
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2011

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 000-24838



MATTSON TECHNOLOGY, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

77-0208119

(I.R.S. Employer Identification Number)

47131 Bayside Parkway, Fremont, California 94538

(Address of Principal Executive Offices, Zip Code)

(510) 657-5900

(Registrant's Telephone Number, Including Area Code)

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

Title of each class

Common Stock, \$.001 Par Value
Preferred Share Purchase Rights

Name of each exchange on which registered

NASDAQ Global Select Market

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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 reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of 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. ☒

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of July 3, 2011 was approximately \$114.4 million based on the closing price for the registrant's common stock reported by the NASDAQ Global Select Market on that date (\$1.97 per share). For purposes of this disclosure, shares of common stock held by officers and directors of the registrant and persons that may be deemed affiliates under the Act have been excluded. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 13, 2012, there were 58,431,837 shares of common stock outstanding.

Documents incorporated by reference: Portions of the Proxy Statement for registrant's Annual Meeting of Stockholders to be held in 2012, which will be filed on or before April 20, 2012, are incorporated herein by reference into Part III.

MATTSON TECHNOLOGY, INC.
FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2011
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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements made pursuant to the provisions of Section 21E of the Securities Exchange Act of 1934. These forward-looking statements are based on management's current expectations and beliefs, including estimates and projections about our industry. Forward-looking statements may be identified by use of terms such as "anticipates," "expects," "intends," "plans," "seeks," "estimates," "believes" and similar expressions, although some forward-looking statements are expressed differently. Forward-looking statements include, but are not limited to, statements concerning our financial position, business strategy and plans, objectives for future operations, the impact of macroeconomic and industry specific conditions on our business, customer demand and future sales levels, cost control measures such as outsourcing, customer adoption of new products and technologies, inventory levels, international operations, research and development initiatives, other product investment initiatives, working capital requirements or future cash flows. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict and may cause actual results to differ materially from the forward-looking statements and from management's current expectations. Such risks and uncertainties include those set forth in Item 1A. "Risk Factors" in this Annual Report on Form 10-K. The forward-looking statements in this report speak only as of the time they are made and do not necessarily reflect our outlook at any other point in time. We undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or for any other reason. However, readers should carefully review the risk factors set forth in other reports or documents we file from time to time with the Securities and Exchange Commission.

As used herein, "Mattson Technology," the "Company," "we," "our," and similar terms include Mattson Technology, Inc. and its subsidiaries, unless the context indicates otherwise.

PART I

Item 1. Business

Overview of Mattson Technology

We design, manufacture, market and globally support semiconductor wafer processing equipment used in the fabrication of integrated circuits (ICs or chips). We are a key supplier of dry strip, rapid thermal processing (RTP) and etch equipment to the global semiconductor industry. Our manufacturing equipment utilizes innovative technology to deliver advanced processing capabilities and high productivity for the fabrication of current and next-generation ICs.

Through strategic investments in the etch market and continued focus on the dry strip and RTP markets, we are now in an arena with a predicted total available market (TAM) of \$5.3 billion in 2011, based on market research data obtained from Gartner⁽¹⁾, a market research firm. In 2011, our new positions in etch and foundry RTP, added to our broad strip base, expanded our available market, and we have transitioned from productivity-driven into more technology-driven markets. Our etch products target the stringent requirements of advanced dielectric and silicon etch, as well as packaging applications. In 2011, we launched the *paradigmE Si* for silicon etch applications, and we now serve the growing silicon etch market. Our etch applications portfolio has helped our etch business grow and now contributes to over one-third of our total system revenue, as customers select our etch tools based on their process performance and cost of ownership.

Our customer base includes foundries, memory and logic device manufacturers. We have a global sales and support organization focused on developing strong, long-term customer relationships. We have design and manufacturing centers in the United States, Germany and South Korea. Our customer sales and support teams are located in China, Germany, Japan, South Korea, Singapore, Taiwan and the United States.

We were incorporated in California in 1988 and reincorporated in Delaware in 1997. Our principal executive office is located at 47131 Bayside Parkway, Fremont, CA 94538. Our telephone number is (510) 657-5900. Additional information about us is available on our website at <http://www.mattson.com>. The information on our website is not incorporated herein by reference.

(1) Forecast: Semiconductor Manufacturing Equipment, Worldwide, 4Q11 Update Report issued in December 2011.

Industry Background

The manufacture of ICs is a highly complex process with hundreds of individual processing steps, many of which are performed multiple times before manufacturing is complete and the IC is fully functional. To build an IC, transistors are first created on the surface of the silicon wafer, and then the transistors are microscopically wired together by means of interconnect metal layers. The steps require the wafer to be subjected to a tightly controlled series of chemical, thermal and photolithographic processes, resulting in the formation of millions, and in some cases billions, of transistors per IC and thousands of ICs on a single wafer.

Over the last four decades, the semiconductor industry has been able to uphold Moore's Law, which postulates that the number of transistors on a chip doubles approximately every 18 to 24 months. The process of reducing feature sizes will continue as the demand for smaller and faster electronic devices increases. Producing smaller features cost-effectively, while avoiding functional restrictions, requires the introduction and use of new materials and technologies. Industry transitions to larger wafer diameters are designed to enable more efficient production and higher yield, with the industry currently manufacturing its latest devices on 300 millimeter (mm) wafers, which it transitioned to during the last decade. The industry is now preparing for the transition to 450 mm wafers, and in 2011, several of the industry's largest companies announced 450 mm programs. Consortia such as IMEC and ISMI have well-established programs focused on the challenges posed by manufacturing with 450 mm wafers, and in September 2011, the Global 450 Consortium was formed at the University of Albany's College of Nanoscale Science and Engineering to deploy 450 mm wafer tools and process capabilities. The 450 mm transition should enable the Moore's law curve development roadmap, a potential 30 percent lower die cost advantage and more efficient manufacturing tool platforms.

These developments increase manufacturing complexity and create the need for manufacturing equipment with more precise process control capability, increased reliability, low defect rates and high productivity. The increased difficulty of achieving transistor performance at advanced nodes has made high yields important in selecting process equipment. Semiconductor manufacturers demand systems that can achieve consistent, reliable and repeatable process results within critical tolerance limits while still achieving desired throughput rates.

Consumer Electronics Driving Industry Growth

As computing and communications become ubiquitous, we are entering the fifth major technology cycle of the past half-century, the Mobile Internet Computing Era, where people, devices, and vehicles are connected at all times and Internet access capability is being embedded in billions of wireless devices such as PDAs, cellular phones, and computers embedded in vehicles (e.g. navigational systems in cars). The content on the Internet continues to grow at an astounding pace. By extending the Internet through mobile information access, the Mobile Internet is on a trajectory to offer all of the same features and value propositions as the traditional Internet, with the potential of greater information access opportunities and broader device-spanning Internet services and experiences, as a result of continuous availability and location awareness. Today's mobile market is an era of 'convergence', gradually integrating computer, telecommunications, home appliances and broadcasting.

Mobile Internet usage is also ramping up faster than desktop Internet usage with smartphone and tablet devices leading this trend with billions of applications downloaded by consumers. Helping to drive this increase is improved wireless 3G and 4G technology and cloud computing.

This trend toward increased mobile Internet usage places demands on cloud computing or "virtual" networks that deliver convenient, on-demand common business applications and hosted services over the Internet to meet consumers' computing needs. Cloud computing services have shown significant growth, with innovations making business and consumer applications even more mobile and collaborative. Applications in smartphones and tablet PCs are expected to continue to drive increased mobile DRAM demand in the coming years.

The Mobile Internet Era shifts the fundamental IC demand from the PC era. In the PC era, the logic processor demand was driven by the complex instruction set computer (CISC) microprocessor while the mobility products are served better with the reduced instruction set computer (RISC) microprocessor which allows for the lower power and streamlined operating system required to deliver the long battery life and fast application switching on today's mobile products. At the memory level, the mobility era requires NAND for long-term file storage, compared with the DRAM-based short-term memory required on a PC. Combining the computing power with wireless capability

and touch-screen interfaces adds additional chipsets that are more reliant on semiconductor foundry manufacturing. The industry still expects that PC Internet connectivity will continue to grow from today's levels and that the mobility era chip requirements will incrementally increase demand, place more emphasis on the foundry manufacturers and require a further NAND capacity expansion.

We have prepared for this shift, with concerted efforts to build upon our existing dry strip positions in NAND flash and foundry, by expanding our etch and RTP products into these NAND flash and foundry customer accounts. During 2011, we established new product positions at several NAND flash and foundry customers. The successful transition of these product positions to high-volume production is expected to help drive incremental revenue gains for us as the Mobile Internet Era unfolds.

Our Strategy

Our business objective is to grow to a sustainable critical mass. Scale is required to deliver full support to the global semiconductor industry while maintaining development for Moore's Law and wafer size transitions. We expanded our served available market and are committed to:

- driving share gains in each of our existing market sectors; and
- leveraging our current technology capabilities to expand into new market sectors.

Our core competency is the ability to deliver leading-edge technical wafer processing at leading productivity levels to provide our customers with the most cost-effective manufacturing. Our tools are selected at the leading technology areas and in full production at advanced semiconductor manufacturing, including DRAM and NAND flash memory, logic and foundry sectors.

Semiconductor manufacturers demand processes that deliver results with an unprecedented level of precision. We work closely with our customers, supply chain vendors and technology partners to deliver on these demands. An important element of our growth strategy is our commitment to technology leadership in the markets we serve. We plan to extend our market and technology leadership by developing robust processing solutions that provide semiconductor manufacturers with technology, productivity and total cost of ownership advantages. Investments in research and development have enabled us to make process improvements and product innovations that we believe are ahead of current device requirements. We believe that our focus on delivering advanced technologies and increasing customer value will enable us to increase our competitive advantage, expand our share in existing markets and penetrate new markets.

Markets, Applications and Products

Dry Strip

The manufacturing of an IC consists of building approximately 30 layers of alternating conducting and insulating films on a silicon substrate wafer. Each layer is patterned according to the chip design. Photoresist stripping, or simply "resist stripping", is the removal of the photoresist masking layers from the wafer once the patterning process has been completed at each of the 30 layers. The objective is to eliminate the photoresist material from the wafer as quickly as possible, without allowing any surface materials to become etched. The need for dry strip across the entire wafer process requires a supplier to deliver very high-throughput, low-cost systems while delivering a strong technical solution. The 2011 dry strip market size was approximately \$220 million according to Gartner in its December 2011 market research report.

We are a leader in the dry strip market. Our SUPREMA strip system utilizes an innovative wafer handling architecture to deliver productivity and reliability with exceptionally low cost of ownership for manufacturing at the 65 nanometer (nm) node and below. The SUPREMA features our patented Faraday-Shielded inductively coupled plasma (ICP) technology that offers superior resist strip capability to leading edge memory, logic and foundry customers. The SUPREMA has been installed at many of the global semiconductor companies for production and process development at advanced nodes.

Rapid Thermal Processing

Rapid thermal processing (RTP) refers to a semiconductor manufacturing process that heats silicon wafers to high temperatures (up to 1200°C or greater) using high intensity lamps on a timescale of several seconds or less to set the electrical properties of the semiconductor and anneal any material defects. RTP consists of heating a single wafer at a time in order to affect its electrical properties. The single-wafer approach allows for faster wafer processing with shorter annealing times from less than one second to three minutes, and more precise control of the annealing profile and process parameters on the wafer. The RTP market that we serve was estimated to be \$494 million in 2011, based on Gartner's market research report issued in December 2011.

As feature sizes become smaller and wafer uniformity demands become more stringent, there is an increased demand from rapid thermal equipment manufacturers to improve control, uniformity and repeatability of processes on wafers. Our RTP products feature dual-sided, lamp-based heating technology that provides enhanced process uniformity and repeatability with precise process control for chip manufacturing. Our products include the Helios and Helios XP systems for conventional annealing applications and the Millios system for millisecond anneal applications (MSA).

Our Helios and Helios XP systems are in volume production at major memory customer sites. The strategy to expand beyond the memory market progressed further in 2011 with the Helios XP. While extending the capabilities in the DRAM and NAND memory segment, the Helios XP system's temperature control architecture specifically aims at addressing advanced logic processing requirements, through its differentiated capabilities, including its low-temperature capability for advanced nickel silicide (NiSi) formation and high temperature pattern independent processing. In 2011, three major logic and foundry customers purchased and accepted the Helios XP evaluation systems. Two of the customers are transferring the system into current production while a third customer accepted the system as 'process tool of record' for the advanced 20 nm technology node and is slating pilot production starting in 2012. A follow on order was shipped into a customer's second production site and is expected to generate revenue in 2012.

Millios, which features a patented arc lamp technology capable of greatly reducing thermal cycle time, is designed to enable our customers to meet advanced gate anneal and activation process requirements at the 32 nm technology node and beyond. This type of annealing, MSA, is needed in a few key processes in most advanced technology nodes where the high temperature exposure requires less than one of a half second. The capability to control anneal times in the millisecond time regime, has enabled one leading logic customer to significantly improve transistor performance in the 20 nm technology node. In 2011, our Millios tool was sold to a leading logic customer's research facility as one of the development systems to enable advanced process technologies. The Millios is valued as the enabling technology to advance 20 nm transistor performance of major logic manufacturers.

Etch

Etching is the process of removing any deposited materials or layers from the wafer's surface to create the desired pattern on the wafer's surface. Plasma etching is one type of dry etching, using plasma to produce chemically reactive species from various gases. The reactive gases are exposed to the wafer surface and react with the material to be etched. Our etch products feature a proprietary Faraday-shielded ICP combined with selectable etch bias control to provide excellent process on-wafer performance. Our etch products, the *paradigmE* and Alpine, are built on our high-throughput platform to provide low cost-of-ownership. The etch market size was approximately \$4.6 billion in 2011 according to Gartner in its market research report issued in December 2011, of which we currently serve an estimated \$1.7 billion of the market.

In 2011, we entered the year with the *paradigmE* solidly established in the DRAM market and expanded into the NAND flash and logic/foundry market. We shipped *paradigmE* for dielectric and silicon etch applications to major DRAM and NAND flash fabs, where they are in volume production. In addition, at the close of 2011, our *paradigmE* was selected for applications in complementary metal-oxide semiconductor (CMOS) Imaging Sensor manufacturing. This is part of our long-term vision to aggressively expand the served available market for our etch products. In 2012, we expect to further broaden our application and customer base in the etch market.

Research, Development and Engineering

The semiconductor equipment industry is characterized by rapid technological change and product innovation. To be successful and competitive we continuously and aggressively develop more advanced process and process integration solutions for our customers. The products that we develop and market allow our customers to address their advanced requirements. Only by continuously striving to develop new intellectual property (IP) for processes and hardware can we maintain and advance our competitive position in the markets we serve. Accordingly, we devote a significant portion of our resources to research, development and engineering programs. We seek to maintain close relationships with our global customers and to remain responsive to their product and processing needs.

