manufacturing market has become increasingly competitive and concentrated in large Asian based original design manufacturers and global electronic manufacturing service contract manufacturers, resulting in the ability on their part 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 solder paste and automated optical inspection systems in some markets. These same pricing pressures also impact our OEM customers for our 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 across all product lines that command better pricing in the market.

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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 equipment 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, 2011, we had 193 full-time employees worldwide, including 46 in sales, marketing and customer support, 63 in manufacturing, purchasing and production operations, 65 in engineering, research and development, and 19 in finance, administration and information services. Of these employees, 99 are located at our corporate headquarters in Minneapolis and 94 are located in other offices (7 in the UK, 10 in Oregon, 64 in Singapore, 9 in China, 2 in Taiwan and 2 in Japan). All of our employees located in Oregon work in our Semiconductor business. 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.

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 78 patents (50 U.S. and 28 foreign) on a number of technologies, including those used in LaserAlign, our embedded inspection technology including our strobe inspection module (SIM), our stand-alone inspection systems 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 38 pending patents (10 U.S. and 28 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.

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ITEM 1A. RISK FACTORS

Our operations are subject to a number of risks and uncertainties that may affect our financial results, our accounting, 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 the current 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. Although the world economy has started to recover, there can be no assurance as to the length and strength of the recovery, that it will continue or that the economy will not slide back into another period of recession. 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. Any tightening of credit in financial markets may lead consumers and businesses to postpone spending, which 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 original equipment manufacturers to which we sell our sensors supply SMT manufacturers, and those manufacturers, as well as the circuit board manufacturers that purchase our SMT systems 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, when or if these economies move into periods of recession, thereby negatively impacting the demand for overall electronics and adversely affecting demand for our products.

- **Sales to our four largest customers constituted a significant portion of our revenue in 2011 and loss of any of these customers, or a decline in the customer's business, would have a materially adverse impact on our results of operation.** Sales to our four largest customers, including our two principal OEM sensor customers, and two original design manufacturers, constituted 46% of our total revenue in 2011. We believe our relationships with these customers are good and we continue to pursue new projects with them. However, like most manufactures in and suppliers to the global electronics markets, their businesses were adversely impacted by recession, and would most likely again be impacted in the future when or if the global economy moves into another recessionary period. If the order rates of these customers are negatively impacted by global economic events beyond their control, or if they choose sensors of inspections 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.

- **With our Solar Wafer Alignment camera, we have entered a new market where capital equipment purchases are dependent upon market factors that differ from our typical markets and may be more difficult to project.** Sales of our Solar Wafer Alignment Camera are dependent upon the ability of DEK (a division of Dover Corporation) to design and sell photovoltaic cell equipment which is competitive in the marketplace. DEK's success in turn is also dependent upon the commercial success of the solar energy market. Solar energy is currently not as economical as other more conventional energy sources, including those based on fossil fuels and its use is dependent upon significant government subsidies in many markets. Our future revenue from this product and ability to sell existing inventory may be impacted if DEK's equipment is not competitive or if government subsidies for solar energy are reduced or eliminated, or if the technology related to solar energy does not continue to advance and become competitive with other more conventional sources of energy.

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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 SARS outbreak, 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. Other natural disasters, such as the tsunami and earthquake that hit Japan and the floods that hit Thailand in 2011, could also affect the business we do in the affected regions. 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 more than three quarters of our revenue (approximately 85% in 2011) 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;
- seasonal reductions in business activity;
- potentially adverse tax assessments; and
- terrorism, disease, or other events that may affect local economies and access.

We conduct platform and software development and final assembly and integration for our stand-alone system products in Singapore which are subject to unique risks due to the remote nature of the operations. Our Singapore development and manufacturing operations present a number of risks related to the retention of personnel, management of product development and operations, 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 at attractive rates. 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 products could be negatively impacted if we are unable to retain our Singapore based employees, or if it costs more than expected to retain these employees or hire experienced employees in a timely manner, or if we are unable to locate suitable sources of supply for our products manufactured in Asia.

- **We price our products in US dollars, and as a result, our products may have difficulty competing in periods of increasing strength of the dollar.** Virtually all 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 goods, 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.

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- **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 subsidiaries in the United Kingdom and Singapore, which may result in unrealized, pre-tax losses.** At December 31, 2011, the dollar equivalent gross notional amount of our foreign exchange forward contracts designated as cash flow hedges was approximately $11.0 million. At December 31, 2011, our open foreign exchange forward contracts were in an unrealized loss position equal to $493,000 on a pre-tax basis due to a significant strengthening of the U.S. dollar in relation to the Singapore dollar in the later part of 2011. 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. For example, the unrealized pre-tax loss on our open foreign exchange forward contracts outstanding as of January 31, 2012 had been reduced to approximately $139,000, due to a weaker U.S. dollar. 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 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 changes rapidly and, because it takes considerable time to develop new products, we must anticipate technological developments in order to effectively compete. Further, because we do not have unlimited development resources, we might choose to forgo the pursuit of what becomes a leading technology and devote our resources to technology that is less successful. If we incorrectly anticipate technology developments, or have inadequate resources to develop our products to deal with changes in technology, our products could become obsolete.

- **We compete in the electronics assembly alignment sensor market with larger companies**. Our 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 features 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 very price competitive.** The electronics capital equipment market for surface mount technologies is becoming more mature, resulting in increased price pressure on suppliers of equipment. Consequently, our electronic assembly stand-alone system 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.

- **We are dependent upon our systems business for approximately one-half of our revenue.** During 2011, approximately 52% of our total revenue was generated by sales of stand-alone SPI and AOI systems. Sales of these products have been subject to increasing competition in world markets, particularly in Asia, negatively impacting sales prices for our products. If we are not successful in continuing to sell and differentiate this product line relative to our competition, our results of operations would be negatively affected.

- **Competitors in Asia may be able to compete favorably with us based on lower production and employee costs**. We compete with large multinational systems companies in sales of stand-alone end-user 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 of stand-alone end-user systems products, many of which may have lower overall production and employee costs and are willing to offer their products at lower selling prices to customers.

- **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.

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- **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.

- **Our growth has been dependent on technical innovation, some of which was generated by our founder, and our growth could be impacted if we are unable to innovate in the future.** Although our results are cyclical, our longer-term growth has been in the past, and we anticipate will be in the future, dependent upon our ability to introduce new and innovative products. Many of our product innovations were generated by our founder, Dr. Steven K. Case, who died in June 2009. Although we have devoted and continue to devote significant resources to research and development to support this innovation and believe we have talented scientists who have and will continue to develop significant new inventions, if we fail to create significant new product innovations, our market position would be negatively impacted.

- **Our ability to gain share in our current markets and to identify, focus on and achieve success in new markets is dependent on our ability to identify the customer requirements in segments of our current market or new markets where we lack familiarity.** Our ability to grow share in our current markets and achieve success in new markets is subject to a number of risks, including hiring and retaining key sales and marketing personnel, identifying new markets where our technology may have applicability, and our ability to identify the requirements to successfully compete in those markets, including sales channels, product development and other market specific requirements.

- **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 6,933,029 shares of our common stock outstanding as of December 31, 2011. 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 15,000 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.

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 sensor products,

including the sensors used in our stand-alone system products and our semiconductor products. In March 2011, we finalized a lease amendment for the facility that became effective July 1, 2011. The amendment provides that we will lease the current facility through December 31, 2018. The amendment contains escalation clauses and two renewal options of three years each. Our prior lease for the facility expired on June 30, 2011. In connection with the lease amendment, we reduced the size of the facility by 9,943 square feet.

We lease a 20,000 square foot mixed office and warehouse facility in Singapore that serves as a sales, development and final assembly and integration facility for our stand-alone system products. The lease for our facility in Singapore expires in July 2013. As of December 31, 2011, we also have operating leases in Oregon (for our semiconductor products), the United Kingdom, and China, which expire in December 2012, December 2014 and September 2012, 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.

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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.

	2011		2010	
Quarter	High	Low	High	Low
First	$9.90	$8.10	$9.34	$6.32
Second	$10.29	$8.20	$11.96	$8.60
Third	$10.22	$6.55	$10.19	$8.11
Fourth	$8.45	$6.83	$9.80	$6.65

As of February 28, 2012, there were approximately 200 holders of record of 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.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable

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

Results of Operations for the Two Years Ended December 31, 2011:

General Overview

Our products are sold primarily into the electronics assembly, photovoltaic (solar) cell manufacturing, semiconductor DRAM and Flash memory manufacturing, 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 produce circuit boards, solar cells and semiconductor wafers and devices. Historically these markets have been cyclical, and have experienced periods of rapid growth as worldwide capacity is added to support increased consumer demand for electronic products, and new capital equipment is purchased as a result of technology changes in electronics components, such as miniaturization, and changing production requirements. These periods of growth have historically been followed by periods of excess capacity and reduced capital spending.

Our results were favorably impacted in 2006 and 2007 as the worldwide demand for cell phones, smart phones, laptops and other consumer electronics remained strong, driving the need for increased production of printed circuit boards and memory modules, and thereby increasing demand for our electronic assembly and semiconductor products. After peaking in the third quarter of 2007, our revenue declined sequentially each quarter through the first quarter of 2009, as our results were negatively impacted by reduced levels of capital spending for electronics manufacturing capacity brought about by the deepening weakness in the global economy. New orders dropped off sharply late in the fourth quarter of 2008 as the global economy fell into a severe recession, and our results for 2009 were adversely affected by the ongoing weakness in the global electronics market.

The global electronics market strengthened significantly in 2010. Our sales benefited in 2010 as pent-up demand, an improving economy, coupled with new product introductions led to significantly increased sales of alignment sensors and our stand-alone solder paste inspection (SPI) and automated optical inspection (AOI) systems.