Our achievements in research, development and engineering in 2011 were in the following:

- Solidly establishing the *paradigmE* in the DRAM market and developing new applications for its expansion into the NAND flash and logic/foundry market
- Expanding *paradigmE*'s application space into the polysilicon market
- Releasing our *paradigmE* for applications in CMOS Imaging Sensor manufacturing
- Achieving enhancements to the Helios XP, a RTP system designed to meet demands of high-volume production at 4X and 3X nm nodes, as well as development at 2X nm node and beyond
- Developing new capabilities in our Millios MSA system for advanced logic device requirements beyond the 20 nm node
- Continuing improvement of our SUPREMA series strip systems to remove photoresist over new materials for semiconductor processing below 20 nm
- Initiating activities in plasma chamber and source design for stripping and etching, plus activities for the process chamber in RTP, for upcoming 450 mm industry transition

In plasma etch, we introduced the *paradigmE* 300 mm reactive ion etch (RIE) for advanced silicon etch applications. During the year, we worked to extend the features and capabilities of our etch offering and expand the system's etch applications portfolio to include a new set of processes. The tool is now established at foundry and logic customers and is in volume production at major DRAM and NAND flash fabs. In addition, the *paradigmE* is enabling development and manufacturing of next generation CMOS Imaging Sensor manufacturing.

We continued to extend the capability of our latest-generation RTP tools for 3X and 2X nm technology requirements and improved our tool reliability and productivity to help reduce our customers' cost of ownership. For Helios XP, we successfully engineered capabilities for more precise temperature measurement, as well as for low temperature processing. We have also developed and introduced the Differential Energy Control (DEC) capability to specifically address the pattern loading effect for pattern independent processing, an increasing problem below 40 nm logic processing. These innovative engineering improvements enable the formation of silicides and ultra-shallow junction (USJ) for the most advanced devices. In 2011, the Helios XP completed qualification for 20 nm node at advanced research and development facilities of our memory and foundry customers.

In 2011, we continued to work closely with a leading device manufacturer to demonstrate Millios' process and manufacturing advantages. Based on the system's proven high throughput, stability and reliability, this customer has qualified the Millios for its volume production facilities. In addition, a major foundry is now using the Millios system for its 20 nm logic process development. We are working with several other key customers to enable advanced process solutions, such as high-k metal gate (HKMG) transistors and precise NiSi formation.

Our SUPREMA strip system incorporates our ICP photoresist process module and an innovative vacuum-based, high-productivity platform that we expect will set new standards for technology and cost of ownership in the industry. Our Faraday-Shielded ICP source technology coupled with the advanced vacuum-based platform is becoming a requirement for processing of sub 30 nm devices. In response to the industry's continued demand for higher productivity, we continued to improve the throughput of our SUPREMA during the year.

In 2012, we intend to continue to make investments in strategic development and engineering programs to meet our customers' technical and production requirements. Over the next year, we intend to focus our research,

development and engineering efforts on improving existing system capabilities, developing new advanced strip, RTP and etch processes for smaller feature sizes, as well as continued development and commercialization of new products in etch and millisecond anneal.

We maintain applications development and engineering laboratories in California, Canada, and Germany to address new tool and process development activities and customer specific requirements. Our research, development and engineering expenses were \$26.2 million in 2011, \$27.8 million in 2010 and \$25.3 million in 2009, representing as a percentage of net sales 14 percent, 20 percent and 59 percent, respectively.

Intellectual Property

We rely on a combination of patent, copyright, trademark and trade secret laws, non-disclosure agreements and other IP protection methods to protect our proprietary technology. We hold a number of U.S. patents and corresponding foreign patents, and have a number of patent applications pending covering various aspects of our products and processes. We also have licensed a small number of patents and where appropriate, we intend to file additional patent applications on inventions resulting from our ongoing research, development and engineering activities to grow and strengthen all of our individual product IP portfolios.

As is customary in our industry, from time to time we receive or make inquiries regarding possible infringement of patents or other IP rights. Although there are no pending claims against us regarding infringement of any existing patents or other IP rights or any unresolved notices that we are infringing IP rights of others, such infringement claims could be asserted against us, or our suppliers, by third parties in the future. Any claims, with or without merit, could be time-consuming, result in costly litigation, result in loss or cancellation of customer orders, cause product shipment delays, subject us to significant liabilities to third parties, require us to enter into royalty or licensing agreements or prevent us from manufacturing and selling our products. If our products were found to infringe a third party's proprietary rights, we could be required to enter into royalty or licensing agreements in order to continue to sell our products. Royalty or licensing agreements, if required, may not be available on terms acceptable to us, if at all, which could seriously harm our business. Our involvement in any patent or other IP dispute or action to protect trade secrets and know-how could have a material adverse effect on our business.

Competition

The global semiconductor equipment industry is intensely competitive and is characterized by rapid technological change and demanding customer service requirements. Our ability to compete depends upon our ability to continually improve products, processes and services, and our ability to develop new products that meet constantly evolving customer requirements.

Substantial capital investments are required by semiconductor manufacturers to install and integrate new processing equipment into a semiconductor production line. As a result, once a semiconductor manufacturer has selected a particular supplier's products, the manufacturer often relies upon that equipment for the specific production line application, and frequently will attempt to consolidate its other capital equipment requirements with the same supplier. Accordingly, it is difficult for a competitor to sell to a customer for a significant period of time in the event a customer has selected our product. It may also be difficult to replace an existing relationship that a potential customer has with a competitor.

Each of our product lines competes in markets defined by the particular IC fabrication process it performs. In each of these markets, we have multiple competitors. At present, however, no single competitor competes with us in all of the process areas in which we serve. Competitors in a given technology tend to have different degrees of market presence in the various regional geographic markets. Competition is based on many factors, primarily technological innovation; productivity; total cost of ownership of the systems, including yield, price, product performance and throughput capability; quality; contamination control; reliability and customer support. We believe that our competitive position in each of our markets is based on the ability of our products and services to address customer requirements related to these competitive factors.

Our principal competitors in the dry strip market include Axcelis Technologies, Novellus Systems and PSK. Principal competitors for our thermal annealing systems are Applied Materials, Dainippon Screen Manufacturing and Ultratech. Principal competitors for our etch systems include Applied Materials, Lam Research and Tokyo Electron.

Customers

The composition of our largest customers has varied from year to year. The following table shows our net sales from customers representing more than ten percent of total sales in each of the last three years and net sales from our top ten customers as a group for each of those years:

	Year Ended December 31,		
	2011	2010	2009
Samsung	42%	40%	30%
Taiwan Semiconductor	10%	<10%	<10%
Hynix	<10%	12%	15%
Global Foundries	<10%	<10%	10%
Top ten customers as a group	87%	83%	80%

Sales and Marketing

Our sales and marketing efforts are focused on building long-term relationships with our customers. We sell our systems primarily through our direct sales force and distribution agreements in certain regions and countries. Our sales and marketing personnel work closely with our customers to develop solutions to meet their processing needs. In addition to the direct sales force residing in our Fremont, California headquarters, we have sales and support offices in China, Germany, Japan, Singapore, South Korea, Taiwan and the United States.

In 2011, we maintained a few representatives where it was advantageous economically or geographically. We maintained our relationship with Canon Marketing, Japan for the distribution and support of our products in Japan.

International sales accounted for 94 percent of our net sales in 2011, 95 percent of our net sales in 2010 and 92 percent of our net sales in 2009. We anticipate that international sales will continue to account for a significant portion of our future net sales. Asia has been a particularly important region for our business. Our sales to customers located in Asia accounted for 84 percent of our net sales in 2011, 90 percent of our net sales in 2010 and 82 percent of our net sales in 2009. Our foreign sales are subject to certain governmental restrictions, including the Export Administration Act and the regulations promulgated under this Act.

Customer Support

One of our primary goals is to build strong and productive partnerships with our customers. Our customer support organization is headquartered in Fremont, California, with additional resources located in China, Germany, Singapore, South Korea, Taiwan and the United States. We also maintain a relationship with Canon Marketing, Japan for the distribution and support of our products in Japan. Our global support infrastructure is composed of a network of product and process technologists, along with experienced field service teams with diverse technical backgrounds in mechanical and electronics engineering. After-sales support is an essential part of our customer service program, and our international customer support teams provide the following services: system installation, on-site repair, telephone support, used tool refurbishment, relocation services, process development applications and upgrades for extending the useful life and value of our products.

We offer warranties on all of our products. We maintain spare parts depots, consignment locations at customer sites and local support in most regions. As part of our global support services, we also offer a broad selection of technical training courses, from maintenance and service training to basic and advanced applications and operation. We are also actively engaged in joint development programs at many major customer sites to collaborate on product and process development and increase the level of customer support.

Backlog

We schedule production of our systems based on both backlog and regular sales forecasts. For several of our key customers, we typically receive orders several weeks prior to shipment. We include in backlog only those systems for which we have accepted purchase orders and assigned shipment dates within the next 12 months. Orders may be subject to cancellation or delay by the customer with limited or no penalty. Our backlog was \$27.1 million as of December 31, 2011, \$22.2 million as of December 31, 2010 and \$4.3 million as of December 31, 2009. Because of possible future changes in delivery schedules and cancellations of orders, our backlog at any particular date is not necessarily representative of actual sales to be expected for any succeeding period. During periods of industry downturn, we have experienced cancellations, delays and push-outs of orders that were previously included in backlog.

Manufacturing

We have direct manufacturing operations in the United States, Germany and South Korea. Our direct manufacturing operations consist of procurement, assembly, test, quality assurance and/or manufacturing engineering. We also utilize an outsourcing strategy for the manufacture of components and major subassemblies/modules. Our direct manufacturing teams are an integral part of our new product development process, working closely with our engineering teams to ensure that new products meet design-for-manufacturability, cost and quality targets. We have established sales and operations planning processes and systems to flexibly manage our production capacity and inventory levels, to quickly respond to fluctuating market demands.

Employees

As of December 31, 2011, we had 382 employees. The success of our future operations will depend in large part on our ability to recruit and retain qualified employees, particularly those highly-skilled design, process and test engineers involved in the manufacture of existing systems and the development of new systems and processes. None of our employees outside of Germany is represented by a labor union, and we have never experienced a work stoppage, slowdown or strike. In Germany, our employees are represented by workers' councils.

Environmental Matters

We are subject to international, federal, state and local environmental laws, rules and regulations. These laws, rules and regulations govern the transport, receipt, storage, use, treatment, discharge and disposal of hazardous and non-hazardous chemicals and wastes during manufacturing, research and development and sales demonstrations. Neither compliance with international, federal, state and local provisions regulating discharge of materials into the environment, nor remedial agreements or other actions relating to the environment have had, or is expected to have, a material effect on our capital expenditures, financial condition, results of operations or competitive position. However, if we fail to comply with applicable regulations, we could be subject to substantial liability for cleanup efforts, personal injuries, fines or suspension or cessation of our operations.

Gartner Market Data

The Gartner Report(s) described herein, (the "Gartner Report(s)") represent(s) data, research opinion or viewpoints published, as part of a syndicated subscription service, by Gartner, Inc. (Gartner), and are not representations of fact. Each Gartner Report speaks as of its original publication date and the opinions expressed in the Gartner Report(s) are subject to change without notice.

Available Information

We make available free of charge, through our website, <http://www.mattson.com>, our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with the Securities and Exchange Commission (SEC). Our publicly filed information is also available on the SEC's website, <http://www.sec.gov>. The information on our website is not incorporated herein by reference.

Item 1A. Risk Factors

Because of the following factors, as well as other variables affecting our operating results, cash flows and financial condition, past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in the future periods. Other events that we do not currently anticipate or that we currently deem immaterial also may affect our results of operations, cash flows and financial condition. See also “Forward-Looking Statements” elsewhere in this report.

We are dependent on our revenue and the success of our cost reduction measures to ensure adequate liquidity and capital resources during the next twelve months.

We have incurred operating losses and generated negative cash flows for the last four years. As of December 31, 2011, we had cash, cash equivalents and restricted cash of \$32.9 million and working capital of \$56.2 million. Our operations require careful management of our cash and working capital balances. Our liquidity is affected by many factors including, among others, fluctuations in our revenue, gross profits and operating expenses, as well as changes in our operating assets and liabilities. The cyclical nature of the semiconductor industry makes it difficult for us to predict our future liquidity needs with certainty. Any upturn in the semiconductor industry would result in short-term uses of our cash to fund inventory purchases and accounts receivable, with longer-term uses for research and development or otherwise to make investments in our business. Alternatively, any renewed softening in the demand for our products or ineffectiveness of our cost reduction efforts may cause us to incur additional losses in the future and lower our cash balances.

We may need additional funds to support our working capital requirements, operating expenses or for other requirements. Historically, we have relied on a combination of fundraising from the sale and issuance of equity securities (such as our common stock offering in May 2011) and cash generated from product, service and royalty revenues to provide funding for our operations. We periodically review our liquidity position and may seek to raise additional funds from a combination of sources including issuance of equity or debt securities through public or private financings. In the event additional needs for cash arise, we may also seek to raise these funds externally through other means, such as the sale of assets. The availability of additional financing will depend on a variety of factors, including among others, market conditions, the general availability of credit to the financial services industry and our credit ratings. As a consequence, these financing options may not be available to us on a timely basis, or on terms acceptable to us, and could be dilutive to our stockholders. Our current liquidity position may result in risks and uncertainties affecting our operations and financial position, including the following:

- we may be required to reduce planned expenditures or investments;
- we may be unable to compete in our newer or developing markets;
- we may not be able to obtain and maintain normal terms with suppliers;
- suppliers may require standby letters of credit before delivering goods and services, which will result in additional demands on our cash;
- customers may delay or discontinue entering into contracts with us; and
- our ability to retain management and other key individuals may be negatively affected.

Failure to generate sufficient cash flows from operations, raise additional capital or reduce spending could have a material adverse effect on our ability to achieve our intended long-term business objectives.

We are dependent on a highly concentrated customer base, and any cancellation, reduction or delay of purchases by these customers could harm our business. Additionally, we may not achieve anticipated revenue levels if we are not selected as “vendor of choice” for new or expanded customer fabrication facilities.

We derive most of our revenues from the sale of systems to a relatively small number of customers, which makes our relationship with each customer critical to our business. For example, in the years ended December 31, 2011, 2010 and 2009, our three largest customers accounted for a total of 60 percent, 59 percent and 55 percent of our revenues, respectively. We currently depend on one customer for a significant portion of our revenues, and the loss of, or a significant reduction in, orders from this customer would significantly reduce our revenue and adversely impact our operating results. See “Business—Customers” for a detailed description of our customer

concentration. Because semiconductor manufacturers must make a substantial investment to install and integrate capital equipment into a semiconductor fabrication facility, these manufacturers will tend to choose semiconductor equipment manufacturers based on product compatibility and proven performance. Customer order cancellations could result in the loss of anticipated sales without allowing us sufficient time to reduce our inventory and operating expenses. In addition, changes in forecasts or the timing of orders from customers could expose us to the risks of inventory shortages or excess inventory. This in turn could cause our operating results to fluctuate. If customer relationships are disrupted due to an inability to deliver sufficient products or for any other reason, it could have a significant negative impact on our business.

A large percentage of our sales are concentrated among customers in the memory market. As a result, a downturn or an upturn in memory spending could impact us more than it would impact competitors who are more diversified with logic and foundry customers.

Once a semiconductor manufacturer selects a particular vendor's capital equipment, the manufacturer generally relies upon equipment from this "vendor of choice" (VOC) for the specific production line application. In addition, the semiconductor manufacturer frequently will attempt to consolidate other capital equipment requirements with the same vendors. Accordingly, we may face narrow windows of opportunity to be selected as the VOC by significant new customers. It may be difficult for us to sell to a particular customer for a significant period of time once that customer selects a competitor's product. If we are unable to achieve broader market acceptance of our systems and technology, we may be unable to maintain and grow our business and our operating results and financial condition will be adversely affected.

Although we maintain a backlog of customer orders with expected shipment dates within the next 12 months, customers may request cancellations or delivery delays. Customers in some regions place orders a few weeks before the shipment. As a result, our backlog may not be a reliable indication of future revenues. If shipments of orders in backlog are cancelled or delayed, revenues could fall below our expectations and the expectations of market analysts and investors.

We face stiff competition in the semiconductor equipment industry.

The semiconductor equipment industry is both highly competitive and subject to rapid technological change. Significant competitive factors include the following:

- system performance;
- cost of ownership;
- size of the installed base;
- breadth of product line;
- delivery speed; and
- customer support.

Competitive pressure has been increasing in several areas. In addition to increased price competition, customers are waiting to make purchase commitments based on their end-user demand, which are then placed with requests for rapid delivery dates and increased product support. Some of our major competitors are larger than we are, have greater capital resources and may have a competitive advantage over us by virtue of having:

- broader product lines;
- longer operating history;
- greater experience with high-volume manufacturing;
- substantially larger customer bases; and
- substantially greater customer support, financial, technical and marketing resources.

Growth in the semiconductor equipment industry is increasingly concentrated in the largest companies, resulting in increasing industry consolidation, such as the pending merger of Lam Research and Novellus Systems announced in December 2011. Semiconductor companies are consolidating their vendor base and prefer to purchase from vendors with a strong, worldwide support infrastructure.

In addition, to expand our sales we must often displace the systems of our competitors or sell new systems to customers of our competitors. Our competitors may develop new or enhanced competitive products that offer price or performance features that are superior to our systems. Our competitors may also be able to respond more quickly to new or emerging technologies and changes in customer requirements or to devote greater resources to the development, promotion, sale and on-site customer support of their product lines. We may not be able to maintain or expand our sales if competition increases and we are unable to respond effectively.

The cyclical nature of the semiconductor industry has caused us to experience losses and reduced liquidity, and it may continue to negatively impact our financial performance.

The semiconductor equipment industry is highly cyclical and periodically has severe and prolonged downturns, which causes our operating results to fluctuate significantly. We are exposed to the risks associated with industry overcapacity, including decreased demand for our products and increased price competition.

The semiconductor industry has historically experienced periodic downturns due to general economic changes or due to capacity growth temporarily exceeding growth in demand for semiconductor devices. Our business depends, in significant part, upon capital expenditures by manufacturers of semiconductor devices, including manufacturers that open new or expand existing facilities. Periods of overcapacity and reductions in capital expenditures by our customers cause decreases in demand for our products. This could result in significant under-utilization in our factories. If existing customer fabrication facilities are not expanded and new facilities are not built, we may be unable to generate significant new orders and sales for our systems. During periods of declining demand for semiconductor manufacturing equipment, our customers typically reduce purchases, delay delivery of ordered products and/or cancel orders, resulting in reduced revenues and backlog, delays in revenue recognition and excess inventory for us. Increased price competition may also result as we compete for the smaller demand in the market, causing pressure on our gross margin and net income.

The weakness in the global economy may continue to negatively impact our financial performance.

The recessionary conditions of 2008 and 2009 in the global economy and the slowdown in the semiconductor industry impacted customer demand for our products and correspondingly, negatively impacted our financial performance. There remains high unemployment in developed countries, concerns regarding the availability of credit, uncertainty about a sustained economic recovery in the U.S. and fears of further economic deterioration in Europe and the developing world, which in turn, may lead to a global downturn. Any of these factors could have a negative impact on our business, or our financial condition.

Demand for semiconductor equipment depends on consumer spending. Continued economic uncertainty may lead to a decrease in consumer spending and may cause certain of our customers to cancel or delay orders. In addition, if our customers have difficulties in obtaining capital or financing, this could result in lower sales. Customers with liquidity issues could lead to charges to our bad debt expense, if we are unable to collect accounts receivables. These conditions could also affect our key suppliers, which could affect their ability to supply parts to us, and result in delays of the completion of our systems and the shipment of these systems to our customers.

Because of the economic downturn and the uncertainty of a full recovery, we may have to take further actions to reduce costs, which could reduce our ability to invest in research and development at levels we believe are desirable. If we are unable to effectively align our cost structure with prevailing market conditions, we will experience additional losses and additional reductions in our cash and cash equivalents. If we are not able to suitably adapt to these economic conditions in a timely manner or at all, our performance, cash flows, results of operations and ability to access capital could be materially and adversely impacted.

We must continually anticipate technology trends, improve our existing products and develop new products in order to be competitive. The development of new or enhanced products involves significant risks, additional costs and delays in revenue recognition. Technical and manufacturing difficulties experienced in the introduction of new products could be costly and could adversely affect our customer relationships.

The markets in which our customers and we compete are characterized by rapidly changing technology, evolving industry standards and continuous improvements in products and services. Consequently, our success depends upon our ability to anticipate future technology trends and customer needs, to develop new systems and processes that meet industry standards and customer requirements and that compete effectively on the basis of price and performance.

Our development of new products involves significant risk, since the products are very complex and the development cycle is long and expensive. The success of any new system we develop and introduce is dependent on a number of factors, including our ability to correctly predict customer requirements for new processes, to assess and select the potential technologies for research and development and to timely complete new system designs that are acceptable to the market. We may make substantial investments in new technologies before we can know whether they are technically or commercially feasible or advantageous, and without any assurance that revenue from future products or product enhancements will be sufficient to recover the associated development costs. Not all development activities result in commercially viable products. We may not be able to improve our existing systems or develop new technologies or systems in a timely manner. We may exceed the budgeted cost of reaching our research, development and engineering objectives, and planned product development schedules may require extension. Any delays or additional development costs could have a material adverse effect on our business and results of operations.

Our products are complex, and we may experience technical or manufacturing inefficiencies, delays or difficulties in the prototype introduction of new systems and enhancements, or in achieving volume production of new systems or enhancements that meet customer requirements. Our inability, or the inability of our outsourced partners, to overcome such difficulties, to meet the technical specifications of any new systems or enhancements or to manufacture and ship these systems or enhancements in volume and in a timely manner would materially adversely affect our business and results of operations, as well as our customer relationships.

Our revenue recognition policies require that during the initial evaluation phase of a new product, customer acceptance needs to be obtained before we can recognize revenue on the product. Customer acceptances may not be completed in a timely manner for a variety of reasons, whether or not related to the quality and performance of our products. Any delays in customer acceptance may result in revenue recognition delays and have an adverse impact on our results of operations.

We may from time to time incur unanticipated costs to ensure the functionality and reliability of our products early in their life cycles, and such costs can be substantial. If we encounter reliability or quality problems with our new products or enhancements, we could face a number of difficulties, including reduced orders, higher manufacturing costs, delays in collection of accounts receivable and additional service and warranty expenses, all of which could materially adversely affect our business and results of operations. The costs associated with our warranties may be significant, and in the event our projections and estimates of these costs are inaccurate, our financial performance could be seriously harmed. In addition, if we experience product failures at an unexpectedly high level, our reputation in the marketplace could be damaged, and our business would suffer.

Significant fluctuations in our operating results are difficult to predict due to our lengthy sales cycle, and our results may fall short of anticipated levels, which could cause our stock price to decline.

Sales of our systems depend upon the decision of a prospective customer to increase or replace manufacturing capacity, typically involving a significant capital commitment. Accordingly, the decision to purchase our systems requires time-consuming internal procedures associated with the evaluation, testing, implementation and introduction of new technologies into our customers' manufacturing facilities. Even after the customer determines that our systems meet their qualification criteria, we may experience delays finalizing system sales while the customer obtains approval for the purchase, constructs new facilities or expands its existing facilities. Consequently, the time between our first contact with a customer regarding a specific potential purchase and the customer's placing its first order may last from nine to twelve months or longer. We may incur significant sales and marketing expenses during this evaluation period. In addition, the length of this period makes it difficult to accurately forecast future sales. Also, any unexpected delays in orders could impact our revenue and operating results. If sales forecasted from a specific customer are not realized, we

may experience an unplanned shortfall in revenues, and our quarterly and annual revenue and operating results may fluctuate significantly from period to period.

Our quarterly and annual revenue and operating results have varied significantly in the past and are likely to vary significantly in the future, which makes it difficult for us to predict our future operating results. We incurred significant net losses between 2001 and 2003, yet were profitable for each of the years 2004 to 2007. Again, we incurred net losses between 2008 and 2011, due to declining demand as a result of the weakness in the semiconductor equipment market and the global economy. We may not achieve profitability in future years. We will need to generate significant sales to achieve profitability, and we may not be able to do so. A substantial percentage of our operating expenses are fixed in the short term and we may continue to be unable to adjust spending to compensate for shortfalls in revenues. As a result, we may continue to incur losses, which could cause the price of our common stock to decline further or remain at a low level for an extended period of time.

We are highly dependent on international sales, and face significant international business risks.

International sales accounted for 94 percent, 95 percent and 92 percent of our net sales for the years ended December 31, 2011, 2010 and 2009, respectively. We anticipate international sales will continue to account for the vast majority of our future net sales. Asia has been a particularly important region for our business, and we anticipate that it will continue to be important going forward. Our sales to customers located in Asia accounted for 84 percent, 90 percent and 82 percent of our net sales for the years ended December 31, 2011, 2010 and 2009, respectively. Because of our continuing dependence upon international sales, we are subject to a number of risks associated with international business activities, including:

- burdensome governmental controls, laws, regulations, tariffs, duties, taxes, restrictions, embargoes or export license requirements;
- unexpected changes in laws or regulations prompted by economic stress, such as protectionism, and other attempts to rectify real or perceived international trade imbalances;
- exchange rate volatility;
- the need to comply with a wide variety of foreign and U.S. customs and export laws;
- political and economic instability;
- government-sponsored competition;
- differing labor regulations;
- reduced protection for, and increased misappropriation of, intellectual property;
- difficulties in accounts receivable collections;
- increased costs for product shipments and potential difficulties from shipment delays;
- difficulties in managing distributors, representatives, contract manufacturers and suppliers;
- difficulties in staffing and managing foreign subsidiary operations; and
- natural disasters, acts of war, terrorism, widespread illness or other catastrophes affecting foreign countries.

Our sales to date have been denominated primarily in U.S. dollars; however future sales to Asian customers may be denominated in the customer's local currency. Our sales in foreign currencies are subject to risks of currency fluctuation. For U.S. dollar sales in foreign countries, our products may become less price competitive when the local currency is declining in value compared to the dollar. This could cause us to lose sales or force us to lower our prices, which would reduce our gross margins.

We are exposed to various risks relating to compliance with the regulatory environment, including export control laws and material contracts provisions, and non-compliance or non-performance with any of these items could result in adverse consequences and monetary fines or damages.

We are subject to various risks related to (1) disagreements and disputes between national and regional regulatory agencies related to international trade; (2) new, inconsistent and conflicting rules by regulatory agencies in the countries in which we operate; and (3) interpretation and application of different laws and regulations. If we are found by a court or regulatory agency to not be in compliance with the laws and regulations, our business, financial condition and results of operations could be adversely affected.

As an exporter, we must comply with various laws and regulations relating to the export of products and technology from the U.S. and other countries having jurisdiction over our operations. In the U.S. these laws include the International Traffic in Arms Regulations (“ITAR”) administered by the State Department’s Directorate of Defense Trade Controls, the Export Administration Regulations (“EAR”) administered by the Bureau of Industry and Security (“BIS”), and trade sanctions against embargoed countries and destinations administered by the U.S. Department of Treasury, Office of Foreign Assets Control (“OFAC”). The EAR governs products, parts, technology and software which present military or weapons proliferation concerns, so-called “dual use” items, and ITAR governs military items listed on the United States Munitions List. Prior to shipping certain items, we must obtain an export license or verify that license exemptions are available. In addition, we must comply with certain requirements related to documentation, record keeping, plant visits and hiring of foreign nationals. Any failures to comply with these laws and regulations could result in fines, adverse publicity and restrictions on our ability to export our products, and repeat failures could carry more significant penalties. In 2008, we self-disclosed to BIS certain inadvertent EAR violations, and are currently working with BIS to resolve these. As of December 31, 2011, we have accrued an amount to reflect what management believes to be the minimum estimated liability. We are unable to estimate the extent of any higher fines or penalties or other potential losses that may be incurred with respect to this matter, though we could face substantial civil fines or other penalties, which could have a material adverse effect on us.

We are a party to several governmental and private-party contracts that provide for liquidated damages in the event that we fail to comply with the covenants or requirements under any of these contracts. These liquidated damage payments could be significant and we could incur significant legal fees if we were to renegotiate these contracts. Any such damage amounts or legal expenses may adversely impact our financial condition or results of operations.

Because of competition for qualified personnel, we may not be able to recruit or retain necessary personnel, which could impede development or sales of our products.

Our growth will depend on our ability to attract and retain qualified, experienced employees. Our ability to attract employees may be harmed by our recent financial losses, which has impacted our available cash and our ability to provide performance-based annual cash incentives. Also, part of our total compensation program includes share-based compensation. Share-based compensation is an important tool in attracting and retaining employees in our industry. If the market price of our common shares declines or remains low, it may adversely affect our ability to attract or retain employees.

During periods of growth in the semiconductor industry, there is substantial competition for experienced engineering, technical, financial, sales and marketing personnel in our industry. In particular, we must attract and retain highly skilled design and process engineers. If we are unable to retain existing key personnel, or attract and retain additional qualified personnel, we may from time to time experience inadequate levels of staffing to develop and market our products and perform services for our customers. As a result, our growth could be limited, we could fail to meet our delivery commitments or we could experience deterioration in service levels or decreases in customer satisfaction.

The price of our common stock has fluctuated in the past and may continue to fluctuate significantly in the future, which may lead to losses by investors, securities litigation or hostile or otherwise unfavorable takeover offers.

The market price of our common stock has been highly volatile in the past, and our stock price may decline in the future. For example, for the year ended December 31, 2011, the closing price range for our common stock was between \$1.00 and \$2.87 per share.

The relatively low stock price makes us attractive to hedge funds and other short-term investors. This could result in substantial volatility of the stock price and cause fluctuations in trading volumes for our stock. In addition, in recent years the stock market in general, and the market for shares of high technology stocks in particular, have experienced extreme price fluctuations. These fluctuations have frequently been unrelated to the operating performance of the affected companies. In the past, securities class action litigation has often been instituted against a company following periods of volatility in its stock price. This type of litigation, if filed against us, could result in substantial costs and divert our management's attention and resources.