Our results in 2011 have been driven by strong sales of our stand-alone inspection system products, particularly our new family of QX500 AOI system products. Sales of AOI systems climbed over 100% to a record $15.7 million from $7.2 million in 2010. Our QX500 sales were paced by substantial orders from several of the industry's largest original design manufacturers (ODMs) in Asia, who deployed this new-generation technology on both new and existing production lines. Reflecting the strong sales of our AOI technologies, CyberOptics' total inspection system revenues

hit a new record of $33.3 million in 2011. We posted lower sales of SMT alignment sensors in 2011 due largely to the general weakening in overall economic conditions. Sales of solar wafer alignment cameras for the photovoltaic cell market were particularly soft in the latter half of 2011, reflecting the continued impact of aggressive production capacity expansion in the solar market during 2010 and early 2011. Partly offsetting weakness in sales of SMT alignment sensors were additional sales of SE500 sensors to German-based Viscom AG, which has integrated CyberOptics' sensor technology into its SPI platforms.

We believe that the first quarter of 2012 will be challenging for the electronics assembly, semiconductor and solar markets. Although we expect that our system sales may grow in the first quarter of fiscal 2012 compared to sales in 2011, we expect that sales of SMT sensors will remain soft, while sales of solar sensors, which accounted for $1.6 million of revenue in the first quarter of 2011, will be virtually nil. We ended 2011 with an order backlog of $4.9 million, compared to $6.3 million at the end of the third quarter. Given these factors, we anticipate earnings at or slightly above break-even in the first quarter ending March 31, 2012. We believe our performance will strengthen as the year progresses, reflecting what we believe will be continued demand for inspection systems, the introduction of new products, and a rebound in sales of solar sensors later in the year. The second and third quarters also tend to mark the peak buying periods for Asian ODM customers. As a result, we are forecasting moderately improved sales and earnings for full-year fiscal 2012. In all, we believe our strategic emphasis on inspection systems and initiatives aimed at broadening our market reach will enable CyberOptics to report another growth year in 2012. Our current markets are cyclical. To a certain extent, our future growth is dependent on our ability to gain share in our current markets and to identify, focus on and achieve success in new markets. Nevertheless, 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.

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Segment Results

Our business consists of two operating segments, the electronic assembly and semiconductor segments. In the electronic assembly segment we design, manufacture and sell optical process control sensors and inspection systems for the electronic assembly and photovoltaic (solar) cell equipment markets. In the semiconductor segment we design, manufacture and sell optical and other process control sensors and related equipment for the semiconductor capital equipment market. Segment information follows:

	Year Ended December 31,		
(In thousands)	2011	2010	2009
Revenue:			
Electronic assembly	$54,147	$50,967	$23,736
Semiconductor	6,940	5,984	3,330
Total	$61,087	$56,951	$27,066
Gross margin:			
Electronic assembly	$23,151	$20,757	$7,061
Semiconductor	4,902	4,205	2,144
Total	$28,053	$24,962	$9,205
Operating expense:			
Electronic assembly	$19,404	$18,643	$17,772
Semiconductor	2,961	2,658	2,668
Total	$22,365	$21,301	$20,440
Income (loss) from operations:			
Electronic assembly	$3,747	$2,114	$(10,711)
Semiconductor	1,941	1,547	(524)
Total income (loss) from operations	$5,688	$3,661	$(11,235)
Interest income and other	39	268	539
Income (loss) before income taxes	$5,727	$3,929	$(10,696)

Revenues

Our revenues increased by 7% to $61.1 million in 2011 from $57.0 million in 2010 and increased by 110% in 2010 from $27.1 million in 2009. The following table sets forth, for the years indicated, revenues by product line (in thousands):

	2011	2010	2009
Electronic Assembly			
Alignment Sensors	$20,844	$25,537	$8,428
SMT Inspection Systems	33,303	25,430	15,308
Total Electronic Assembly	54,147	50,967	23,736
Semiconductor	6,940	5,984	3,330
Total	$61,087	$56,951	$27,066

Electronic Assembly

Revenue from sales of alignment sensors decreased by $4.7 million or 18% in 2011, down from $25.5 million in 2010. Revenue from sales of our SMT inspection system products increased by $7.9 million or 31% in 2011, up from $25.4 million in 2010. Revenue from sales of our alignment sensors increased by 203% to $25.5 million in 2010, up from $8.4 million in 2009. Revenue from sales of our stand-alone SMT inspection system products increased by 66% or $10.1 million to $25.4 million in 2010, up from $15.3 million in 2009.

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Sales of non-solar SMT alignment sensors decreased by $4.4 million or 20% to $17.7 million in 2011, resulting largely from the general weakening in overall economic conditions and a challenging comparison with 2010, when sales of capital equipment for printed circuit board production benefited from pent-up demand as the global economy was emerging from the deep recession of 2009. Sales of solar wafer alignment cameras for the photovoltaic cell market, while up $300,000 or 17% in 2011 to $2.1 million, were particularly soft in the last six months of 2011, reflecting the continued impact of aggressive production capacity expansion in the solar market during 2010 and early 2011.

In March 2011, we entered into an OEM agreement with German-based Viscom AG, under which we integrated our SE500 sensor technology into Viscom's SPI platforms. We realized the initial sales of our SE500 SPI sensors to Viscom AG in the second quarter of 2011. We believe Viscom's new platform has enjoyed a strong market acceptance, resulting in additional orders for our SE500 sensors that we anticipate will increase in future periods. This new OEM partnership has the potential to make a significant contribution to our profitability over the next few years.

Revenue from sales of our stand-alone SMT inspection system products increased by $7.9 million or 31% in 2011, up from $25.4 million in 2010. The revenue increase was driven by favorable market acceptance and significantly higher sales of our family of QX500 AOI system products. Sales of AOI systems climbed over 100% to a record $15.7 million from $7.2 million in 2010. Our QX500 sales were paced by substantial orders from several of the industry's largest ODMs in Asia, who deployed this new-generation technology on both new and existing production lines. Featuring what we believe are the fastest AOI inspection times currently available, the QX500 family is based upon a cost-reduced platform that we believe exceeds the performance metrics of competitors' systems. We believe the QX500 family of products will continue to receive favorable market acceptance, particularly with ODMs, where we have a large, established installed base of SPI systems and where the fast inspection times of the QX500 are required. Increased sales of AOI systems in 2011 were offset slightly by a small reduction in sales of our SPI systems. Sales of SPI systems declined by $600,000 or 4% to $15.8 million in 2011, from $16.4 million in 2010. We believe that the ongoing introduction of new system products addressing different tiers of the market will strengthen our competitive position in the inspection market. For example, we have recently introduced two new inspection system products: a lower-end AOI tabletop system and a higher-performance SPI system based upon a newly developed dual illumination sensor.

The global recession caused severe weakness and disruption in our electronics markets starting late in 2008 and throughout all of 2009, resulting in very low levels of revenue in 2009 from both our alignment sensors and stand-alone SMT inspection system products. The global electronics market strengthened in 2010, returning to more normalized levels of equipment purchases and production capacity additions. We believe that improved market conditions, combined with favorable market acceptance of the new products we have recently introduced, resulted in the higher revenue levels in 2010 compared to the same periods of 2009. Our revenue in 2010 benefited from initial shipment of solar wafer alignment cameras to DEK, an equipment manufacturer for the photovoltaic cell market. Sales of our SE500, SE350 and SE300 Ultra SPI systems increased by over 100% to $16.4 million in 2010 from $8.1 million in 2009. Our sales of QX500 and Flex Ultra AOI system products increased by 26% to $7.2 million in 2010, up from $5.7 million in 2009. Sales of our inspection system products were negatively impacted in 2009 by the severe

global economic recession.

We believe that ongoing introduction of new system products will continue to strengthen our competitive position in the inspection market. Unlike revenue from our alignment sensors, which is closely tied to the need for added production capacity for printed circuit boards, a portion of our stand-alone SMT systems revenue is derived from the retro-fit of existing production lines as companies seek to improve their production yields, thereby reducing manufacturing costs. We believe that these new products, and technology trends toward smaller components and increased production speeds, will contribute to increased demand and higher revenue in 2012.

Export revenue from alignment and OEM inspection sensors and stand-alone SMT inspection systems totaled $48.8 million or 90% of electronic assembly revenue in 2011, compared to $46.7 million or 92% of electronic assembly revenue in 2010. Sales to international customers continue to be significant, as manufacturing of electronic components has migrated offshore, particularly to China and other areas of Asia.

Semiconductor

Revenues from sales of our semiconductor products increased by 16% or $1.0 million to $6.9 million in 2011. Revenues from sales of semiconductor products increased by 80% or $2.7 million to $6.0 million in 2010, up from $3.3 million in 2009. The revenue increase in both years was due to continuing favorable market acceptance of our WaferSense™ products. Sales of these products increased by $1.3 million or 37% to $4.7 million in 2011. WaferSense revenue increased by over 100% to $3.4 million in 2010, from $1.6 million in 2009. The increase in revenue in 2010 was also due to improving conditions in the market for semiconductor fabrication equipment resulting from the better economic environment.

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Our wafer mapper and frame grabber products are relatively mature. We anticipate that future growth in our semiconductor revenues, exclusive of changes related to capital procurement cycles, will come from our WaferSense™ products, a family of wireless, wafer-like precision measurement tools for in-situ setup, calibration and process optimization in semiconductor processing equipment. We expect to introduce a new WaferSense™ particle sensor in 2012, and anticipate introducing additional WaferSense™ products in later periods.

Export revenue from semiconductor products totaled $3.3 million or 48% of revenue in 2011, compared to $2.1 million or 35% of revenue in 2010. We anticipate that the percentage of export revenue will continue to grow in the future as a higher proportion of our WaferSense™ sales come from international customers compared to our other semiconductor products.

Cost of Revenue and Gross Margin

Electronic Assembly

Cost of revenue for our electronic assembly segment increased by $786,000 or 3% to $31.0 million in 2011, after increasing by 81% to $30.2 million in 2010. The increase in cost of revenue in both periods was due to the higher level of sales. Electronic assembly sales increased 6% in 2011 and 115% in 2010. Cost of revenue items fluctuating with the level of sales include raw materials, direct labor and some factory overhead costs.

Gross margin as a percentage of electronic assembly sales was 43% in 2011, compared to 41% in 2010. The improvement in gross margin percentage in 2011, compared to 2010, was due to increased sales of higher margin products, including the large increase in sales of our QX500 family of AOI systems and SE500 sensors to Viscom, as well as the favorable impact of cost reduction programs across all of our electronic assembly products.

Gross margin as a percentage of electronic assembly sales was 41% in 2010, compared to 30% in 2009. The improvement in gross margin percentage in 2010 was due to significantly increased sales of higher margin alignment sensors, better manufacturing leverage resulting from substantially higher production volumes over which to spread fixed manufacturing overhead costs (due to the much higher sales in 2010 compared to 2009), the favorable impact of cost reduction programs and our new cost reduced SMT inspection system products.

The electronic assembly market is highly price competitive, 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, we believe our next-generation QX500 AOI system

products combines a reduction in cost with enhanced performance. Other recently introduced products including our solar wafer alignment camera, embedded process verification (EPV) technology, the embedded solder paste inspection solution we developed for DEK, and the SE500 sensor we sell to Viscom, have more favorable margins than our existing products.

Semiconductor

Cost of revenue for our semiconductor segment increased by $259,000 or 15% to $2.0 million in 2011, after increasing by $593,000 or 50% to $1.8 million in 2010. The increase in cost of revenue in both 2011 and 2010 was due to the higher level of sales. Semiconductor sales increased 16% in 2011 and 80% in 2010.

Gross margin as a percentage of semiconductor sales increased to 71% in 2011 from 70% in 2010 and 64% in 2009. The gross margin benefit from higher WaferSense sales in 2011 was mostly offset by an increase in scrap charges, resulting in the one percentage point improvement in gross margin.

The gross margin improvement as a percentage of semiconductor sales in 2010 was due to the cost benefit from consolidation of manufacturing for our semiconductor products into our Minneapolis, Minnesota headquarters, increased sales of higher margin WaferSense™ products and improved manufacturing leverage, resulting from higher production volumes over which to spread fixed manufacturing overhead costs.

Operating Expenses

We believe continued investment in research and development of new products, coupled with continued investment in and development of our sales channel is critical to future growth and profitability. We historically have maintained research and development and sales and marketing expenses at relatively high levels, even during periods of recession and downturn in our electronic assembly and semiconductor capital equipment markets, as we continue to fund development of important new products, and continue to invest in our sales channels and develop new sales territories.

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Electronic Assembly

Research and development expenses for our electronic assembly segment were $6.6 million or 12% of revenue in 2011, $6.3 million or 12% of revenue in 2010, and $6.0 million or 25% of revenue in 2009.

The 5% increase in research and development expenses in 2011 resulted from increased inspection system development cost in Singapore due to the weakened United States dollar, higher recruitment costs, along with additional wages and benefits due to annual pay increases and headcount additions, offset in part by lower project costs for proto-types and consulting. Research and development expenses increased 5% in 2010 compared to 2009. In 2010 we restored pay for our employees to levels prior to a 2009 pay cut implemented in response to the severe recession. We also incurred higher costs for proto-type materials related to new product development and added several new employees to assist with ongoing development efforts.

Our research and development efforts in 2011 were focused on new products, including a new dual illumination sensor for our SE500 platform providing enhanced solder paste measurement performance and repeatability, a new off-line tabletop AOI system, our 2D inspection technology based on our strobe inspection module (SIM) for both stand-alone and embedded inspection solutions, and next generation SMT alignment sensors. We expect research and development costs to increase further in 2012, as development continues on important new products including next generation stand-alone AOI and SPI inspection systems, embedded inspection solutions and next generation SMT alignment sensors.

Selling, general and administrative expenses for our electronic assembly segment were $12.7 million or 24% of revenue in 2011, $12.3 million or 24% of revenue in 2010 and $11.4 million or 48% of revenue in 2009.

The slight increase in selling, general and administrative expense in 2011 was due to additional business development activities and the impact of the weakening United States dollar on the recorded value of costs attributable to our foreign sales offices, was mostly offset by a reduction in commissions for third party sales representatives, as more sales were sold through distribution channels, and a $65,000 reduction in our allowance for doubtful accounts. The increase in selling, general and administrative expenses in 2010 reflect higher sales and marketing costs, including commissions for third party sales representatives resulting from higher levels of SMT inspection system sales, higher incentive compensation costs due, in part, to our improved financial performance, partially offset by lower expense for doubtful accounts. Selling, general and administrative expenses for 2009 include an $800,000 provision for doubtful accounts related to a key distributor of our SMT inspection system products. The distributor remains in business, and is committed to paying us the amount owed. The $60,000 reduction in our allowance for doubtful accounts in 2011 was due to partial collection of this receivable.

Semiconductor

Research and development expenses for our semiconductor segment were $1.2 million or 17% of revenue in 2011, $1.1 million or 18% of revenue in 2010 and $1.1 million or 33% of revenue in 2009. Research and development expenses were higher in 2011 due to increased expenditures for proto-types, certification fees and consulting, reflecting our ongoing investment in the WaferSense™ product line, particularly the new particle sensor we expect to introduce in 2012.

Selling, general and administrative expenses for our semiconductor segment were $1.7 million or 25% of revenue in 2011, $1.5 million or 25% of revenue in 2010 and $1.4 million or 41% of revenue in 2009. The increase in expense in 2011 reflects the 16% overall increase in semiconductor sales and higher WaferSense™ sales through third party sales representatives in 2011, resulting in more third party commission expense. The increase in 2010 reflects higher third party commission payments attributable to the higher level of sales.

Interest Income and Other

Interest income and other includes interest earned on investments, realized gains and losses from sales of investments and gains and losses associated with foreign currency transactions and foreign exchange forward contracts used to hedge against the effects of exchange rate fluctuations on intercompany financing transactions associated with our subsidiaries in the United Kingdom and Singapore.

Interest income and other decreased in 2011 and 2010 due to lower interest income resulting from lower rates of interest earned on invested funds. Fluctuations in the level of gains and losses associated with foreign currency transactions and foreign exchange forward contracts can also impact the level of interest income and other reported in any given period. We incurred foreign currency transaction gains, net of underlying currency hedges of $67,000 in 2011, compared to foreign currency transaction gains, net of underlying currency hedges, of $106,000 in 2010.

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Income Taxes

We recorded income tax expense of $1.4 million in 2011 reflecting an effective tax rate of 24%, compared to income tax expense of $794,000 in 2010 reflecting an effective tax rate of 20%. Our effective tax rate for 2011 and 2010 reflects the benefit of having a significant portion of our operations in Singapore where corporate income tax rates are substantially lower than the United States. Fluctuations in the level of income in the United States and Singapore will have an impact on our effective tax rate in any given annual period. Lower tax rates in foreign jurisdictions favorably impacted our 2011 income tax rate by 11.1% and our 2010 income tax rate by 11.5%. Other items favorably impacting our income tax rate in 2011 and 2010 include benefits from the federal research and experimentation (R&D) tax credit and the domestic manufacturer's production incentive deduction. An increase in our valuation allowance for state R&D tax credits and net operating loss carry forwards negatively impacted our effective tax rate by 1.4% in 2011.

We file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. During 2009, the Internal Revenue Service completed audits of our 2006 and 2007 federal income tax returns. Our settlement with the Internal Revenue Service did not have a material impact on our financial condition. Due to the carryback of our 2009 federal taxable loss to taxable years 2004 - 2007, the Internal Revenue Service could potentially examine our federal income tax returns for those years. The statute of limitations for examination of these returns had previously expired. We received a federal income tax refund in 2010 of approximately $2.4 million from carry-back of our 2009 federal taxable loss. Our 2010 federal income tax return is currently being audited by the Internal Revenue Service. We are not able to reasonably estimate the timing of any potential payments that may result from this audit. We are no longer subject to state and local income tax examinations by tax authorities for years before 2007.

Liquidity and Capital Resources

Our cash and cash equivalents increased by $5.4 million in 2011 due to cash provided by operating activities of $9.2 million, proceeds from exercise of stock options and issuance of common stock under our employee stock purchase plan of $205,000, offset in part by purchases of marketable securities, net of maturities and sales, of $3.1 million, and capital expenditures of $900,000. 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, in addition to marketable securities. 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 increased to $30.5 million as of December 31, 2011, up from $22.1 million as of December 31, 2010.

Operating activities provided $9.2 million of cash in 2011. Cash provided by operations included net income of $4.4 million, which included non-cash expenses totaling $2.9 million for depreciation and amortization, provision for

doubtful accounts, deferred taxes, non-cash gains and losses from foreign currency transactions and stock compensation expenses.

Changes in operating assets and liabilities providing cash included decreases in inventory of $2.9 million and increases in accrued expenses and other liabilities of $638,000. Changes in operating assets and liabilities using cash included increases in accounts receivable of $549,000 and decreases in accounts payable of $1.1 million. Better sales forecasting and inventory management resulted in lower inventory purchases in the latter half of 2011 and a corresponding reduction in inventory and accounts payable levels. Accrued expenses and other liabilities increased due to higher warranty, commission and incentive compensation accruals, resulting from higher sales levels and improved operating results. Accounts receivable were higher due to a slight slowdown in our collection efficiency.

Operating activities generated $1.8 million of cash in 2010. Cash provided by operations included net income of $3.1 million, which included non-cash expenses totaling $2.8 million for depreciation and amortization, provision for doubtful accounts, deferred taxes, non-cash gains and losses from foreign currency transactions and stock compensation costs. Changes in operating assets and liabilities using cash included increases in accounts receivable of $2.9 million and inventories of $6.6 million. Changes in operating assets and liabilities providing cash included increases in accounts payable of $1.5 million, accrued expenses and other liabilities of $1.1 million, advance customer payments of $495,000 and decreases in income tax refunds receivable of $2.1 million. The increase in accounts receivable and advance customer payments was due to higher sales levels in the fourth quarter of 2010, compared to the fourth quarter of 2009. Inventories were higher due to increased material purchases to support the higher level of sales expected in the second half of 2010 and early in 2011. The increase in accounts payable resulted from increased material purchases and a conscious effort on our part to extend the timing of vendor payments. Accrued expenses and other liabilities increased due to higher warranty, commission and incentive compensation accruals, resulting from higher sales levels and improved operating results. Income tax refunds receivable decreased due to receipt of our anticipated tax refund resulting from carryback of our 2009 net operating loss to prior periods.