Our stock price has been below the five-year peak of \$11.76 for several years, and if revenue does not return to the peak 2007 levels or we do not return to profitability in the near term, we could be an attractive target for acquisition or be impacted by mergers or acquisition by another company or consolidation in the industry. An acquisition or merger could be hostile or on terms unfavorable to us, and may result in substantial costs and potential disruption to our business.

We are subject to significant risks related to our operations.

We are outsourcing logistics activities and select manufacturing activities to third-party service providers, which decrease our control over the performance of these functions and quality of our products.

We have outsourced our spare parts logistics functions and select core product manufacturing to third-party service providers. Outsourcing has a number of risks and reduces our control over the performance of the outsourced functions. Significant performance problems by these third-party service providers could result in cost overruns, delayed deliveries, shortages, quality issues or other problems that could result in significant customer dissatisfaction and could materially and adversely affect our business, financial condition and results of operations. If for any reason one or more of these third-party service providers becomes unable or unwilling to continue to provide services of acceptable quality, at acceptable costs and in a timely manner, our ability to deliver our products or spare parts to our customers could be severely impaired.

We depend upon a limited number of suppliers for some components and subassemblies, and supply shortages or the loss of these suppliers could result in increased cost or delays in the manufacture and sale of our products.

We rely, to a substantial extent, on outside vendors to provide many of the components and subassemblies of our systems. We obtain some of these components and subassemblies from a sole source or a limited group of suppliers. We generally acquire these components on a purchase order basis and not under long-term supply contracts. Because of this reliance on these vendors and suppliers, we may be unable to obtain an adequate supply of required components. When demand for semiconductor equipment is strong, our suppliers may have difficulty providing components on a timely basis.

In addition, during periods of shortages of components, we may have reduced control over pricing and timely delivery of components. We often quote prices to our customers and accept customer orders for our products prior to purchasing components and subassemblies from our suppliers. If our suppliers increase the cost of components or subassemblies, we may not have alternative sources of supply and may no longer be able to increase the cost of the system being evaluated by our customers to cover all or part of the increased cost of components.

The manufacture of some of these components is an extremely complex process and requires long lead times. If we are unable to obtain adequate and timely deliveries of our required components, we may have to seek alternative sources of supply or manufacture such components internally. This could delay our ability to manufacture or ship our systems in a timely manner, causing us to lose sales, incur additional costs, delay new product introductions and harm our reputation. Historically, we have not experienced any significant delays in manufacturing due to an inability to obtain components, and we are not currently aware of any specific problems regarding the availability of components that might significantly delay the manufacturing of our systems in the future. Any inability to obtain adequate deliveries, or any other circumstance that would require us to seek alternative sources of supply or to manufacture such components internally, could delay our ability to ship our systems and could have a material adverse effect on us.

Our gross margins may be impacted if we do not effectively manage our inventory.

We need to manage our inventory of component parts, work-in-process and finished goods effectively to meet customer delivery demands at an acceptable risk and cost. For both the inventories that support manufacture of our products and our spare parts inventories, if the anticipated customer demand does not materialize in a timely manner, we will incur increased carrying costs and some inventory could become excess or obsolete, resulting in write-offs, which would adversely affect our cash position and results of operations. The sale of this inventory during periods of increasing revenue could temporarily impact our gross margins favorably due to the adjusted carrying value of this inventory, and could result in future unpredictability in our gross margin estimates.

Our gross margins for sales of products that we manufacture in Germany and/or South Korea may fluctuate due to changes in the value of the Euro and South Korean won.

We develop and manufacture a significant portion of our products in Germany, where our costs for labor and materials are primarily denominated in Euros, and anticipate increased manufacturing activities in South Korea going forward, where our costs for labor are primarily denominated in won. Future increases in the strength of the Euro or won, if any, could increase our development costs, our costs to manufacture systems, and our costs to purchase spare parts for products from our suppliers, which would make it more difficult for us to compete and could adversely affect our results of operations.

We manufacture many of our products at two primary manufacturing facilities and are thus subject to risk of disruption.

Although we outsource select core product manufacturing to third parties, we continue to produce our latest generation products at our two principal manufacturing plants in Fremont, California and Dornstadt, Germany. We have limited ability to interchangeably produce our products at either facility, and in the event of a disruption of operations at one facility, our other facility would not be able to make up the capacity loss. Our operations could be subject to disruption for a variety of reasons, including, but not limited to, natural disasters, including earthquakes in California, work stoppages, operational facility constraints and terrorism. Such disruption could cause delays in shipments of products to our customers, result in cancellation of orders or loss of customers and seriously harm our business.

We self-insure certain risks including earthquake risk. If one or more of the uninsured events occurs, we could suffer major financial losses.

We purchase insurance to help mitigate the economic impact of certain insurable risks; however, certain other risks are uninsurable or are insurable only at significant cost or cannot be mitigated with insurance. An earthquake could significantly disrupt our principal manufacturing operations in Fremont, California, an area highly susceptible to earthquakes. It could also significantly delay our research and development efforts on new products, a significant portion of which is conducted in California. We self-insure earthquake risks because we believe this is a prudent financial decision based on the high cost and limited coverage available in the earthquake insurance market. If a major earthquake occurs, we could suffer a major financial loss and face significant disruption in our business.

If we are unable to protect our intellectual property, we may lose valuable assets and experience reduced market share. Efforts to protect our intellectual property may be costly to resolve, require additional costly litigation and could divert management attention. We also agree to indemnify customers for certain claims, and such obligations are more likely to increase during downturns.

We rely on a combination of patents, copyrights, trademark and trade secret laws, non-disclosure agreements, and other intellectual property protection methods to protect our proprietary technology. Despite our efforts to protect our intellectual property, we may from time to time be subject to claims of infringement of other parties' patents or other proprietary rights. If this occurs, we may not be able to prevent the use of such technology. Our means of protecting our proprietary rights may not be adequate and our patents may not be sufficiently broad to protect our technology. Any patents owned by us could be challenged, invalidated or circumvented and any rights granted under any patent may not provide adequate protection to us.

Furthermore, we may not have sufficient resources to protect our rights. When we outsource portions of our manufacturing, we are less able to protect our intellectual property ourselves, and rely more on our service providers to do so. Our service providers may not always be able to assure that their employees or former employees do not use our intellectual property for their own account to compete with us. Our competitors may independently develop similar technology, or design around patents that may be issued to us. In addition, the laws of some foreign countries may not protect our proprietary rights to as great an extent as do the laws of the United States and it may be more difficult to monitor the use of our products in such foreign countries. As a result of these threats to our proprietary technology, we may have to resort to costly litigation to enforce our intellectual property rights.

On occasion we receive notification from customers who believe that we are required to indemnify them or we have other financial obligations to them because of claims of intellectual property infringement made against them by third parties. Our involvement in any patent dispute or other intellectual property dispute or action to protect trade secrets, even if the claims are without merit, could be very expensive to defend and could divert the attention of our management. Adverse determinations in any litigation could subject us to significant liabilities to third parties, require us to seek costly licenses from third parties and prevent us from manufacturing and selling our products. Royalty or license agreements, if required, may not be available on terms acceptable to us, or at all. Any of these situations could have a material adverse effect on our business and operating results in one or more countries.

In the normal course of business, we indemnify customers with respect to certain matters, for example if our tool infringes the intellectual property rights of any third party or if we breach any promise in our contract with the customer. During downturns in general or industry specific economic conditions, our customers may require that the extent and scope of our obligation to indemnify them be expanded because customers feel they have greater leverage in negotiating with us. In the future, we may be compelled to enter into or accrue for settlements under such indemnification provisions. Our financial performance could be materially adversely affected if we expend significant amounts in defending or settling any purported claims.

Our failure to comply with environmental or safety regulations could result in substantial liability.

We are subject to a variety of federal, state, local and foreign laws, rules, and regulations relating to environmental protection and workplace safety. These laws, rules and regulations govern the use, storage, discharge and disposal of hazardous chemicals during manufacturing, research and development and sales demonstrations, as well as governmental standards for workplace safety. If we fail to comply with present or future regulations, especially in our manufacturing facilities in the United States, Germany and South Korea, we could be subject to substantial liability for cleanup efforts, personal injury, fines or suspension or cessation of our operations. We may be subject to liability if our acquired companies have past violations. Restrictions on our ability to expand or continue to operate our present locations could be imposed upon us as a result of such laws, rules and regulations, and we could be required to acquire costly remediation equipment or incur other significant expenses.

Any future business divestitures or acquisitions may disrupt our business, diminish stockholder value or distract management attention.

We may seek to divest of certain assets or businesses from time to time, especially if we need additional liquidity or capital resources. When we make a decision to sell assets or a business, we may encounter difficulty completing the transaction as a result of a range of possible factors such as new or changed demands from the buyer. These circumstances may cause us to incur additional time or expense or to accept less favorable terms, which may adversely affect the overall benefits of the transaction.

As part of our ongoing business strategy, we may consider acquisitions of, or significant investments in, businesses that offer products, services and technologies complementary to our own. Such acquisitions could materially adversely affect our operating results and/or the price of our common stock. Acquisitions also entail numerous risks, including:

- difficulty of assimilating the operations, products and personnel of the acquired businesses and possible impairments caused by this;
- potential disruption of our ongoing business;
- unanticipated costs associated with the acquisition;

- inability of management to manage the financial and strategic position of acquired or developed products, services and technologies;
- inability to maintain uniform standards, controls, policies and procedures; and
- impairment of relationships with employees and customers that may occur as a result of integration of the acquired business.

To the extent that shares of our stock or other rights to purchase stock are issued in connection with any future acquisitions, dilution to our existing stockholders will result, and our earnings per share may suffer. We may be required to incur debt to pay for any future acquisitions, which could subject us to restrictive covenants and other leverage concerns. Any future acquisitions may not generate additional revenue or provide any benefit to our business, and we may not achieve a satisfactory return on our investment in any acquired businesses.

Divestitures, acquisitions and other transactions are inherently risky, and we cannot provide any assurance that our previous or future transactions will be successful. The inability to effectively manage the risks associated with these transactions could materially and adversely affect our business, financial condition or results of operations.

Our current transfer of operations and periodic restructuring plans may not produce anticipated benefits and may lead to charges that will adversely affect our results of operations.

We are currently undertaking a transfer of our operations from Canada to our Germany facility. This transfer plan may not be achieved in a timely and efficient manner, and may not fully realize the anticipated cost savings and synergies for a variety of reasons. Some of the risk related to this transfer include failure to obtain expected cost savings due to cost overruns in connection with the move or after operations commence; failure to merge our Canadian operations into our existing German operations; and employment and other law, rules, regulations or other limitations in foreign jurisdictions that could have an impact on timing, amounts or costs of achieving expected synergies.

In addition, we have from time to time enacted restructuring and other cost reduction plans designed to reduce our manufacturing overhead and our operating expenses. These restructuring efforts resulted or may result in significant restructuring charges that have adversely affected, and may continue to adversely affect, our results of operations for the periods in which such charges occur. Additionally, actual costs related to such restructuring plans have in the past, and may in the future, exceed the amounts that we previously estimated, leading to additional charges as actual costs are incurred. We expect to incur significant restructuring charges over the next 12 months, both in connection with our transfer of the Canadian operations and otherwise.

Changes in tax rates or tax liabilities could affect results.

We are subject to taxation in the United States and various other countries. Significant judgment is required to determine and estimate worldwide tax liabilities. Our future annual and quarterly tax rates could be affected by numerous factors, including changes in the applicable tax laws, composition of earnings in countries with differing tax rates or our valuation and utilization of deferred tax assets and liabilities. In addition, we are subject to regular examination of our income tax returns by the Internal Revenue Service and other tax authorities. We regularly assess the likelihood of favorable or unfavorable outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. Although we believe our tax estimates are reasonable, there can be no assurance that any final determination will not be materially different from the treatment reflected in our historical income tax provisions and accruals, which could materially and adversely affect our results of operations.

We may be required to record additional impairment charges that will adversely impact our results of operations.

We review our goodwill and intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amounts of these assets may not be recoverable, and also review goodwill balances annually. For example, during the year ended December 31, 2008, we recorded impairment charges of \$18.1 million and \$6.6 million related to the write-off of goodwill and certain intangible assets, respectively. The write-offs were triggered by the significant decline in our revenue and cash flows. The resulting assessment indicated a material decline in our market valuation and projected revenues, causing a decrease in the anticipated future cash flows

attributable to these assets relative to the cash flow expectations when the assets were acquired. In the event that we determine in a future period that impairment of our intangible assets exists for any reason, we would record additional impairment charges in the period such determination is made, which would adversely impact our financial position and results of operations.

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

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

- our board of directors is authorized, without prior stockholder approval, to create and issue preferred stock, commonly referred to as “blank check” preferred stock, with rights senior to those of common stock;
- our board of directors is staggered into three classes, only one of which is elected at each annual meeting;
- stockholder action by written consent is prohibited;
- nominations for election to our board of directors and the submission of matters to be acted upon by stockholders at a meeting are subject to advance notice requirements;
- certain provisions in our bylaws and certificate of incorporation such as notice to stockholders, the ability to call a stockholder meeting, advance notice requirements and action of stockholders by written consent may only be amended with the approval of stockholders holding 66 2/3 percent of our outstanding voting stock;
- the ability of our stockholders to call special meetings of stockholders is prohibited; and
- subject to certain exceptions requiring stockholder approval, our board of directors is expressly authorized to make, alter or repeal our bylaws.

In addition, the provisions in our stockholder rights plan could make it more difficult for a potential acquiror to consummate an acquisition of our company. We are also subject to Section 203 of the Delaware General Corporation Law, which provides, subject to enumerated exceptions, that if a person acquires 15 percent or more of our outstanding voting stock, the person is an “interested stockholder” and may not engage in any “business combination” with us for a period of three years from the time the person acquired 15 percent or more of our outstanding voting stock.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. Properties

Our principal properties as of December 31, 2011 are set forth below:

Location	Type	Principal Use	Square Footage	Ownership
Fremont, CA	Office, plant and warehouse	Headquarters, marketing, manufacturing, distribution, research and engineering	101,000	Leased
Exton, PA	Office	Subleased	80,000 ⁽¹⁾	Leased
Dornstadt, Germany	Office, plant and warehouse	Manufacturing, research and engineering	89,000	Leased

⁽¹⁾ *Leased property in Exton, PA is not needed for our operations. As of December 31, 2011, approximately half of this property was subleased to another party.*

In addition to the above properties, we lease an aggregate of approximately 31,000 square feet of office space for sales and customer support offices, worldwide. In Canada, we also lease approximately 18,000 square feet of office, plant and warehouse space for office, manufacturing and research facilities.

In total, we lease office space for headquarters, manufacturing, operations, research and engineering, distribution, marketing, sales and customer support in approximately 22 locations throughout the world: three in the United States, six in Korea, four in each of China and Taiwan, two in Germany, and one in each of Canada, Singapore and Japan. During 2011, we reviewed the utilization of our facilities and made appropriate amendments to our lease agreements as necessary. We consider these current facilities suitable and adequate to meet our requirements.

Item 3. Legal Proceedings

In the ordinary course of business, we are subject to claims and litigation, including claims that we infringe third party patents, trademarks and other intellectual property rights. Although we believe it is unlikely that any current claims or actions will have a material adverse impact on our operating results or our financial position, given the uncertainty of litigation, we cannot be certain of this. Moreover, the defense of claims or actions against us, even if not meritorious, could result in the expenditure of significant financial and managerial resources.

Our involvement in any patent dispute, other intellectual property dispute or action to protect trade secrets and know-how could result in a material adverse effect on our business. Adverse determinations in current litigation or any other litigation in which we may become involved and regulatory non-compliance, including with respect to export regulations, could subject us to significant liabilities to third parties or government agencies, require us to grant licenses to or seek licenses from third parties and prevent us from manufacturing and selling our products. Any of these situations could have a material adverse effect on our business.

In addition, as disclosed in Note 7, *Commitments and Contingencies* in Part II, Item 8 of this Form 10-K, we are working with the Bureau of Industry and Security to resolve certain inadvertent Export Administration Regulation violations.

Item 4. Mine Safety Disclosures

Not applicable

PART II

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

Market for Registrant's Common Equity

Our common stock has been traded on The NASDAQ Global Select Market since our initial public offering on September 28, 1994. Our stock is quoted under the symbol "MTSN". The following table sets forth the low and high closing prices as reported by The NASDAQ Global Select Market for the periods indicated:

	<u>Low</u>	<u>High</u>
2011		
First	\$ 2.08	\$ 2.87
Second	\$ 1.56	\$ 2.42
Third	\$ 1.17	\$ 2.15
Fourth	\$ 1.00	\$ 1.48
2010		
First	\$ 3.05	\$ 4.60
Second	\$ 3.57	\$ 5.46
Third	\$ 2.01	\$ 4.10
Fourth	\$ 2.46	\$ 3.26

On February 13, 2012, our common stock on the NASDAQ Global Select Market was \$3.15 per share; and according to the records of our transfer agent, we had 195 stockholders of record of our common stock on that date. Because brokers and other institutions hold many of our shares on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Dividends

We have never paid cash dividends on our common stock and have no present plans to pay cash dividends. We intend to retain all future earnings for use in our business.

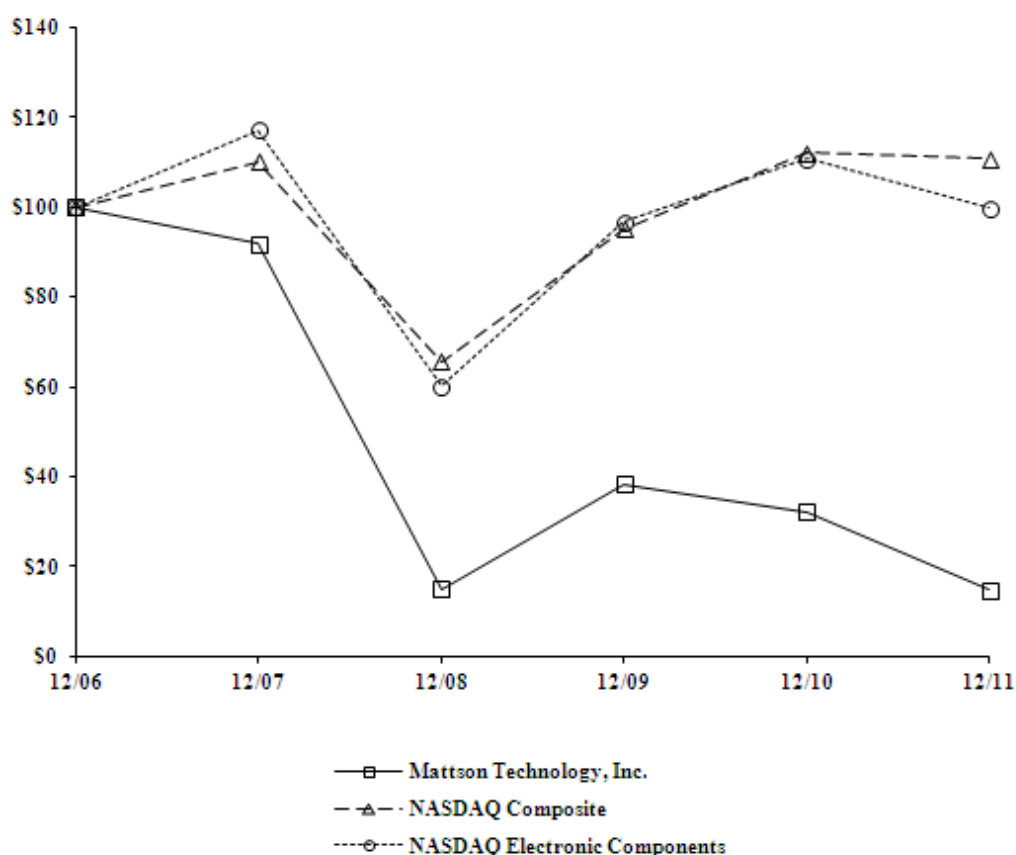
Equity Compensation Plan Information

Information regarding our securities authorized for issuance under equity compensation plans will be included in Item 12, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters," of this Annual Report on Form 10-K and is incorporated herein by reference from our definitive proxy statement relating to our Annual Meeting of Stockholders to be held in 2012.

Comparison of Stockholder Return

The following graph compares the cumulative five-year total return on Mattson Technology, Inc.'s common stock relative to the cumulative total returns of The NASDAQ Composite index and the NASDAQ Electronic Components index:

**Comparison of Five-Year Cumulative Total Return
From December 31, 2006 through December 31, 2011 ⁽¹⁾
Among Mattson Technology, Inc., the NASDAQ Composite
and the NASDAQ Electronic Components Index**



	December 31,					
	2006	2007	2008	2009	2010	2011
Mattson Technology, Inc.	\$100.00	\$ 91.85	\$ 15.13	\$ 38.30	\$ 32.19	\$ 14.81
NASDAQ Composite	\$100.00	\$110.26	\$ 65.65	\$ 95.19	\$112.10	\$110.81
NASDAQ Electronic Components	\$100.00	\$117.33	\$ 60.16	\$ 96.77	\$110.84	\$ 99.75

⁽¹⁾ Assumes that \$100.00 was invested in Mattson Technology, Inc. common stock and in each index at market closing prices on December 31, 2006, and that all dividends were reinvested. No cash dividends have been declared on our common stock. Stockholder returns over the indicated period should not be considered indicative of future stockholder returns.

Issuer Repurchases of Equity Securities

We previously had a common stock repurchase plan originally approved in March 2007. On May 2, 2011, we terminated the Repurchase Plan.

Item 6. Selected Financial Data

The following historical financial data should be read in conjunction with our consolidated financial statements and notes thereto. We derived the selected consolidated statement of operations data for the years ended December 31, 2011, 2010 and 2009 and the selected consolidated balance sheet data as of December 31, 2011 and 2010 from our audited consolidated financial statements appearing in Item 8 of this report. We derived the selected consolidated statement of operations data for the years ended December 31, 2008 and 2007, and the selected consolidated balance sheet data as of December 31, 2009, 2008 and 2007 from our audited consolidated financial statements as published in our 10-K for the year ended December 31, 2009 and December 31, 2008. For presentation purposes, certain prior period amounts have been reclassified to conform to the reporting in the current period financial statements. These reclassifications do not affect our net income, cash flows or stockholders' equity.

	Year Ended December 31,				
	2011	2010	2009	2008	2007
	(thousands, except per share amounts)				
Net sales	\$ 184,947	\$ 138,336	\$ 42,748	\$ 133,551	\$ 267,286
Cost of sales	\$ 128,699	\$ 98,952	\$ 46,960	\$ 92,057	\$ 150,699
Gross profit (loss)	\$ 56,248	\$ 39,384	\$ (4,212)	\$ 41,494	\$ 116,587
Income (loss) from operations	\$ (16,550)	\$ (33,195)	\$ (77,011)	\$ (91,825)	\$ 24,241
Net income (loss)	\$ (17,950)	\$ (33,403)	\$ (67,042)	\$ (92,163)	\$ 27,553
Net income (loss) per share:					
Basic	\$ (0.32)	\$ (0.67)	\$ (1.35)	\$ (1.86)	\$ 0.53
Diluted	\$ (0.32)	\$ (0.67)	\$ (1.35)	\$ (1.86)	\$ 0.52
Shares used in computing net income (loss) per share:					
Basic	55,299	50,073	49,832	49,471	51,771
Diluted	55,299	50,073	49,832	49,471	52,716

Consolidated Balance Sheet Data:

	December 31,				
	2011	2010	2009	2008	2007
	(thousands)				
Cash, cash equivalents and restricted cash	\$ 32,950	\$ 20,889	\$ 47,346	\$ 77,107	\$ 125,533
Short-term investments	\$ -	\$ 2,151	\$ 13,089	\$ 26,280	\$ 26,280
Working capital	\$ 56,177	\$ 51,126	\$ 75,455	\$ 140,491	\$ 201,019
Total assets	\$ 113,843	\$ 111,624	\$ 133,073	\$ 208,211	\$ 317,770
Total stockholders' equity	\$ 60,145	\$ 62,655	\$ 94,706	\$ 156,836	\$ 245,283

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with Item 6. "Selected Financial Data," our consolidated financial statements and related notes included elsewhere in this document. In addition to historical information, the discussion below contains certain forward-looking statements that involve risks and uncertainties. These forward-looking statements include, but are not limited to, those matters discussed under the heading "Forward-looking Statements," above. Our actual results could differ materially from those anticipated by these forward-looking statements due to various factors, including, but not limited to, those set forth under Item 1A. "Risk Factors" in this Annual Report on Form 10-K and elsewhere in this document.

Overview

We are a supplier of semiconductor wafer processing equipment used in the fabrication of integrated circuits (ICs). Our manufacturing equipment is primarily used for semiconductor manufacturing. Our manufacturing equipment utilizes innovative technology to deliver advanced processing capabilities and high productivity for the fabrication of current and next-generation ICs. We were incorporated in California in 1988 and reincorporated in Delaware in 1997.

Our business depends upon capital expenditures by manufacturers of semiconductor devices. The level of capital expenditures by these manufacturers depends upon the current and anticipated market demand for such devices. Because the demand for semiconductor devices is highly cyclical, the demand for wafer processing equipment is also highly cyclical. The semiconductor equipment industry is typically characterized by wide swings in operating results as the industry moves through its cycle. In 2011, the semiconductor capital equipment market was impacted by several natural disasters, the continuing global macroeconomic problems, semiconductor inventory overbuild and DRAM oversupply. The DRAM market declined significantly in 2011, with DRAM capital expenditures continuing to soften. Despite the decline in DRAM, the NAND flash memory represented a growth segment in the semiconductor market in 2011, with revenue expected to grow for the year. The transition to mobility products such as tablet and eReader products, smartphones and the solid state drives (SSDs) helped to drive IC demand in the NAND flash, advanced RISC machines (ARM) and some advanced foundry areas. Overall, this resulted in demand that was technology-based in anticipation of capacity increases.

In 2011, we solidified our new positions in etch and strip, and expanded RTP into foundry. We announced our move into silicon etch with the introduction of our new *paradigmE* Si system. The new system's capability to perform the expanded silicon etch applications has increased our served available market. Etch now addresses over half of the applications in the total etch market. We grew the etch business by approximately 77 percent and expect etch to contribute a significant portion of total revenue in 2012 as more customers select our etch tools based on the process performance and cost of ownership.

In 2011, we gained market share in strip, realizing new positions in foundry, logic, and NAND flash. These positions allowed strip to grow 79 percent over 2010. We introduced our SUPREMA XP⁵, based on the production-proven, high-throughput SUPREMA platform providing further productivity value to the industry. The SUPREMA series provides the technology extendibility, performance, cost of ownership and reliability that chipmakers require for high-volume production of current and future-generation logic, DRAM and flash memory devices. SUPREMA achieved wins at 30 nm and below in both the foundry and memory markets, which will enable us to participate in advanced volume production facilities in the future.

In 2011, we gained new positions in RTP with our Helios XP system at three major foundry customers, with the first of these now in volume production. We shipped volume levels of our Helios RTP systems to a major NAND flash memory manufacturer, a new position we gained during the last cycle. Additionally, our Millios millisecond anneal system (MSA) is now positioned at three key foundry/logic customers.

In 2011, our revenue increased by \$46.6 million to \$184.9 million from \$138.3 million in 2010, due to our product traction, growth in our etch business and expansion of our strip products into the logic/foundry sector. Gross profit in 2011 was \$56.2 million compared to a \$39.4 million in 2010. The increase in gross profit was primarily due to operating leverage from higher net sales, improved factory utilization and continued traction with our cost-reduction measures. Our operating expenses in 2011 remained relatively flat compared with 2010, at \$72.8 million,

but is significantly reduced from the levels prior to the downturn. Excluding restructuring charges, our 2011 operating expenses decreased by \$1.8 million as compared to 2010. The impact of having better operating leverage from higher net sales and the cost-reduction measures contributed to a lower net loss in 2011 of \$18.0 million compared to \$33.4 million in 2010.

Results of Operations

Years Ended December 31, 2011 and 2010

The following table sets forth our consolidated results of operations for the years ended December 31, 2011 and 2010, and the year-over-year increase (decrease) in our results, expressed both in dollar amounts (in thousands) and as a percentage of net sales, except where indicated:

	Year Ended December 31,				Increase (Decrease)	
	2011		2010			
	(thousands)	%	(thousands)	%	(thousands)	%
Net sales	\$ 184,947	100.0	\$ 138,336	100.0	\$ 46,611	33.7
Cost of sales	128,699	69.6	98,952	71.5	29,747	30.1
Gross profit	56,248	30.4	39,384	28.5	16,864	42.8
Operating expenses:						
Research, development and engineering	26,189	14.2	27,791	20.1	(1,602)	(5.8)
Selling, general and administrative	44,720	24.2	44,902	32.5	(182)	(0.4)
Restructuring charges	1,889	1.0	(114)	(0.1)	2,003	n/m ⁽¹⁾
Total operating expenses	72,798	39.4	72,579	52.5	219	0.3
Loss from operations	(16,550)	(9.0)	(33,195)	(24.0)	16,645	(50.1)
Interest income (expense), net	107	0.1	5	-	102	2,040.0
Other income (expense), net	163	0.1	108	0.1	55	50.9
Loss before income taxes	(16,280)	(8.8)	(33,082)	(23.9)	16,802	(50.8)
Provision for income taxes	1,670	0.9	321	0.2	1,349	420.2
Net income (loss)	\$ (17,950)	(9.7)	\$ (33,403)	(24.1)	\$ 15,453	(46.3)

⁽¹⁾ Not meaningful

Net Sales

Net sales were \$184.9 million in 2011, an increase of \$46.6 million or 34 percent, compared to \$138.3 million in 2010. The increase in net sales was primarily due to the improvement in the global economy and the semiconductor equipment sector as compared to the prior year, and from our continued penetration in the etch market which contributed over one-third of our system sales in 2011. In 2011, system sales generated from the etch market were over \$22.7 million higher than in 2010.

In 2011, international sales to customers in Europe and Asia continued to account for a significant portion of our total net sales, comprising approximately 94 percent of net sales in 2011, compared to 95 percent in 2010. We anticipate that international sales will continue to account for a significant portion of our net sales.