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Investing activities used $4.0 million of cash in 2011, compared to providing $2.3 million of cash in 2010. Changes in the level of investment in marketable securities, resulting from the purchases, sales and maturities of those securities used $3.1 million of cash in 2011 and provided $3.6 million of cash in 2010. We used $900,000 of cash in 2011 and $1.3 million of cash in 2010 for the purchase of fixed assets and capitalized patent costs.

Financing activities provided $205,000 of cash in 2011, compared to providing $207,000 of cash in 2010, all from the exercise of employee stock options and issuance of common stock under our Employee Stock Purchase Plan.

At December 31, 2011, 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. We do not believe we are exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such relationships.

Except for our obligations under facilities leases and purchase contracts, we had no material commitments for expenditures as of December 31, 2011. Purchase commitments for inventory can vary based on the volume of revenue and resulting inventory requirements. While there were no material commitments, we evaluate investment opportunities that come to our attention and could make a significant commitment in the future.

The following summarizes our contractual obligations at December 31, 2011, and the effect such obligations are expected to have on our liquidity and cash flow in future periods.

December 31, 2011 (in 000's)	Total	Less Than 1 Year	1 – 4 Years	After 4 Years
Contractual Obligations:				
Non-cancelable operating lease obligations	$3,842	$866	$1,531	$1,445
Purchase obligations	9,417	9,417	—	—
Reserve for income taxes	840	—	840	—
Total contractual cash obligations	$14,099	$10,283	$2,371	$1,445

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 sensor products, including the sensors used in our stand-alone system products and our semiconductor products. In March 2011, we

finalized a lease amendment for the facility that became effective July 1, 2011. The amendment provides that we will lease the current facility through December 31, 2018. The amendment contains escalation clauses and two renewal options of three years each. Our prior lease for the facility expired on June 30, 2011. In connection with the lease amendment, we reduced the size of the facility by 9,943 square feet. We estimate a reduction in average annual rental expense over the term of the new lease amendment of approximately $270,000 per year.

Purchase obligations are defined as agreements to purchase goods or services that are enforceable and legally binding. Included in the purchase obligations category above are obligations related to purchase orders for inventory purchases under our standard terms and conditions and under negotiated agreements with vendors and utilities. We expect to receive consideration (products or services) for these purchase obligations. The purchase obligation amounts do not represent all anticipated purchases in the future, but represent only those items for which we are contractually obligated. The majority of our products and services are purchased as needed, with no contractual commitment. Consequently, these amounts will not provide a reliable indicator of our expected future cash outflows on a stand-alone basis.

Our cash, cash equivalents and marketable securities totaled $30.5 million at December 31, 2011. 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.

Related Party Transactions

We did not engage in any related party transactions during the three year period ended December 31, 2011.

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Inflation and Foreign Currency Transactions

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

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.

We enter into foreign exchange forward contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies and certain intercompany financing transactions associated with our subsidiaries in the United Kingdom and 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 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, 2011, 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, 2011 was approximately $11.0 million.

At December 31, 2011, our open foreign exchange forward contracts were in an unrealized loss position equal to $493,000 on a pre-tax basis due to a significant strengthening of the U.S. dollar in relation to the Singapore dollar in the later part of 2011. 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. For example, the unrealized pre-tax loss on our open foreign exchange forward contracts outstanding as of January 30, 2012 had been reduced to approximately $139,000 due to a weaker U.S. dollar. 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.

Recent Accounting Developments

In June 2011, the FASB issued amended disclosure requirements for the presentation of comprehensive income (ASU No. 2011-05, *Comprehensive Income (Topic 220): Presentation of Comprehensive Income)*. The amended guidance eliminates the option to present components of other comprehensive income (OCI) as part of the statement of changes in equity. Under the amended guidance, all changes in OCI are to be presented either in a single continuous statement of comprehensive income or in two separate but consecutive financial statements. The FASB subsequently met on October 21, 2011 and decided that the specific requirement to present items that are reclassified from other comprehensive income to net income alongside their respective components of net income and other comprehensive income will be deferred. The remaining changes are effective January 1, 2012. Early application is permitted. There will be no impact to the consolidated financial results as the amendments relate only to changes in financial statement presentation.

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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 and extended warranty are recognized as the services are provided.

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 used VSOE to establish fair value for extended warranty, installation and training services. Costs related to products delivered are recognized in the period revenue is recognized. Cost of goods sold consists primarily of direct labor, manufacturing overhead, raw materials and components and excludes amortization of intangible assets.

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 $940,000 at December 31, 2011 and $1,005,000 as of December 31, 2010.

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 $985,000 at December 31, 2011 and $702,000 at December 31, 2010.

Reserve for Inventory Obsolescence.

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. 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. We had a reserve for obsolete and excess inventory of $592,000 at December 31, 2011 and $487,000 at December 31, 2010.

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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 assets and long-lived assets, if the carrying value of the asset exceeds the undiscounted cash flows from such asset.
- For goodwill, if the carrying value of the asset exceeds the fair value of the reporting unit.

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 for each of our reporting units by estimating their fair value, utilizing a discounted cash flow methodology to determine a reasonable valuation. The evaluation of asset impairment requires us to make assumptions about future cash flows over the life of the asset being evaluated. These assumptions require significant judgment and actual results may differ from assumed or estimated amounts.

Our remaining goodwill at December 31, 2011 and 2010 in the amount of $569,000 relates to our semiconductor reporting unit. Our recent analyses performed in the fourth quarters of 2011 and 2010 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.

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 occur that 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 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.

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In analyzing the need for valuation allowances, we first considered our history of cumulative losses for U.S. income tax purposes over the past three years and also gave significant consideration to our results for U.S. income tax purposes over the past five years, as the economic cycles in our industry have tended to average five years in length (from peak to trough). We also considered our forecasts of future profitability, the duration of statutory carry forward periods and tax planning alternatives. Finally, we considered the length and severity of the recent global economic crisis, the impact that it had on our operating results and our expectation for continued rebound given the current recovery in the global economy and more specifically in our markets. After considering all of these factors, and after considering other significant positive evidence, we concluded that a valuation allowance with respect to substantially all of our U.S. based deferred tax assets was not required at December 31, 2011.

Our results in both 2008 and 2009 were negatively impacted by the severe global economic recession, and we incurred a loss in the United States in both 2008 and 2009, where most of our net deferred tax assets are recorded. We recorded a significant profit in both 2011 and 2010. Achievement of ongoing profitability in the United States will be a significant factor in determining our continuing ability to carry these deferred tax assets without recording a valuation allowance. The global electronics market has significantly strengthened since 2009. We are seeing ongoing demand from manufacturers of SMT assembly equipment who purchase our alignment sensor products, and for our stand-alone SPI and AOI systems. We believe that improved market conditions, the efficiencies in operations we have implemented, and the new products we have introduced and anticipate introducing in the next year, will lead to improved operating results and continued profitability in future periods. If future results from our operations are less than projected, a valuation allowance may be required against virtually all of our deferred tax assets, which could have a material impact on our results of operations in the period in which it is recorded.

Deferred tax assets at December 31, 2011 include net operating loss carry forwards incurred in the UK by CyberOptics Ltd., which was acquired in 1999. 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.

The valuation allowances of $833,000 at December 31, 2011 and $732,000 at December 31, 2010 are needed for various long-term state tax credit carry forwards, state operating loss carry forwards and capital losses for which recovery is not deemed to be more likely than not. The valuation allowance was increased in 2011 for additional state tax credit and net operating loss carry forwards that failed to satisfy the more likely than not criteria for recovery.

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 and certain intercompany financing transactions associated with our subsidiaries in the United Kingdom and 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 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, 2011 and December 31, 2010, 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 $11.0 million at December 31, 2011 and $1.0 million at December 31, 2010.

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 income on cash flow hedges were not material for the years ended December 31, 2011 and 2010. At December 31, 2011, the fair value of our foreign exchange forward contracts representing a loss in the amount of $493,000 was recorded in accrued expenses in the accompanying consolidated balance sheet. The fair value of foreign exchange forward contracts and their impact on accumulated other comprehensive income as of December 31, 2010 was inconsequential.

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.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

CONSOLIDATED BALANCE SHEETS

CYBEROPTICS CORPORATION

(In thousands, except share information)	As of December 31, 2011	2010
ASSETS		
Cash and cash equivalents	$13,791	$8,427
Marketable securities	10,640	6,384
Accounts receivable, less allowance for doubtful accounts of $940 at December 31, 2011 and $1,005 at December 31, 2010	11,909	11,296
Inventories	11,052	14,215
Income tax refunds receivable	196	380
Other current assets	1,238	1,232
Deferred tax assets, net	2,518	2,317
Total current assets	51,344	44,251
Marketable securities, long-term	6,106	7,289
Equipment and leasehold improvements, net	1,400	1,896
Intangible and other assets, net	230	435
Goodwill	569	569
Other assets	137	173
Deferred tax assets, net	3,130	3,621
Total assets	$62,916	$58,234
LIABILITIES AND STOCKHOLDERS' EQUITY		
Accounts payable	$4,081	$5,206
Advance customer payments	655	830
Accrued expenses	3,657	2,873
Total current liabilities	8,393	8,909
Deferred rent	327	—
Extended warranty liability	353	322
Deferred tax liability	34	—
Reserve for income taxes	840	686
Total liabilities	9,947	9,917

Commitments and contingencies (notes 11 and 14)		
Stockholders' equity:		
Preferred stock, no par value, 5,000,000 shares authorized, none outstanding	—	—
Common stock, no par value, 25,000,000 shares authorized, 6,933,029 shares issued and outstanding at December 31, 2011 and 6,891,262 shares issued and outstanding at December 31, 2010	30,965	30,330
Accumulated other comprehensive loss	(926)	(586)
Retained earnings	22,930	18,573
Total stockholders' equity	52,969	48,317
Total liabilities and stockholders' equity	$62,916	$58,234

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

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CONSOLIDATED STATEMENTS OF OPERATIONS

CYBEROPTICS CORPORATION

(In thousands, except per share amounts)	Year ended December 31, 2011	2010
Revenues	$61,087	$56,951
Cost of revenues	33,034	31,989
Gross margin	28,053	24,962
Research and development expenses	7,781	7,354
Selling, general and administrative expenses	14,476	13,766
Amortization of intangibles	108	181
Income from operations	5,688	3,661
Interest income and other	39	268
Income before income taxes	5,727	3,929
Income tax provision	1,370	794
Net income	$4,357	$3,135
Net income per share – Basic	$.63	$.46
Net income per share – Diluted	$.63	$.45
Weighted average shares outstanding – Basic	6,906	6,861
Weighted average and common equivalent shares outstanding – Diluted	6,952	6,907

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

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CONSOLIDATED STATEMENTS OF CASH FLOWS

CYBEROPTICS CORPORATION

(In thousands)	Year ended December 31, 2011	2010
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$4,357	$3,135
Adjustments to reconcile net income to net cash provided (used) by operating activities:		
Depreciation and amortization	1,955	2,263
Provision for doubtful accounts	(62)	(27)
Deferred income tax provision	629	331
Foreign currency transaction gains	(68)	(129)
Excess tax benefits from equity compensation plans	(3)	(6)
Stock compensation expense	430	391
Changes in operating assets and liabilities:		
Accounts receivable	(549)	(2,875)
Inventories	2,859	(6,624)
Income tax refunds receivable	184	2,105
Other assets	65	147
Accounts payable	(1,095)	1,456
Advance customer payments and extended warranty	(144)	495
Accrued expenses and other liabilities	638	1,100
Net cash provided by operating activities	9,196	1,762
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from maturities of available-for-sale marketable securities	10,053	16,965
Proceeds from sales of available-for-sale marketable securities	3,175	3,241
Purchases of available-for-sale marketable securities	(16,304)	(16,572)
Additions to equipment and leasehold improvements	(772)	(1,109)
Additions to patents	(104)	(202)
Net cash provided (used) by investing activities	(3,952)	2,323
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from exercise of stock options	1	26
Excess tax benefits from equity compensation plans	3	6
Proceeds from issuance of common stock under Employee Stock Purchase Plan	201	175
Net cash provided by financing activities	205	207

Effects of exchange rate changes on cash and cash equivalents	(85)	(42)
Net increase in cash and cash equivalents	5,364	4,250
Cash and cash equivalents – beginning of year	8,427	4,177
Cash and cash equivalents – end of year	$13,791	$8,427

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

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CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME

CYBEROPTICS CORPORATION

(In thousands)	Common Stock Shares	Common Stock Amount	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
BALANCE, DECEMBER 31, 2009	6,829	$29,732	$ (768)	$15,438	$ 44,402
Excess tax benefit from exercise of stock options, net of deferred tax shortfall related to stock options and restricted stock units	—	6	—	—	6
Exercise of stock options, vesting of restricted stock units, net of shares exchanged as payment	28	26	—	—	26
Share issuances for compensation purposes	4	38	—	—	38
Stock compensation	—	353	—	—	353
Issuance of common stock under Employee Stock Purchase Plan	30	175	—	—	175
Comprehensive income:					
Market value adjustments of marketable securities, net of reclassification adjustment	—	—	(121)	—	(121)
Cumulative translation adjustment	—	—	303	—	303
Net income	—	—	—	3,135	3,135
Total comprehensive income	—	—	—	—	3,317
BALANCE, DECEMBER 31, 2010	6,891	$30,330	$ (586)	$18,573	$ 48,317
Excess tax benefit from exercise of stock options, net of deferred tax shortfall related to stock options and restricted stock units	—	3	—	—	3
Exercise of stock options, vesting of restricted stock units, net of shares exchanged as payment	13	1	—	—	1
Share issuances for compensation purposes	4	41	—	—	41
Stock compensation	—	389	—	—	389
Issuance of common stock under Employee Stock Purchase Plan	25	201	—	—	201
Comprehensive income:					
Market value adjustments of marketable securities, net of reclassification adjustment	—	—	20	—	20
Unrealized loss on foreign exchange forward contracts, net of reclassification adjustment	—	—	(323)	—	(323)
Cumulative translation adjustment	—	—	(37)	—	(37)
Net income	—	—	—	4,357	4,357
Total comprehensive income	—	—	—	—	4,017
BALANCE, DECEMBER 31, 2011	6,933	$30,965	$ (926)	$22,930	$ 52,969

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

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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 optical process control sensors and inspection systems that are used to control the manufacturing process and to ensure the quality of electronic circuit boards manufactured by our customers using surface mount technology (SMT). We also manufacture and sell sensors that assist with yield improvement in the photovoltaic cell manufacturing and semiconductor wafer fabrication process.

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. Cash held in foreign accounts totaled $2,296,000 at December 31, 2011 and $1,046,000 at December 31, 2010.

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.

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.

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.

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 depreciated 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.

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Intangible Assets

Identified intangible assets (excluding goodwill), consisting primarily of developed technology and trademarks, are being amortized on a straight-line basis over periods ranging from four to ten years, based upon their estimated life. The straight-line method of amortization reflects an appropriate allocation of the cost of intangible assets to earnings in proportion to the economic benefits obtained by us in each reporting period.

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.

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 for our reporting units 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 the fair value of each reporting unit, as determined based on their future estimated discounted cash flows, to the carrying value for each reporting unit.

Patents

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

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 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 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 used VSOE to establish fair value for extended warranty, installation and training services. Costs related to products delivered are recognized in the period revenue is recognized. Cost of goods sold 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 gains, net of underlying currency hedges of $67,000 in 2011. We recognized foreign currency transaction gains, net of underlying currency hedges, of $106,000 in 2010.

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.

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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 and certain intercompany financing transactions associated with our subsidiaries in the United Kingdom and 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 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. The amounts were not material for all periods presented.

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 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.

Only the portion of the liability 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 Income Per Share

Basic net income per share is computed by dividing net income by the weighted average number of common shares outstanding during the period. Net income per diluted share is computed by dividing net income by the weighted average number of common and common equivalent 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.

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.

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 statement 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.

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Recent Accounting Developments

In June 2011, the FASB issued amended disclosure requirements for the presentation of comprehensive income (ASU No. 2011-05, *Comprehensive Income (Topic 220): Presentation of Comprehensive Income)*. The amended guidance eliminates the option to present components of other comprehensive income (OCI) as part of the statement of changes in equity. Under the amended guidance, all changes in OCI are to be presented either in a single continuous statement of comprehensive income or in two separate but consecutive financial statements. The FASB subsequently met on October 21, 2011 and decided that the specific requirement to present items that are reclassified from other comprehensive income to net income alongside their respective components of net income and other comprehensive income will be deferred. The remaining changes are effective January 1, 2012. Early application is permitted. There will be no impact to the consolidated financial results as the amendments relate only to changes in financial statement presentation.

NOTE 2 – MARKETABLE SECURITIES

Investments in marketable securities classified as available-for-sale with a carrying amount of $16,746,000 at December 31, 2011 and $13,673,000 at December 31, 2010 consist of the following:

	December 31, 2011			
(In thousands)	Cost	Unrealized Gains	Unrealized Losses	Recorded Basis
U.S. government and agency obligations	$6,495	$ 8	$ —	$ 6,503
Corporate debt securities and certificates of deposit	4,133	4	—	4,137
Marketable securities – short-term	$10,628	$ 12	$ —	$ 10,640
U.S. government and agency obligations	$3,653	$ 28	$ (1)	$ 3,680
Corporate debt securities and certificates of deposit	2,353	9	(2)	2,360
Equity security	84	—	(18)	66
Marketable securities – long-term	$6,090	$ 37	$ (21)	$ 6,106

	December 31, 2010			
(In thousands)	Cost	Unrealized Gains	Unrealized Losses	Recorded Basis
U.S. government and agency obligations	$3,178	$ 7	$ —	$ 3,185
Corporate debt securities and certificates of deposit	3,197	2	—	3,199
Marketable securities – short-term	$6,375	$ 9	$ —	$ 6,384

U.S. government and agency obligations	$4,809	$ 17	$ (1)	$ 4,825
Corporate debt securities	2,208	4	(3)	2,209
Asset backed securities	200	3	—	203
Equity security	84	—	(32)	52
Marketable securities – long-term	$7,301	$ 24	$ (36)	$ 7,289

Our equity security investment was in an $18,000 unrealized loss position at December 31, 2011 and a $32,000 unrealized loss position at December 31, 2010, due to weak economic and stock market conditions. We intend to hold this security indefinitely and expect a recovery in value as economic and market conditions continue to improve. At December 31, 2011, the equity security investment had been in an unrealized loss position for less than one year.

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Our investments in long-term marketable debt securities all have maturities of less than five years. At December 31, 2011, marketable debt securities valued at $14,207,000 were in an unrealized gain position totaling $49,000. At December 31, 2011, marketable debt securities valued at $2,473,000 were in an insignificant unrealized loss position totaling $3,000 (all had been in an unrealized loss position for less than twelve months). At December 31, 2010, marketable debt securities valued at $10,578,000 were in an unrealized gain position totaling $33,000. At December 31, 2010, marketable debt securities valued at $3,043,000 were in an insignificant unrealized loss position totaling $4,000 (all had been in an unrealized loss position for less than twelve months).

Net pre-tax unrealized gains for marketable securities of $28,000 at December 31, 2011 and net pre-tax unrealized losses for marketable securities of $3,000 at December 31, 2010 were recorded as a component of accumulated other comprehensive income (loss) in stockholders equity. In 2011 we received proceeds of $3,175,000 from the sale of marketable securities. In 2010, we received proceeds of $3,241,000 from the sale of marketable securities. No gain or loss was recognized on any of the sales in 2011 or 2010.