Cost of Sales

Our cost of sales consists of the costs associated with manufacturing our products, and includes the purchase of raw materials and related overhead, labor, warranty costs, charges for excess and obsolete inventory and costs incurred by our contract manufacturers in the production of our components, major subassemblies/modules and complete systems. In 2011, we reclassified certain current and prior period costs, including \$5.2 million in 2010 related to our spare parts business from selling, general and administrative expense to cost of sales, as they more appropriately reflect costs associated with revenue generating activities.

Cost of sales was \$128.7 million in 2011, an increase of \$29.7 million or 30 percent, compared to \$99.0 million in 2010. The increase in cost of sales was primarily related to costs associated with higher volumes of sales in 2011.

Gross Profit

Gross profit is calculated as net sales less cost of sales. Gross margin rate is gross profit reflected as a percentage of net sales.

Gross margin rate improved from 28 percent in 2010 to 30 percent in 2011. The increase in gross margin in 2011 was primarily due to operating leverage from higher net sales volumes and improved utilization of our internal manufacturing operations, partially offset by an increase of approximately \$0.7 million in warranty provisions related to servicing our new products and a higher number of sales from our lower margin Aspen III systems, as compared to our total sales mix. Gross margin rate was favorably impacted in 2011 and 2010, as we recorded a net benefit of \$1.7 million and \$3.1 million, respectively, related to the sale of previously written down inventories, net of inventory valuation charges.

Our gross margin rate has varied over the years and will continue to be affected by many factors, including competitive pressures, product mix, inventory reserves, economies of scale, material and other costs, overhead absorption levels and the timing of revenue recognition.

Research, Development and Engineering

Research, development and engineering expenses consist primarily of salaries and related costs of employees engaged in research, development and engineering activities, costs of product development and depreciation on equipment used in the course of research, development and engineering activities.

Research, development and engineering expenses were \$26.2 million in 2011, a decrease of \$1.6 million or 6 percent, compared to \$27.8 million in 2010. The decrease in research, development and engineering expenses was primarily due to a decrease of \$0.8 million in depreciation expense on lab tools resulting from significantly lower capital expenditures in 2009 through 2011 as compared to earlier years, and from a \$0.4 million decrease in engineering materials used in new product development projects.

Selling, General and Administrative

Selling, general and administrative expenses consist primarily of personnel-related expenses, as well as legal and professional fees, facilities expenses (excluding research and development focused sites), insurance expenses, amortization of evaluation systems and certain information technology costs.

Selling, general and administrative expenses were \$44.7 million in 2011, a decrease of \$0.2 million compared to \$44.9 million in 2010. The slight decrease in selling, general and administrative expenses was primarily due to a \$1.4 million allocation of field service costs to cost of sales as a result of higher utilization rates, a decrease of \$0.7 million in outside service spending levels and a decrease of stock compensation expense of \$0.3 million, partially offset by a \$1.4 million reduction year over year in the collection of certain accounts receivable previously provided for in the allowance for doubtful accounts and a \$0.9 million increase in amortization expense for evaluation tools placed at customer sites in late 2010.

Restructuring Charges

In 2011, we incurred \$1.4 million in contract termination costs related to revised estimates of our future rent obligations associated with a vacated leased facility, net of sublease income. The revised estimates are based on a final settlement with the landlord, which includes exiting from the lease arrangement in July 2015, rather than the initial lease expiration of March 2019. The final settlement also reduces our total future lease commitments from \$9.6 million to \$3.8 million, which includes a lease termination and other fees of \$1.0 million. During the fourth quarter of 2011, we also initiated a cost reduction plan that includes workforce reductions and transitioning our operations in Canada to our Germany facility. As of December 31, 2011, we recorded \$0.5 million in employee severance benefits related to this restructuring. We expect to incur approximately \$1.1 million in employee separation and other charges in 2012 related to this restructuring plan.

In 2010, based on revised estimates, we reversed a net \$0.1 million in restructuring reserves, related to earlier cost reduction plans.

Other Income (Expense), net

Other income (expense), net was \$0.2 million of income in 2011, an increase of \$0.1 million when compared to \$0.1 million of income in 2010. The increase in income was due to a \$1.6 million gain related to the extinguishment of certain liabilities, partially offset by net foreign exchange losses primarily related to our foreign-denominated balances at our U.S. operations.

Provision for Income Taxes

The provision for income taxes was \$1.7 million in 2011, which consisted of deferred tax expense from the creation of a valuation allowance of \$3.7 million against deferred tax assets in a foreign jurisdiction, current foreign taxes of \$0.9 million and current federal and state income taxes of \$0.3 million, partially offset by a \$3.1 million benefit from the release of various foreign reserves. The provision for income taxes was \$0.3 million in 2010, which consisted of a provision for foreign taxes of \$0.9 million, partially offset by a \$0.5 million benefit from the release of various foreign reserves and a benefit for federal and state income taxes of \$0.1 million.

Currently, we have provided a full valuation allowance against deferred tax assets for all jurisdictions due to uncertainties and other negative evidence in our current operations and our expectations of future operations. It is more likely than not that our deferred tax assets will not be realized. Our provision for income taxes could be favorably impacted going forward if our results of operations and forecasts for future profitability improve sufficiently to indicate that the related deferred tax assets will be realized. Such a change in management's expectations could result in a material change to our valuation allowance assessment and the resulting income tax provision.

Years Ended December 31, 2010 and 2009

The following table sets forth our consolidated results of operations for the years ended December 31, 2010 and 2009, and the year-over-year increase (decrease) in our results, expressed both in dollar amounts (in thousands) and as a percentage of net sales, except where indicated:

	Year Ended December 31,				Increase (Decrease)	
	2010		2009		(thousands) %	
	(thousands)	%	(thousands)	%	(thousands)	%
Net sales	\$ 138,336	100.0	\$ 42,748	100.0	\$ 95,588	223.6
Cost of sales	98,952	71.5	46,960	109.9	51,992	110.7
Gross profit (loss)	39,384	28.5	(4,212)	(9.9)	43,596	n/m ⁽¹⁾
Operating expenses:						
Research, development and engineering	27,791	20.1	25,340	59.3	2,451	9.7
Selling, general and administrative	44,902	32.5	44,863	104.9	39	0.1
Restructuring charges	(114)	(0.1)	2,596	6.1	(2,710)	n/m ⁽¹⁾
Total operating expenses	72,579	52.5	72,799	170.3	(220)	(0.3)
Loss from operations	(33,195)	(24.0)	(77,011)	(180.2)	43,816	(56.9)
Interest income (expense), net	5	-	532	1.2	(527)	(99.1)
Other income (expense), net	108	0.1	1,371	3.2	(1,263)	(92.1)
Loss before income taxes	(33,082)	(23.9)	(75,108)	(175.8)	42,026	(56.0)
Provision for (benefit from) income taxes	321	0.2	(8,066)	(18.9)	8,387	n/m ⁽¹⁾
Net income (loss)	\$ (33,403)	(24.1)	\$ (67,042)	(156.9)	\$ 33,639	(50.2)

⁽¹⁾ Not meaningful

Net Sales

Net sales were \$138.3 million in 2010, an increase of \$95.6 million or 224 percent, compared to \$42.7 million in 2009. The increase in net sales was primarily due to the improvement in the global economy and the semiconductor equipment sector. The low level of net sales in 2009 reflected the trough of the downturn in the semiconductor equipment industry. Since sales bottomed out in the first quarter of 2009, we have experienced seven consecutive quarters of growth, as the upturn has moved from a period of principally technology purchases to the current capacity building phase of the cycle. Accordingly, the year-over-year increase in sales was broad-based across all of our products. In addition, our penetration of the etch market during 2010 contributed over 30 percent to our system sales compared with approximately 14 percent in 2009.

In 2010, international sales to customers in Europe and Asia, continued to account for a significant portion of our total net sales, comprising approximately 95 percent of net sales in 2010, compared to 92 percent in 2009.

Cost of Sales

Cost of sales was \$99.0 million in 2010, an increase of \$52.0 million or 111 percent, compared to \$47.0 million in 2009. The increase in cost of sales was primarily related to costs associated with increased product sales resulting from improved market conditions in 2010 and realizing the benefits of previous cost reduction efforts described more fully in Note 6. Restructuring Charges.

In 2011, we reclassified certain current and prior period costs, including \$5.2 million in 2010 and \$ 2.1 million in 2009 related to our spare parts business from selling, general and administrative expense to cost of sales, as they more appropriately reflect costs associated with revenue generating activities.

Gross Profit (Loss)

Gross margin rate improved to 28 percent in 2010, compared to a negative 10 percent in 2009. The increase in gross margin in 2010 was primarily due to operating leverage from higher net sales volumes, sales of previously written down inventories and an increase in absorption levels, partially offset by an increase in warranty provisions related to the higher net sales. Gross margin rate was favorably impacted in 2010 and unfavorably impacted in 2009, as we recorded a net benefit of \$3.1 million compared to a net charge of \$14.2 million in 2009, related to the sale of previously written down inventories, net of inventory valuation charges.

Research, Development and Engineering

Research, development and engineering expenses were \$27.8 million in 2010, an increase of \$2.5 million or 10 percent, compared to \$25.3 million in 2009. The increase in research, development and engineering expenses was primarily due to a \$1.6 million increase in materials used in new product development projects and a \$1.2 million increase in salaries and related costs resulting from increased headcount and a reduction in the number of work furloughs throughout 2010, partially offset by a decrease of \$0.6 million in depreciation and amortization related to equipment that was fully depreciated in 2009.

Selling, General and Administrative

Selling, general and administrative expenses remained flat in 2010 at \$44.9 million, as compared to \$44.9 million in 2009. Selling, general and administrative expenses increased as a result of higher level of revenues and related business activities in 2010, including increases in costs related to legal fees, sales commissions and amortization of evaluation systems, offset by a reduction year over year in the collection of certain accounts receivable previously provided for in the allowance for doubtful accounts.

Restructuring Charges

In response to declining revenues, we implemented several restructuring programs to reduce our cost structure in 2008 and 2009, which combined to reduce our workforce by approximately 40 percent over those two years. Restructuring charges recorded under these programs were primarily for estimated employee severance costs and lease termination costs, which have since been adjusted to reflect revised estimates and actual amounts paid. In 2010, based on revised estimates, we reversed a net \$0.1 million in restructuring reserves, which is included in the accompanying consolidated statement of operations. In 2009, restructuring expenses were \$2.6 million, comprised of \$2.4 million in employee severance costs and \$0.2 million in lease termination costs.

Interest and Other Income (Expense), Net

Interest income was \$0.1 million in 2010, a decrease of \$0.5 million when compared to \$0.6 million in 2009. The decrease in interest income was primarily due to lower cash investment balances during fiscal 2010.

Other income (expense), net was \$0.1 million of income in 2010, a decrease of \$1.3 million when compared to \$1.4 million of income in 2010. The decrease in foreign currency gains related to the significant fluctuation in our foreign-denominated balances at our U.S. operations

Provision for (Benefit from) Income Taxes

Provision for (benefit from) income taxes was a \$0.3 million net provision in 2010, which consisted of a \$0.4 million provision for foreign taxes partially offset by a \$0.1 million benefit for federal and state income taxes. Provision for (benefit from) income taxes in 2009 was an \$8.1 million net benefit, which consisted of a \$9.8 million benefit from the settlement of a German tax audit for tax years 2001 to 2004, partially offset by provisions for foreign taxes and for federal and state income taxes of \$1.6 million and \$0.2 million, respectively.

Liquidity and Capital Resources

Our cash and cash equivalents, restricted cash and short-term investments were \$32.9 million as of December 31, 2011, an increase of approximately \$9.9 million, as compared to \$23.0 million as of December 31, 2010. Stockholders' equity as of December 31, 2011 was \$60.1 million, as compared to \$62.7 million as of December 31, 2010. Working capital as of December 31, 2011 was \$56.2 million, as compared to \$51.1 million as of December 31, 2010.

Liquidity and Capital Resources Outlook

As of December 31, 2011, we had cash and cash equivalents of \$31.1 million and working capital of \$56.2 million. We believe that these balances will be sufficient to fund our working and other capital requirements over the course of the next twelve months. Our operations require careful management of our cash and working capital balances. Our liquidity is affected by many factors including, among others, fluctuations in our revenue, gross profits and operating expenses, as well as changes in our operating assets and liabilities. The cyclical nature of the semiconductor industry makes it difficult to predict our future liquidity needs with certainty. Any upturn in the semiconductor industry would result in short-term uses of cash to fund inventory purchases and accounts receivable. Alternatively, any renewed softening in the demand for our products or ineffectiveness of our cost reduction efforts may cause us to incur additional losses in the future and lower our cash balances. We may need additional funds to support our working capital requirements, operating expenses or for other requirements. Historically, we have relied on a combination of fundraising from the sale and issuance of equity securities (such as our common stock offering in May 2011) and cash generated from product, service and royalty revenues to provide funding for our operations. We will continue to review our expected cash requirements and take appropriate cost reduction measures to ensure that we have sufficient liquidity. We periodically review our liquidity position and may decide to raise additional funds, and may seek them from a combination of sources including issuance of equity or debt securities through public or private financings. These financing options may not be available on a timely basis, or on terms acceptable to us, and could be dilutive to our stockholders. If adequate funds are not available on acceptable terms, our ability to achieve our intended long-term business objectives could be limited.

Contractual Obligations

Under U.S. generally accepted accounting principles, certain obligations and commitments are not required to be included in our consolidated balance sheet. These obligations and commitments, while entered into in the normal course of business, may have a material impact on our liquidity.

Our contractual commitments as of December 31, 2011 are summarized in the following table:

	Operating Lease Payments	Vendor Commitments				Total Commitments
		Sub- Contractor	Inventory	Other ⁽¹⁾	Total	
				(thousands)		
2012	\$ 3,943	\$ 1,913	\$ 19,878	\$ 5,837	\$ 27,628	\$ 31,571
2013	3,545	-	-	1,742	1,742	5,287
2014	3,302	-	-	73	73	3,375
2015	3,088	-	-	1	-	3,088
2016	1,884	-	-	-	-	1,884
Thereafter	2,291	-	-	-	-	2,291
	<u>\$ 18,053</u>	<u>\$ 1,913</u>	<u>\$ 19,878</u>	<u>\$ 7,653</u>	<u>\$ 29,443</u>	<u>\$ 47,496</u>

⁽¹⁾ Other vendor commitments primarily include service-related contracts and agreements for information technology support, commitments for non-inventory purchases of assets, and other service-related commitments.

We continue to lease one building previously used to house the administrative functions related to wet surface preparation products in Exton, Pennsylvania. The original lease for the administrative building was scheduled to expire on March 31, 2019, with a current rental cost of approximately \$0.9 million annually. In December 2011, we reached a final settlement with the landlord, which includes exiting from the lease arrangement in July 2015. The final settlement also reduces our total future lease obligations from \$9.6 million to \$3.8 million, which includes a lease termination and broker's fee of \$1.0 million. Of the \$3.8 million in future lease obligations, we expect to pay out \$1.7 million in 2012 and the remaining balance on a declining basis through July 2015. We continue to sublease a portion of the Exton facility, cancelable by our subtenant anytime after December 31, 2012. Our sublease income under the current sublease agreement was \$0.6 million for 2011. In determining facilities lease loss liability, various assumptions were made, including the time period over which the buildings will be vacant, expected sublease terms and expected sublease rates. At December 31, 2011 and 2010, we had an accrued liability balance of \$2.3 million and \$0.9 million, respectively, related to this facility. Adjustments to this accrual will be made in future periods, if events and circumstances change.

Our deferred income taxes have been excluded from the table above because the related future cash outflows are uncertain. As of December 31, 2011, we had approximately \$1.1 million of net unrecognized tax benefits that may be subject to examination by applicable tax authorities. We are uncertain of the timing and amounts of any potential future payments related to these unrecognized tax benefits.

In connection with our acquisition of Vortek Industries, Ltd (Vortek) in 2004, we became party to an agreement between Vortek and the Canadian Minister of Industry (the Minister) relating to an investment in Vortek by Technology Partnerships Canada. Under the agreement, as amended, we, or Vortek (renamed Mattson Technology, Canada, Inc. or MTC) agreed to various covenants, including (i) payment by us of a royalty to the Minister of 1.4 percent of revenues from certain Flash RTP products, up to a total of CAD 14,269,290 (approximately \$14.0 million based on the applicable exchange rate as of December 31, 2011), (ii) MTC maintaining a specified average workforce of employees in Canada through October 27, 2009, (iii) investment of a certain amount by October 27, 2009 and certain other covenants concerning manufacturing obligations. Under the provisions of this agreement, if we, or MTC, did not materially satisfy the obligations pursuant to the covenants, the Minister could have demanded payment of liquidated damages in the amount of CAD 14,269,290 less any royalties paid by MTC or us to the Minister. As of December 31, 2009, we were no longer subject to covenants (ii) and (iii), as discussed above; but are still subject to covenant (i), relating to the payment of royalty on revenues from certain Flash RTP products until 2020. However, if MTC is dissolved, files for bankruptcy or does not materially comply with certain other terms and conditions of the contract

prior to its expiration on December 31, 2020, we could be subject to liquidated damages in the amount of CAD 14,269,290 less any royalties paid by MTC or us to the Minister.

Off-Balance Sheet Arrangements

As of December 31, 2011, we did not have any significant “off-balance sheet” arrangements as defined in Item 303 (a)(4)(ii) of Regulation S-K.

Cash Flows from Operating Activities

In 2011, net cash used in operations was \$2.4 million, comprised primarily of a net loss of \$18.0 million, partially offset by \$0.8 million of cash increases reflected in the net change in assets and liabilities and non-cash charges of \$14.8 million. Cash flow increases resulting from the net change in assets and liabilities primarily consisted of a \$6.3 million increase in deferred revenue, a \$3.1 million increase in accrued liabilities, a \$2.5 million increase in other liabilities, a \$2.3 million decrease in inventories and a \$0.2 million increase in other assets, partially offset by a \$3.9 decrease in accounts payable, a \$3.3 million increase in prepaid expenses and other current assets, a \$3.3 million increase in accounts receivable and advance billings, and a \$3.1 million decrease in income taxes payable, non-current. The increase in accounts receivable and advance billings reflects the increase in sales and business activities in 2011 as compared to 2010. Non-cash charges consisted primarily of \$9.0 million of depreciation and amortization, \$3.7 million for deferred income taxes and \$2.3 million of stock-based compensation, partially offset by a \$0.2 million gain on sale of fixed assets.

In 2010, net cash used in operations was \$35.9 million, comprised primarily of a net loss of \$33.4 million and \$14.1 million of cash decreases reflected in the net change in assets and liabilities, partially offset by non-cash charges of \$11.6 million. Cash flow decreases resulting from the net change in assets and liabilities primarily consisted of a \$15.1 million increase in accounts receivable and advance billings, an \$10.2 million increase in inventories and a \$5.8 decrease in accrued liabilities, income taxes payable, non-current and other liabilities; partially offset by a \$13.3 million increase in accounts payable, a \$2.7 million increase in deferred revenue and a \$1.0 million combined decrease in prepaid expenses, other current assets and other assets. The increases in accounts receivable, inventories and accounts payable reflect the sharp increase in sales and business activities in 2010 as compared to 2009. Non-cash charges consisted primarily of \$9.2 million of depreciation and amortization, \$2.7 million of stock-based compensation, \$0.7 million for deferred taxes and \$0.1 million of other non-cash charges; partially offset by \$1.2 million from the collection of accounts receivable previously provided for in the allowance for doubtful accounts during the recent industry downturn.

In 2009, net cash used in operations was \$42.3 million, comprised primarily of a net loss of \$67.0 million, offset by non-cash charges of \$6.0 million and \$18.8 million of cash increases reflected in the net change in assets and liabilities. Non-cash charges consisted primarily of \$13.6 million in depreciation and amortization charges, \$2.9 million in stock-based compensation and \$0.3 million in charges for other non-cash items; partially offset by a \$8.5 million net tax benefit, primarily consisting of a \$8.3 million reversal of certain foreign deferred tax liabilities, and \$2.4 million from the collection of accounts receivable previously provided for in the allowance for doubtful accounts during the recent industry downturn. Cash flow increases resulting from the net change in assets and liabilities primarily consisted of a \$17.8 million decrease in inventories, a \$5.7 million decrease in accounts receivable and advanced billings, a \$1.0 million decrease in prepaid expenses and other current assets and a \$0.6 million combined increase in accounts payable, income taxes payable, non-current and other liabilities; partially offset by a \$3.6 million decrease in accrued liabilities, a \$2.5 million reduction in deferred revenue and a \$0.3 million increase in other assets. The decrease in accounts receivable and deferred revenue were largely reflective of the 68 percent decrease in net sales in 2009. The decreases in inventories were the result of our efforts to maximize utilization of available inventory, thereby minimizing cash outlays on new inventories.

Cash provided by operations may fluctuate in future periods as a result of a number of factors, including fluctuations in our net sales and operating results, amount of revenue deferred, inventory purchases, collection of accounts receivable and timing of payments.

Cash Flows from Investing Activities

In 2011, net cash provided by investing activities was \$3.2 million, comprised primarily of \$2.2 million of maturities of available-for-sale investments, \$2.1 million decrease in restricted cash used to secure standby letters of credit provided to certain vendors, and \$0.8 million in proceeds from the sale of property and equipment, partially offset by \$1.9 million of property and equipment purchases.

In 2010, net cash provided by investing activities was \$7.2 million, comprised primarily of \$10.8 million of maturities of available-for-sale investments in excess of purchases, partially offset by \$2.0 million of property and equipment purchases and a \$1.6 million increase in restricted cash. Our property and equipment purchases were primarily for tools and equipment used in our manufacturing activities. The increase in restricted cash represents purchases of certificates of deposit used to secure standby letters of credit we provided to certain vendors during the year.

In 2009, net cash provided by investing activities was \$9.3 million, comprised primarily of \$12.7 million of maturities of available-for-sale investments in excess of purchases, partially offset by a \$2.0 million increase in restricted cash and \$1.4 million of property and equipment purchases.

Cash Flows from Financing Activities

In 2011, net cash provided by financing activities was \$12.9 million, consisting primarily of \$12.6 million of proceeds from our public offering on May 16, 2011 of 7.8 million shares of our common stock at a price to the public of \$1.80 per share of common stock. The \$12.6 million of proceeds is net of underwriting discounts and offering expenses of \$1.5 million. The net proceeds from this offering are being used for general corporate purposes, including working capital. In addition, we also realized \$0.3 million in net proceeds from employee stock plan transactions.

In 2010, net cash provided by financing activities was \$0.4 million, consisting of net proceeds from employee stock plan transactions.

In 2009, net cash provided by financing activities was \$0.2 million, consisting of net proceeds from employee stock plan transactions.

Critical Accounting Policies and Use of Estimates

Management's Discussion and Analysis of Financial Condition and Results of Operations discusses our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. On an on-going basis, management evaluates its estimates and judgments, including those related to reserves for excess and obsolete inventory, warranty obligations, bad debts, goodwill, intangible assets, income taxes, restructuring costs, contingencies and litigation. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances. These form the basis for making judgment about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We consider certain accounting policies related to revenue recognition, allowance for doubtful accounts, warranty obligations, inventories, goodwill and other intangible assets, impairment of long-lived assets, restructuring, income taxes and stock-based compensation as critical to our business operations and an understanding of our results of operations. See Note 2. *Summary of Significant Accounting Policies* of the accompanying consolidated financial statements for a summary of our significant accounting policies.

Revenue Recognition. We derive revenues from the following primary sources - equipment (tool or system) sales, spare part sales and service and maintenance contracts. In accordance with the authoritative guidance on revenue recognition, we recognize revenue on equipment sales as follows: 1) for equipment sales of existing products with new specifications and for sales of new products, revenue is recognized upon customer acceptance; 2) for equipment sales to existing customers who have purchased the same equipment with the same specifications and previously demonstrated acceptance, or equipment sales to new customers purchasing existing products with established reliability, we recognize revenue on a multiple element approach in which revenue is recognized upon the delivery of the separate elements to the customer and when we receive customer acceptance or is otherwise released from our customer acceptance obligations. For multiple element arrangements initiated at or prior to December 31, 2010, the revenue relating to the undelivered elements is deferred at its estimated fair values until delivery of the deferred elements; and for arrangements initiated or materially modified subsequent to December 31, 2010 containing multiple elements, the revenue relating to the undelivered elements is deferred using the relative selling price method, which allocates revenue to each element using the estimated selling prices for the deliverables when vendor-specific objective evidence or third-party evidence is not available. The maximum revenue we recognize on a delivered element is limited to the amount that is not contingent upon the delivery of additional items such as installation and customer acceptance. Under this approach, generally 90 percent of the total invoice amount is recognized as revenue upon shipment and transfer of title; 100 percent of the associated tool costs is also recognized upon shipment; and the remaining portion, generally 10 percent of the total invoice amount, is contingent upon customer acceptance and is recognized once installation services are completed and final customer acceptance of the tool is received. From time to time, we allow customers to evaluate systems, with the customer maintaining the right to return the systems at its discretion with limited or no penalty. For this type of arrangement, we do not recognize revenue on the evaluation systems until customer acceptance is received. For spare parts, we recognize revenue upon shipment. For service and maintenance contracts, we recognize revenue on a straight-line basis over the service period of the related contract or as services are performed. In all cases, revenue is only recognized when persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable and collectability is reasonably assured. Accounts receivable for which revenue has not been recognized are classified as advance billings.

Allowance for Doubtful Accounts. We perform ongoing credit evaluations of our customers and record specific allowances for bad debts when a customer is unable to meet its financial obligations, as in the case of bankruptcy filings or deteriorated financial position. We estimate the allowances for bad debts for all other customers based on factors such as current trends, the length of time the receivables are past due and historical collection experience. We write-off a receivable when all rights, remedies and recourses against the account and its principals are exhausted and record a benefit when previously reserved accounts are collected.

Warranty. The warranty we offer on system sales is generally 12 months, except where previous customer agreements state otherwise. A provision for the estimated cost of warranty, based on historical costs, is recorded as a cost of sale when the revenue is recognized for the sale of the equipment or parts. Our warranty obligations require us to repair or replace defective products or parts during the warranty period at no cost to the customer. The actual system performance and/or field expense profiles may differ from historical experience, and in those cases we adjust our warranty accruals accordingly. Actual warranty reserves and settlements against reserves are highly dependent on our system volumes.

Inventories. Our inventories are stated at the lower of cost or market, with cost determined on a first-in, first-out basis, and include material, labor and manufacturing overhead costs. Finished goods are reported as inventories until the point of title transfer to the customer. Under our general terms of sale, title transfers when we complete physical transfer of the products to the freight carrier unless other customer practices prevail. All intercompany profits related to the sales and purchases of inventory between our legal entities are eliminated from the consolidated financial statements.

Inventory Valuation. Our policy is to assess the valuation of all inventories, including manufacturing raw materials, work-in-process, finished goods and spare parts, in each reporting period. Although we attempt to accurately forecast future inventory demand, given the competitive pressures and cyclicity of the semiconductor industry, there may be significant unanticipated changes in demand or technological developments that could have a significant impact on the value of our inventories and reported operating results. The carrying value of our inventory is reduced for

estimated excess and obsolescence by the difference between its cost and the estimated market value based upon assumptions about future demand. We evaluate the inventory carrying value for potential excess and obsolete inventory exposures by analyzing historical and anticipated demand. In addition, inventories are evaluated for potential obsolescence due to the effect of known and anticipated engineering change orders and new products. If actual demand were to be substantially lower than estimated, additional inventory adjustments for excess or obsolete inventory might be required, which could have a material adverse effect on our business, financial condition and results of operations.

Fair Value Measurements of Assets and Liabilities. We measure certain of our assets at fair value, using observable market data. The authoritative guidance on fair value measurement defines fair value as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants, and establishes valuation hierarchy based on the level of independent objective evidence available regarding the value of assets or liabilities. The authoritative guidance also establishes three classes of assets or liabilities: Level 1 consists of assets and liabilities for which there are quoted prices in active markets; Level 2 consists of assets and liabilities for which observable inputs other than Level 1 inputs are used such as prices for similar assets or liabilities in active markets or for identical assets or liabilities in less active markets and model-derived valuations for which the variables are derived from or corroborated by observable market data; and Level 3 consists of assets and liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value. Our cash equivalents and investment instruments are classified within Level 1 of the fair value hierarchy, as these instruments are valued using quoted market prices. We had no assets or liabilities classified within Level 2 or 3 as of December 31, 2011 and 2010.

Impairment of Long-Lived Assets. We review our long-lived assets, including property and equipment, intangibles and other long-lived assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Recoverability is measured by a comparison of the assets' carrying amount to their expected future undiscounted net cash flows. If such assets are considered to be impaired, the impairment is measured based on the amount by which the carrying amount of the asset exceeds its fair value. In 2008, we recorded impairment charges to write off intangible assets of \$6.6 million and certain lab assets of \$2.8 million to adjust for the deteriorating value of these assets resulting from the decline in expected cash flows attributable to the assets. There were no such impairment charges in 2009 through 2011.

Restructuring. We recognize expenses related to employee termination benefits when the benefit arrangement is communicated to the employee and no significant future services are required. If an employee is required to render service until a specific termination date in order to receive the termination benefits, the fair value of the associated liability would be recognized ratably over the future service period. The costs of severance are determined by local statutory requirements and our policies. For some entities, where salaries are paid during the notice period, a portion of the severance reserves would be based on estimates of the ability to find employment during the notice period, and we would determine the reserves in accordance with these estimates.

We recognize the present value of facility lease termination obligations, net of estimated sublease income and other exit costs, when we have future lease payments with no future economic benefit. In future periods, we will record accretion expense to increase the liability to an amount equal to the estimated future cash payments necessary to exit the lease. This requires a significant amount of judgment and management estimation in order to determine the expected time frame it will take to secure a subtenant, the amount of sublease income to be received and the appropriate discount rate to calculate the present value of the future cash flows. If actual lease exit costs differ from estimates, we would adjust the restructuring charge, which would impact net income in the period any adjustment was recorded.