Investments in marketable securities classified as cash equivalents of $685,000 at December 31, 2011 and $1,425,000 at December 31, 2010 consist of the following:

	December 31, 2011			
(In thousands)	Cost	Unrealized Gains	Unrealized Losses	Recorded Basis
U.S. government and agency obligations	$30	$ —	$ —	$ 30
Corporate debt securities and certificates of deposit	655	—	—	655
	$685	$ —	$ —	$ 685

	December 31, 2010			
(In thousands)	Cost	Unrealized Gains	Unrealized Losses	Recorded Basis
U.S. government and agency obligations	$115	$ —	$ —	$ 115
Corporate debt securities and certificates of deposit	1,310	—	—	1,310
	$1,425	$ —	$ —	$ 1,425

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 and certain intercompany financing transactions associated with our subsidiaries in the United Kingdom and 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 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 income on cash flow hedges were not material for the years ended December 31, 2011 and 2010.

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, 2011 and December 31, 2010, 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 $11.0 million at December 31, 2011 and $1.0 million at December 31, 2010.

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

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Year Ended December 31, 2011

(In thousands)	Pretax Gain (Loss) Recognized in Other Comprehensive Income on Effective Portion of Derivative	Pretax Gain (Loss) Recognized in Income on Effective Portion of Derivative as a Result of Reclassification from Accumulated Other Comprehensive Income	Ineffective Portion of Gain (Loss) on Derivative and Amount Excluded from Effectiveness Testing Recognized in Income
Cost of sales	$ (291)	$ 59	$ —
Research and development	(76)	7	—
Sales and marketing	(58)	6	—
Other income	(43)	(43)	—
Total	$ (468)	$ 29	$ —

Year Ended December 31, 2010

(In thousands)	Pretax Gain (Loss) Recognized in Other Comprehensive Income on Effective Portion of Derivative	Pretax Gain (Loss) Recognized in Income on Effective Portion of Derivative as a Result of Reclassification from Accumulated Other Comprehensive Income	Ineffective Portion of Gain (Loss) on Derivative and Amount Excluded from Effectiveness Testing Recognized in Income
Cost of sales	$ —	$ —	$ —
Research and development	—	—	—
Sales and marketing	—	—	—
Other income	(23)	(23)	—
Total	$ (23)	$ (23)	$ —

As of December 31, 2011, we had $323,000 recorded in accumulated other comprehensive income for the after tax net unrealized loss associated with cash flow hedging instruments. We expect to reclassify this amount to earnings over the next 12 months with the impact offset by cash flows from underlying hedged items. At December 31, 2011, the fair value of our foreign exchange forward contracts representing a loss in the amount of $493,000 was recorded in accrued expenses in the accompanying consolidated balance sheet. The fair value of foreign exchange forward contracts and their impact on accumulated other comprehensive income as of December 31, 2010 was inconsequential.

Additional information with respect to the impact of derivative instruments on other comprehensive income 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.

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NOTE 4 – COMPREHENSIVE INCOME (LOSS)

Total comprehensive income and components of total other comprehensive income (loss) for the year ended December 31, 2011 and 2010 is as follows:

(In thousands)	Year Ended December 31, 2011	2010
Net income	$4,357	$3,135
Other comprehensive income (loss), net of tax:		
Foreign currency translation adjustments	(37)	303
Tax effect	—	—
Foreign currency translation adjustments, net of tax	(37)	303
Unrealized gains (losses) on available-for-sale securities	30	(184)
Tax effect	(10)	63
Unrealized gains (losses) on available-for-sale securities, net of tax	20	(121)
Unrealized losses on foreign exchange forward contracts	(497)	—
Tax effect	174	—
Unrealized gains (losses) on foreign exchange forward contracts, net of tax	(323)	—
Total other comprehensive income (loss), net of tax	$(340)	$182
Total comprehensive income	$4,017	$3,317

At December 31, 2011 and 2010 components of accumulated other comprehensive income (loss) is as follows:

(In thousands)	December 31, 2011	2010
Unrealized gains (losses) on available for sale securities	$18	$(2)
Unrealized losses on effective portion of foreign exchange forward contracts, net	(323)	—

Foreign currency translation adjustments	(621)	(584)
Balance at end of period	$(926)	$(586)

Reclassification adjustments are made to avoid double counting in comprehensive income items that are also recorded as part of net income. Reclassifications to earnings related to cash flow hedging instruments are provided in Note 3. There were no reclassifications to earnings from accumulated other comprehensive income related to realized gains or losses on available-for-sale securities. Income taxes are not provided for foreign currency translation adjustments relating to permanent investments in international subsidiaries.

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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 forward exchange forward contracts as of December 31, 2011 and 2010 according to the three-level fair value hierarchy:

		Fair Value Measurements at December 31, 2011 Using		
(In thousands)	Balance December 31, 2011	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	$ 10,183	$ —	$ 10,183	$ —
Corporate debt securities and certificates of deposit	6,497	—	6,497	—
Equity security	66	66	—	—
Total marketable securities	$ 16,746	$ 66	$ 16,680	$ —
Derivative instruments –liabilities:				
Foreign exchange forward contracts	$ (493)	$ —	$ (493)	$ —

		Fair Value Measurements at December 31, 2010 Using		
(In thousands)	Balance December 31, 2010	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	$ 8,010	$ —	$ 8,010	$ —
Corporate debt securities and certificates of deposit	5,408	—	5,408	—

Asset backed securities	203	—	203	—
Equity security	52	52	—	—
Total marketable securities	$ 13,673	$ 52	$ 13,621	$ —
Derivative instruments:				
Foreign exchange forward contracts	$ —	$ —	$ —	$ —

During the years ended December 31, 2011 and 2010 there were no significant transfers to or from 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, 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.

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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 carrying amounts of financial instruments such as cash equivalents, accounts receivable, other assets, accounts payable, accrued expenses and other current liabilities approximate the 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 2011 or 2010.

NOTE 6 – ACCOUNTING FOR STOCK BASED COMPENSATION

Share Based Compensation Information

The following is a summary of pre-tax equity based compensation expense for the two year period ended December 31, 2011:

(In thousands)	2011	2010
Pre-tax equity compensation expense	$430	$391
Income tax benefits related to equity based compensation	$120	$109

Pre-tax equity compensation expense for 2011 includes $302,000 for stock options and restricted stock units, $87,000 for our employee stock purchase plan and $41,000 for 4,000 shares issued to board members for compensation purposes (weighted average grant date fair value of $10.12). Pre-tax equity compensation expense for 2010 includes $266,000 for stock options and restricted stock units, $87,000 for our employee stock purchase plan and $38,000 for 4,000 shares issued to board members for compensation purposes (weighted average grant date fair value of $9.45).

We use historical data to estimate pre-vesting forfeitures. At December 31, 2011, the total unrecognized compensation cost related to non-vested equity based compensation arrangements was $553,000 and the related weighted average period over which it is expected to be recognized is 1.7 years. The total fair value of shares vested was $215,000 in 2011 and $251,000 in 2010.

The fair values of the options granted to our employees were 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 the simplified method. We continued to use the simplified method in 2010 because our historical exercise experience is not expected to be representative of exercise patterns in the future, due to our recent restructuring activities and employee turnover. Expected volatility was computed based on historical fluctuations in the daily price of our common stock.

There were no stock options granted in 2011. For stock options granted in 2010, 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:

	2010
Risk-free interest rates	1.98%-2.75%
Expected life in years	4.75
Expected volatility	48%-52%
Expected dividends	None
Weighted average fair value on grant date	$4.20

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Stock Options

We have two stock incentive plans that are administered under the supervision of the Compensation Committee of the Board of Directors which have 732,776 shares of common stock reserved in the aggregate for issuance of options and other stock based benefits, including restricted stock units, to employees, officers and others. Reserved shares underlying canceled options are available for future grant under our active plans. Options are granted at an option price per share equal to or greater than the market value at the date of grant. Generally, options granted to employees vest over a four-year period and expire five, 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, 2011, there are 247,385 shares of common stock available for future issuance under these plans. In addition, there are 50,000 shares reserved and included in the plan summaries below that are not part of the two stock incentive plans.

The following is a summary of stock option activity for each of the years in the two year period ended December 31, 2011:

	Year ended December 31,	
Shares	2011	2010
Outstanding, beginning of year	531,137	549,095
Granted	—	106,167
Exercised	(2,500)	(66,500)
Expired	(12,650)	(57,625)
Outstanding, end of year	515,987	531,137
Exercisable	389,463	336,471

Weighted average exercise price per share	2011	2010
Outstanding, beginning of year	$10.09	$10.04
Granted	$—	$9.59
Exercised	$4.80	$5.97
Expired	$12.09	$13.47
Outstanding, end of year	$10.07	$10.09
Exercisable	$10.77	$11.44

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, 2011, the weighted average remaining contractual term was 3.15 years and the aggregate intrinsic value was $398,000. For options exercisable at December 31, 2011, the weighted average remaining contractual term was 2.51 years and the aggregate intrinsic value was $266,000. The aggregate intrinsic value of stock options exercised was $13,000 in 2011 and $113,000 in 2010. We received proceeds of $12,000 and realized an income tax benefit of $5,000 from the exercise of stock options in 2011. New shares are issued for all option exercises, upon vesting of restricted stock units, for share issuances to board members and others or for share issuances under our Employee Stock Purchase Plan.

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 fair market value of our common stock on the date of grant, generally vest over a four year period and entitle the holders to one share of our common stock for each restricted unit. No restricted stock units were granted in 2011. The weighted average grant date fair value for each restricted stock unit was $8.69 in 2010. The aggregate fair value of outstanding restricted stock units based on the closing share price of our common stock as of December 31, 2011 was $151,000. 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 $85,000 for the year ended December 31, 2011 and $90,000 for the year ended December 31, 2010.

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A summary of activity in non-vested restricted stock units for the year ended December 31, 2011 follows:

Non-vested restricted stock units	Shares	Weighted – Average Grant Date Fair Value per Share
Non-vested at December 31, 2010	32,645	$ 7.55
Granted	—	$ —
Vested	(11,891)	$ 7.36
Forfeited	(1,350)	$ 8.71
Non-vested at December 31, 2011	19,404	$ 7.58

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 price on the first or last day of the offering period. Share issuances under the Employee Stock Purchase Plan were 25,003 for the year ended December 31, 2011 and 30,658 for the year ended December 31, 2010. As of December 31, 2011, 186,341 shares remain available for 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 election or 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 4,000 shares in each of the years ended December 31, 2011 and December 31, 2010. As of December 31, 2011, 16,000 shares remain available for issuance under this plan. The shares issued in 2011 had a fair market value on the date of grant equal to $41,000. The shares issued in 2010 had a fair market value on the date of grant equal to $38,000.

NOTE 7 – NET INCOME PER SHARE

Basic net income per share is computed by dividing net income by the weighted average number of common shares outstanding during the period. Net income per diluted share is computed by dividing net income by the weighted average number of common and common equivalent 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 anti-dilutive common equivalent shares are excluded from the calculation of net income per diluted share due to their anti-dilutive effect. The components of net income per basic and diluted share are as follows:

(In thousands except per share amounts)	Net income	Weighted Average Shares Outstanding	Per Share Amount
Year Ended December 31, 2011:			
Basic	$ 4,357	6,906	$ 0.63
Dilutive effect of common equivalent shares	—	46	—
Dilutive	$ 4,357	6,952	$ 0.63

(In thousands except per share amounts)	Net income	Weighted Average Shares Outstanding	Per Share Amount
Year Ended December 31, 2010:			
Basic	$ 3,135	6,861	$ 0.46
Dilutive effect of common equivalent shares	—	46	(0.01)
Dilutive	$ 3,135	6,907	$ 0.45

The calculation of diluted net income per common share excludes 381,000 potentially dilutive shares for the year ended December 31, 2011 and 328,000 potentially dilutive shares for the year ended December 31, 2010, because their effect would be anti-dilutive.

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NOTE 8 – OTHER FINANCIAL STATEMENT DATA

Inventories consist of the following:

(In thousands)	December 31, 2011	2010
Raw materials and purchased parts	$6,893	$6,895
Work in process	1,007	1,807
Finished goods	3,152	5,513
	$11,052	$14,215

Total amortization expense related to demonstration inventory was $582,000 for the year ended December 31, 2011 and $693,000 for the year ended December 31, 2010.

Equipment and leasehold improvements consist of the following:

(In thousands)	December 31, 2011	2010
Equipment	$10,257	$10,957
Leasehold improvements	1,471	1,514
	11,728	12,471
Accumulated depreciation and amortization	(10,328)	(10,575)
	$1,400	$1,896

Total depreciation expense related to equipment and leasehold improvements was $1,064,000 for the year ended December 31, 2011 and $1,162,000 for the year ended December 31, 2010.

Intangible and other assets consist of the following:

(In thousands)	December 31, 2011 Gross Carrying Amount	Accumulated Amortization	Net	December 31, 2010 Gross Carrying Amount	Accumulated Amortization	Net
Developed technology	$7,775	$ (7,775)	$—	$7,775	$ (7,666)	$109
Patents	2,734	(2,504)	230	2,732	(2,406)	326
	$10,509	$ (10,279)	$230	$10,507	$ (10,072)	$435

Amortization expense for the two years ended December 31, 2011 and 2010 is as follows:

(In thousands)	Year ended December 31, 2011	2010
Developed technology	$109	$181
Patents	200	227
	$309	$408

As of December 31, 2011, the weighted average remaining life of our intangible assets, consisting entirely of patents, was approximately 2.1 years. Estimated aggregate amortization expense based on current intangibles for the next three years is expected to be as follows: $135,000 in 2012, $74,000 in 2013 and $21,000 in 2014.

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Accrued expenses consist of the following:

(In thousands)	December 31, 2011	2010
Wages and benefits	$1,741	$1,437
Warranty liability	985	702
Income taxes payable	122	277
Unrealized loss on foreign exchange forward contract	493	—
Other	316	457
	$3,657	$2,873

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, and could be material. 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, 2011	2010
Balance at the beginning of period	$702	$488
Accruals for warranties	1,273	1,124
Settlements made during the period	(990)	(910)
Balance at the end of period	$985	$702

Extended warranty:

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

(In thousands)	Year ended December 31, 2011	2010
Balance at the beginning of period	$787	$636
Revenue deferrals	489	589
Amortization of deferred revenue	(470)	(438)
Total extended warranty liability	806	787
Current portion of extended warranty liability	(453)	(465)
Long term extended warranty liability	$353	322

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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 evaluating whether goodwill was impaired, we compared the fair value of our reporting units to which goodwill is assigned to their 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 the reporting units' financial forecasts. Future estimated cash flows are discounted to their present value to calculate fair value. The summation of our reporting units' fair values is compared and reconciled to our market capitalization as of the date of our impairment test. In the situation where a reporting unit's carrying amount exceeds its fair value, the amount of the impairment loss must be measured. The measurement of the impairment (Step 2 of the impairment test) is calculated by determining the implied fair value of a reporting unit's goodwill. In calculating the implied fair value of goodwill, the fair value of the reporting unit is allocated to all other assets and liabilities of that unit based on their fair values. The excess of the fair value of a reporting unit over the amount assigned to its other assets and liabilities is the implied fair value of goodwill. The goodwill impairment is measured as the excess of the carrying amount of goodwill over its implied fair value.

In determining the fair value of our reporting units 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. The significant assumptions incorporated in the cash flow forecasts used for our 2011 goodwill impairment tests include a 20% discount rate and a 5% terminal growth rate. We utilized a 20% discount rate and a 6% terminal growth rate for our 2010 goodwill impairment test. Our goodwill at December 31, 2011 and 2010 in the amount of $569,000, relates entirely to our semiconductor reporting unit. Our recent analyses indicate that this goodwill is not impaired.

NOTE 10 – INCOME TAXES

Income before income taxes consists of the following:

(In thousands)	Year ended December 31, 2011	2010

Sources of income before income taxes:		
United States	$3,196	$1,681
Foreign	2,531	2,248
Total income before income taxes	$5,727	$3,929

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

	Year ended December 31,	
(In thousands)	2011	2010
Current:		
Federal	$622	$292
State	61	(101)
Foreign	58	272
Total current	$741	$463
Deferred:		
Federal	$259	$301
State	166	(9)
Foreign	204	39
Total deferred	$629	$331
Total provision for income taxes	$1,370	$794

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

	Year ended December 31,	
	2011	2010
Federal statutory rate	34.0%	34.0%
State income taxes, net of federal benefit	1.2	(2.2)
Domestic manufacturing tax deduction	(1.5)	(0.9)
U.S. Subpart F income	1.3	1.8
Stock based compensation	0.5	0.7
Research and experimentation credit	(1.9)	(1.9)
Foreign rate difference	(11.1)	(11.5)
Reserve for income taxes	0.4	1.2
Valuation allowance	1.4	0.4
Other, net	(0.4)	(1.4)
Effective tax rate	23.9%	20.2%

Our effective tax rate for 2011 and 2010 reflects the benefit 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 favorably impacted our 2011 income tax rate by 11.1% and our 2010 tax rate by 11.5%.

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

(In thousands)	2011	2010
Gross UTB balance at beginning of year	$1,543	$1,446
Additions based on tax positions related to the current year	101	97
Additions for tax positions of prior years	52	—
Reductions for tax positions of prior years	(69)	—
Reductions due to lapse of applicable statute of limitations	(28)	—
Gross UTB balance at end of year	$1,599	$1,543
Net UTB balance at end of year	$840	$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 $177,000 as of December 31, 2011 and $159,000 as of December 31, 2010.

During the year ended December 31, 2011, we recorded a $22,000 increase in liabilities, net of deferred tax benefit, for uncertain tax positions that was recorded as income tax expense. Estimated gross interest and penalties included in this amount total $18,000. During the year ended December 31, 2010, we recorded a $49,000 increase in liabilities, net of deferred tax benefit, for uncertain tax positions that was recorded as income tax expense. The estimated gross interest and penalties included in this amount total $19,000.

We file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. During 2009, the Internal Revenue Service completed audits of our 2006 and 2007 federal income tax returns. Our settlement with the Internal Revenue Service did not have a material impact on our financial condition. Due to the carryback of our 2009 federal taxable loss to the years 2004-2007, the Internal Revenue Service could potentially examine our federal income tax returns for those years. The statute of limitations for examination of these returns had previously expired. We received a federal income tax refund in 2010 of approximately $2.4 million from carryback of our 2009 federal taxable loss. Our 2010 federal income tax return is currently being audited by the Internal Revenue Service. We are not able to reasonably estimate the timing of any potential payments that may result from this audit. We are no longer subject to state and local income tax examinations by tax authorities for years before 2007.

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Deferred tax assets and liabilities consist of the following:

(In thousands)	December 31, 2011 Assets	Liabilities	December 31, 2010 Assets	Liabilities
Fixed asset and intangible amortization, net	$940	$ 34	$961	$ —
Inventory allowances	497	—	629	—
Accrued liabilities	309	—	193	—
Warranty accrual	344	—	246	—
Deferred revenue	500	—	612	—
Accounts receivable allowance	328	—	353	—
Federal and state tax credits	2,482	—	2,676	—
Foreign net operating loss carry forwards	311	—	459	—
Stock based compensation	468	—	397	—
Unrealized losses - other comprehensive income	164	—	1	—
Other, net	138	—	143	—
Subtotal	6,481	34	6,670	—
Valuation allowance	(833)	—	(732)	—
Total deferred tax assets and liabilities	$5,648	$ 34	$5,938	$ —

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 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.

In analyzing the need for valuation allowances, we first considered our history of cumulative losses for U.S. income tax purposes over the past three years and also gave significant consideration to our results for U.S. income tax purposes over the past five years, as the economic cycles in our industry have tended to average five years in length (from peak to trough). We also considered our forecasts of future profitability, the duration of statutory carry forward

periods and tax planning alternatives. Finally, we considered the length and severity of the recent global economic crisis, the impact that it had on our operating results and our expectation for rebound given recent signs of recovery in the global economy and more specifically in our markets. After considering all of these factors, and after considering other significant positive evidence, we concluded that a valuation allowance, with respect to substantially all of our U.S. based deferred tax assets, was not required at December 31, 2011.

Our results in both 2008 and 2009 were negatively impacted by the global economic slowdown, and we incurred a loss in the United States in both 2008 and 2009, where most of our net deferred tax assets are recorded. We recorded a profit in both 2010 and 2011. Achievement of ongoing profitability in the United States will be a significant factor in determining our continuing ability to carry these deferred tax assets without recording a valuation allowance. If future results from our operations are less than projected, a valuation allowance may be required against virtually all of our deferred tax assets, which could have a material impact on our results of operations in the period in which it is recorded.

Deferred tax assets at December 31, 2011, include $311,000 of net operating loss carry forwards incurred in the UK by CyberOptics Ltd., which was acquired in 1999. 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 $44,000 in 2011 due to a reduction in the future UK income tax rate. At December 31, 2011 we had $2,045,000 of federal R&D tax credits that will begin to expire in 2021 if unused.

The valuation allowances at December 31, 2011 and 2010 are needed for various long-term state tax credit carry forwards, state operating loss carry forwards and capital losses for which recovery is not deemed to be more likely than not. The valuation allowance was increased in 2011 for additional state tax credit and net operating loss carry forwards that failed to satisfy the more likely than not criteria for recovery.

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Cash payments for income taxes, net of refunds received, were $822,000 for the year ended December 31, 2011. Income tax refunds received, net of cash payments for income taxes, were $1,951,000 for the year ended December 31, 2010.

We have been granted a tax holiday with respect to a wholly owned foreign subsidiary allowing us to pay a reduced rate of tax for a period of five years through 2013. The tax holiday decreased income tax expense in 2011 by $115,000 and decreased income tax expense in 2010 by $120,000, if income tax expense had been computed using the statutory rate in the foreign jurisdiction where the subsidiary operates.

It is the intention of management to permanently reinvest all undistributed earnings of international subsidiaries, and accordingly, we have not provided United States taxes on such earnings. It is not practicable to determine the income tax liability that would be payable if such earnings were not indefinitely reinvested.

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 escalation clauses 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 also lease a 20,000 square foot mixed office and warehouse facility in Singapore through July 2013, in addition to facilities for the operations of our other subsidiaries under operating leases that expire at various times through December 2014.

Total rent expense was $1,287,000 for the year ended December 31, 2011 and $1,442,000 for the year ended December 31, 2010. At December 31, 2011, the future minimum lease payments required under non-cancelable operating lease agreements are as follows:

Year ending December 31,	(In thousands)
2012	$ 866

2013	630
2014	444
2015	457
2016	469
Thereafter through 2018	976
Total	3,842

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 $237,000 in 2011 and $221,000 in 2010.

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 $40,000 in 2011 and $43,000 in 2010.

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NOTE 13 – BUSINESS SEGMENTS AND SIGNIFICANT CUSTOMERS

We determine our segments using the management approach, which designates a segment as an internal organization that is used by management for making operating decisions and assessing performance. We have determined that our business operates as two reportable segments. Balance sheet and income statement information for all periods presented has been allocated to our two segments. The electronic assembly segment is the design, manufacture and sale of optical process control sensors and inspection systems for the electronic assembly and photovoltaic cell equipment markets. The semiconductor segment is the design, manufacture and sale of optical and other process control sensors and related equipment for the semiconductor capital equipment market.

Information regarding our segments is as follows:

	Year Ended December 31,	
(In thousands)	2011	2010
Revenue:		
Electronic assembly		
OEM Sensors	$20,844	$25,537
SMT Systems	33,303	25,430
Total electronic assembly	$54,147	$50,967
Semiconductor	6,940	5,984
Total	$61,087	$56,951
Income from operations:		
Electronic assembly	$3,747	$2,114
Semiconductor	1,941	1,547
Total income from operations	$5,688	$3,661
Interest income and other	39	268
Income before income taxes	$5,727	$3,929
Depreciation and amortization:		
Electronic assembly	$1,751	$2,035
Semiconductor	204	228
Total	$1,955	$2,263
Expenditures for long-lived assets:		
Electronic assembly	$693	$1,083
Semiconductor	183	228
Total	$876	$1,311

Total assets (end of year):		
Electronic assembly	$41,424	$39,306
Semiconductor	4,026	3,620
Corporate	17,466	15,308
Total	$62,916	$58,234

The following summarizes certain significant customer information:

(In thousands)	Significant Customer	Revenues	Percentage of Revenues
Year ended December 31, 2011	A	$ 10,025	16%
	C	$ 8,279	14%
Year ended December 31, 2010	A	$ 12,108	21%
	B	$ 8,010	14%

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The significant customers listed above are related to our electronic assembly segment. As of December 31, 2011, accounts receivable from significant customer A were $1,393,000 and accounts receivable from significant customer C were $1,120,000. As of December 31, 2010, accounts receivable from significant customer A were $1,496,000 and accounts receivable from significant customer B were $1,961,000.

Our LaserAlign sensor family has historically accounted for a significant portion of our electronic assembly sales and profitability. Revenue from product shipments of LaserAlign sensors accounted for 20% of our total revenue in 2011 and 27% of our total revenue in 2010. 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 85% for the year ended December 31, 2011 and 86% for the year ended December 31, 2010. Export sales are attributed to the country where the product is shipped. Virtually all export sales are negotiated, invoiced and paid in U.S. dollars.

Revenue by geographic area is summarized as follows:

(In thousands)	2011	2010
United States	$9,009	$8,115
Americas	1,739	1,328
Netherlands	5,402	7,833
Other Europe	9,562	7,732
China	14,898	11,714
Japan	11,616	12,529
Other Asia	7,850	7,035
Other	1,011	665
	$61,087	$56,951

Long-lived assets include equipment and leasehold improvements attributable to each geographic area’s operations. Long-lived assets at December 31, 2011 and 2010 are as follows:

(In thousands)	2011	2010

Long-lived assets:		
United States	$1,081	$1,245
Europe	4	3
Asia and other	315	648
Total long-lived assets	$1,400	$1,896

NOTE 14 – CONTINGENCIES

In the ordinary course of business, we are a defendant in miscellaneous claims and disputes. 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 indemnification claims 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.

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NOTE 15 – QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

(In thousands, except per share amounts)

2011	March 31	June 30	September 30	December 31
Revenues	$13,350	$16,859	$ 17,088	$ 13,790
Gross margin	6,607	7,507	7,467	6,472
Income from operations	1,087	1,844	2,069	688
Net income	846	1,398	1,566	547
Net income per share – Basic (1)	0.12	0.20	0.23	0.08
Net income per share – Diluted (1)	0.12	0.20	0.22	0.08

2010	March 31	June 30	September 30	December 31
Revenues	$12,341	$16,499	$ 14,145	$ 13,966
Gross margin	5,256	6,656	6,663	6,387
Income from operations	257	1,189	1,174	1,041
Net income	247	969	948	971
Net income per share – Basic (1)	0.04	0.14	0.14	0.14
Net income per share – Diluted (1)	0.04	0.14	0.14	0.14

(1) The summation of quarterly per share amounts may not equal the calculation for the full year, as each quarterly calculation is performed discretely.

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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 subsidiary (the "Company") as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity and comprehensive income and cash flows for each of the two years in the period ended December 31, 2011. 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. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audit 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, 2011 and 2010, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2011 in conformity with accounting principles generally accepted in the United States of America.

Grant Thornton LLP

Minneapolis, Minnesota

March 14, 2012

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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, 2011. 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, 2011 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, 2011 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, 2011, 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.

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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 21, 2012 (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” and “Amendment to 1998 Stock Incentive Plan–Equity Compensation Plan Information” of the Proxy Statement is hereby incorporated by reference.

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.

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, 2011 and 2010.

Consolidated Statements of Operations for the years ended December 31, 2011 and 2010.

Consolidated Statements of Cash Flows for the years ended December 31, 2011 and 2010.

Consolidated Statements of Stockholders’ Equity and Comprehensive Income for the years ended December 31, 2011 and 2010.

Notes to the Consolidated Financial Statements.

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(b) LIST OF EXHIBITS

Exhibit Number	Description
3.1	Articles of Incorporation of 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	Restated Stock Option Plan of the Company, as amended (incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-8 filed August 18, 1998 (file no 333-61711)).
4.2	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)).
4.3	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 December 4, 2000 (file no. 333-51200)).
4.4	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)).
4.5	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).
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.
*10.9	Clarification to Severance Pay Agreement with Jeffrey A. Bertelsen.
*10.10	Clarification to Severance Pay Agreement with Daniel Good.
21.0	Subsidiaries of the Company.
23.1	Consent of Independent Registered Public Accounting Firm.

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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 Cash Flows, (iv) the Consolidated Statements of Stockholder's Equity and Comprehensive Income, and (v) the Notes to the Consolidated Financial Statements.

* Management Contract or Compensatory Plan or Arrangement

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SIGNATURES

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

CYBEROPTICS CORPORATION

/s/ KATHLEEN P. IVERSON
By Kathleen P. Iverson, CEO and Chair

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/ KATHLEEN P. IVERSON Kathleen P. Iverson	Director, CEO and Chair (Principal Executive Officer)	March 14, 2012
/s/ ALEX B. CIMOCHOWSKI Alex B. Cimochowski	Director	March 14, 2012
/s/ MICHAEL M. SELZER, JR. Michael M. Selzer, Jr.	Director	March 14, 2012
/s/ IRENE M. QUALTERS Irene M. Qualters	Director	March 14, 2012
/s/ SUBODH K. KULKARNI Subodh K. Kulkarni	Director	March 14, 2012
/s/ CRAIG D. GATES	Director	March 14, 2012

Craig D. Gates

/s/ JEFFREY A. BERTELSEN Jeffrey A. Bertelsen	Vice President and CFO (Principal Financial Officer and Principal Accounting Officer)	March 14, 2012