Income Taxes. We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate resolution.

For all tax jurisdictions, we recorded a 100 percent valuation allowance against our net deferred tax asset as we expect it is more likely than not that we will not realize our net deferred tax asset as of December 31, 2011. In assessing the need for a valuation allowance, we consider historical levels of income and losses, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies. In

the event we determine that we would be able to realize additional deferred tax assets in the future in excess of the net recorded amount, or if we subsequently determine that realization of an amount previously recorded is unlikely, we would record an adjustment to the deferred tax asset valuation allowance, which would change income in the period of the adjustment.

Stock-based Compensation. We measure the fair value of all stock-based awards, including stock options, restricted stock units, and purchase rights under our employee stock purchase plan, on the date of grant, and we recognize the related stock-based compensation expense on a straight-line basis over the requisite service period, which is generally the vesting period.

We use the Black-Scholes option-pricing model to determine the fair value of certain of our stock-based awards. The determination of fair value using the Black-Scholes model is affected by our stock price as well as assumptions regarding a number of complex and subjective variables, which includes expected stock price volatility over the term of the awards, actual and projected employee exercise and cancellation behaviors, risk-free interest rates, and expected dividends.

We estimate the expected life of options based on an analysis of our historical experience of employee exercise and post-vesting termination behavior considered in relation to the contractual life of the option; expected volatility is based on the historical volatility of our common stock; and the risk-free interest rate is equal to the U.S. Treasury rates, with maturity approximating the expected life of the option. We do not currently pay cash dividends on our common stock and do not anticipate doing so in the foreseeable future; accordingly, the expected dividend yield is zero.

We estimate forfeiture rates on stock-based awards at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. Such forfeiture estimates are based on historical experience. If the assumptions for estimating stock-based compensation expense change in future periods, the amount of future stock-based compensation may differ significantly from the amounts we recorded in the current and prior periods.

Stock-based compensation expenses in 2011, 2010 and 2009 were \$2.3 million, \$2.7 million and \$2.9 million, respectively.

New Accounting Pronouncements

For a description of new accounting pronouncements, including the expected dates of adoption and estimated effects, if any, on our consolidated financial statements, see Note 2. *Summary of Significant Accounting* in Part II, Item 8 of this Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to various market risks related to fluctuations in foreign currency exchange rates and interest rates. We may use derivative financial instruments to mitigate certain risks related foreign exchange rates. We do not use derivatives or other financial instruments for trading or speculative purposes.

Interest Rate Risk

As of December 31, 2011, our portfolio consisted of \$31.1 million in cash and cash equivalents. We did not have any short-term investments as of December 31, 2011. Our exposure to interest rate risk relates primarily to short-term investments, which we may purchase at different points in time, and the potential losses arising from changes in those interest rates. Our investment objective is to achieve the maximum return compatible with capital preservation and our liquidity requirements. Our strategy is to invest our cash in a manner that preserves capital, maintains sufficient liquidity to meet our cash requirements, and maximizes yields consistent with approved credit risk. We place our investments with high credit quality issuers and, by policy, limit the amount of our credit exposure to any one issuer. Our portfolio includes only marketable securities with active secondary or resale markets to ensure portfolio liquidity. We classify our cash equivalents and short-term investments in accordance with authoritative guidance on accounting for investments in debt and equity securities; consider investments in instruments purchased with an original maturity of 90 days or less to be cash equivalents; and classify our short-term investments as available-for-sale.

Our cash equivalents and short-term investment portfolios consist primarily of money market funds and U.S. government and government-sponsored debt securities. Our short-term investments are reported at fair value with unrealized gains and losses, net of tax, included in accumulated other comprehensive income within stockholders' equity in the accompanying consolidated balance sheets. The amortization of premiums and discounts on the investments, realized gains and losses, and declines in value judged to be other-than-temporary on available-for-sale securities are included in other income (expense), net in the accompanying consolidated statements of operations.

Based on the size of the investment portfolio as of December 31, 2011, an immediate increase or decrease in interest rates of 100 basis points would not have a material adverse effect on the fair value of our investment portfolio.

Foreign Currency Risk

The functional currency of our foreign subsidiaries is their local currencies. Accordingly, all assets and liabilities of these foreign operations are translated using exchange rates in effect at the end of the period, and revenues and costs are translated using average exchange rates for the period. Gains or losses from translation of foreign operations where the local currencies are the functional currency, are included as a component of accumulated other comprehensive income in the accompanying consolidated balance sheets. Foreign currency transaction gains and losses are recognized in the accompanying consolidated statements of operations as they are incurred. Because much of our revenues and capital spending are transacted in U.S. dollars, we are subject to fluctuations in foreign currency exchange rates that could have a material adverse effect on our overall financial position, results of operations or cash flows, depending on the strength of the U.S. dollar relative to the currencies of other countries in which we operate. Exchange rate fluctuations of greater than ten percent, primarily for the U.S. dollar relative to the Euro, Canadian dollar or South Korean won, could have a material impact on our financial statements. Additionally, foreign currency transaction gains and losses fluctuate depending upon the mix of foreign currency denominated assets and liabilities and whether the local currency of an entity strengthens or weakens during a period. As of December 31, 2011, our U.S. operations had approximately \$11.3 million, net, in foreign denominated operating intercompany payables. It is estimated that a ten percent fluctuation in the U.S. dollar relative to these foreign currencies would lead to a profit of \$1.1 million (U.S. dollar strengthening), or a loss of \$1.1 million (U.S. dollar weakening) on the translation of these intercompany payables, which would be recorded as other income (expense), net in our consolidated statement of operations.

In 2011, 2010 and 2009, we recorded foreign currency exchange gains and losses of \$0.7 million loss, zero and \$0.9 million gain, respectively, in other income (expense), net in the accompanying consolidated statements of operations.

Foreign currency translation adjustments included in comprehensive income for 2011 was \$0.2 million, primarily due to the strengthening of the U.S. dollar against the Euro, which favorably impacted the net assets used in our foreign operations and held in local currencies. The cumulative translation adjustment as of December 31, 2011 and 2010 was \$20.5 million and \$20.3 million, respectively.

Item 8. *Financial Statements and Supplementary Data*

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MATTSON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share amounts)

	Year Ended December 31,		
	2011	2010	2009
Net sales	\$ 184,947	\$ 138,336	\$ 42,748
Cost of sales	128,699	98,952	46,960
Gross profit (loss)	<u>56,248</u>	<u>39,384</u>	<u>(4,212)</u>
Operating expenses:			
Research, development and engineering	26,189	27,791	25,340
Selling, general and administrative	44,720	44,902	44,863
Restructuring charges	1,889	(114)	2,596
Total operating expenses	<u>72,798</u>	<u>72,579</u>	<u>72,799</u>
Loss from operations	(16,550)	(33,195)	(77,011)
Interest income (expense), net	107	5	532
Other income (expense), net	163	108	1,371
Loss before income taxes	<u>(16,280)</u>	<u>(33,082)</u>	<u>(75,108)</u>
Provision for (benefit from) income taxes	1,670	321	(8,066)
Net loss	<u>\$ (17,950)</u>	<u>\$ (33,403)</u>	<u>\$ (67,042)</u>
Net loss per share:			
Basic and diluted	\$ (0.32)	\$ (0.67)	\$ (1.35)
Shares used in computing net loss per share:			
Basic and diluted	55,299	50,073	49,832

The accompanying notes are an integral part of these consolidated financial statements.

MATTSON TECHNOLOGY, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except par value)

	December 31,	
	2011	2010
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 31,073	\$ 16,863
Short-term investments	-	2,151
Restricted cash	1,877	4,026
Accounts receivable, net of allowance for doubtful accounts of \$684 in 2011 and \$681 in 2010	25,278	24,127
Advance billings	5,071	3,177
Inventories	29,203	34,673
Prepaid expenses and other current assets	9,024	5,770
Total current assets	101,526	90,787
Property and equipment, net	10,552	15,011
Intangibles, net	750	1,000
Other assets	1,015	4,826
Total assets	\$ 113,843	\$ 111,624
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 16,785	\$ 20,860
Accrued liabilities	16,447	13,452
Deferred revenue	12,117	5,349
Total current liabilities	45,349	39,661
Income taxes payable, non-current	1,312	4,287
Other liabilities	7,037	5,021
Total liabilities	53,698	48,969
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, 2,000 shares authorized; none issued and outstanding	-	-
Common stock, par value \$0.001, 120,000 shares authorized; 62,547 shares issued and 58,366 shares outstanding in 2011; 54,440 shares issued and 50,259 shares outstanding in 2010	63	54
Additional paid-in capital	650,110	634,944
Accumulated other comprehensive income	20,472	20,207
Treasury stock, 4,181 shares in 2011 and 2010, at cost	(37,986)	(37,986)
Accumulated deficit	(572,514)	(554,564)
Total stockholders' equity	60,145	62,655
Total liabilities and stockholders' equity	\$ 113,843	\$ 111,624

The accompanying notes are an integral part of these consolidated financial statements.

MATTSON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
AND COMPREHENSIVE LOSS
(in thousands)

	Shares of Common Stock	Common Stock and Additional Paid-In Capital	Accumulated Other Comprehensive Income	Treasury Stock		Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount					
Balance at December 31, 2008	53,874	628,686	20,255	(4,181)	(37,986)	(454,119)	156,836
Components of comprehensive loss:							
Net loss	-	-	-	-	-	(67,042)	(67,042)
Cumulative translation adjustments	-	-	1,665	-	-	-	1,665
Unrealized gain on investments	-	-	94	-	-	-	94
Comprehensive loss							(65,283)
Shares issued under employee stock plans, net	83	8	-	-	-	-	8
Shares issued under employee stock purchase plan	183	201	-	-	-	-	201
Stock-based compensation expense	-	2,944	-	-	-	-	2,944
Balance at December 31, 2009	54,140	631,839	22,014	(4,181)	(37,986)	(521,161)	94,706
Components of comprehensive loss:							
Net loss	-	-	-	-	-	(33,403)	(33,403)
Cumulative translation adjustments	-	-	(1,815)	-	-	-	(1,815)
Unrealized gain on investments	-	-	8	-	-	-	8
Comprehensive loss							(35,210)
Shares issued under employee stock plans, net	196	84	-	-	-	-	84
Shares issued under employee stock purchase plan	104	331	-	-	-	-	331
Stock-based compensation expense	-	2,744	-	-	-	-	2,744
Balance at December 31, 2010	54,440	\$ 634,998	\$ 20,207	(4,181)	\$ (37,986)	\$ (554,564)	\$ 62,655
Components of comprehensive loss:							
Net loss	-	-	-	-	-	(17,950)	(17,950)
Cumulative translation adjustments	-	-	158	-	-	-	158
Unrealized gain on investments	-	-	107	-	-	-	107
Comprehensive loss							(17,685)
Shares issued in connection with public offering, net	7,820	12,599	-	-	-	-	12,599
Shares issued under employee stock plans, net	144	87	-	-	-	-	87
Shares issued under employee stock purchase plan	143	185	-	-	-	-	185
Stock-based compensation expense	-	2,304	-	-	-	-	2,304
Balance at December 31, 2011	62,547	\$ 650,173	\$ 20,472	(4,181)	\$ (37,986)	\$ (572,514)	\$ 60,145

The accompanying notes are an integral part of these consolidated financial statements.

MATTSON TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Year Ended December 31,		
	2011	2010	2009
Cash flows from operating activities:			
Net loss	\$ (17,950)	\$ (33,403)	\$ (67,042)
Adjustments to reconcile net loss to net cash used in operating activities:			
Allowance for doubtful accounts	8	(1,154)	(2,440)
Depreciation and amortization	8,983	9,183	13,618
Deferred income taxes	3,698	691	(8,504)
Stock-based compensation	2,304	2,744	2,944
Other non-cash items	(196)	130	348
Changes in assets and liabilities:			
Accounts receivable	(1,380)	(12,742)	6,479
Advance billings	(1,897)	(2,311)	(765)
Inventories	2,265	(10,177)	17,784
Prepaid expenses and other current assets	(3,337)	69	1,034
Other assets	220	867	(291)
Accounts payable	(3,906)	13,305	202
Accrued liabilities	3,065	(4,807)	(3,568)
Deferred revenue	6,268	2,699	(2,548)
Income taxes payable, non-current	(3,076)	(593)	-
Other liabilities	2,537	(360)	435
Net cash used in operating activities	(2,394)	(35,859)	(42,314)
Cash flows from investing activities:			
Purchases of available-for-sale investments	-	(11,327)	(28,771)
Maturities of available-for-sale investments	2,151	22,125	41,500
Decrease (increase) in restricted cash	2,149	(2,026)	(2,000)
Purchases of property and equipment	(1,928)	(1,526)	(1,409)
Sales of property and equipment	842	-	-
Net cash provided by investing activities	3,214	7,246	9,320
Cash flows from financing activities:			
Proceeds from issuance of common stock, net	12,871	415	208
Net cash provided by financing activities	12,871	415	208
Effect of exchange rate changes on cash and cash equivalents	519	(285)	1,025
Net increase (decrease) in cash and cash equivalents	14,210	(28,483)	(31,761)
Cash and cash equivalents, beginning of year	16,863	45,346	77,107
Cash and cash equivalents, end of year	\$ 31,073	\$ 16,863	\$ 45,346
Supplemental disclosures:			
Cash paid for (refunded from) income taxes, net	\$ (479)	\$ 1,336	\$ 266

The accompanying notes are an integral part of these consolidated financial statements.

MATTSON TECHNOLOGY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2011

1. ORGANIZATION

Nature of Operations

Mattson Technology, Inc. was incorporated in California in 1988 and reincorporated in Delaware in 1997. We design, manufacture, market and globally support semiconductor wafer processing equipment used in the fabrication of integrated circuits.

Liquidity and Management Plans

As of December 31, 2011, we had cash and cash equivalents of \$31.1 million and working capital of \$56.2 million. We believe that these balances will be sufficient to fund our working and other capital requirements over the course of the next twelve months. Historically, we have relied on a combination of fundraising from the sale and issuance of equity securities (such as our common stock offering in May 2011) and cash generated from product, service and royalty revenues to provide funding for our operations. We will continue to review our expected cash requirements and take appropriate cost reduction measures or raise additional funds, and may seek them from a combination of sources including issuance of equity or debt securities through public or private financings. These financing options may not be available on a timely basis, or on terms acceptable to us, and could be dilutive to our stockholders. If adequate funds are not available on acceptable terms, our ability to achieve our intended long-term business objectives could be limited.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The consolidated financial statements include our accounts and the accounts of our subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. Our fiscal year ends on December 31. Our interim fiscal quarters are based upon the first quarter ending on the Sunday closest to March 31, with the second and third fiscal quarters each being exactly 13 weeks long.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reported periods. We evaluate our estimates on an ongoing basis, including those related to the useful lives and fair value of long-lived assets, estimates used to determine facility lease loss liabilities, measurement of warranty obligations, valuation allowances for deferred tax assets, the fair value of stock-based compensation, estimates for allowance for doubtful accounts, and valuation of excess and obsolete inventories. Our estimates and assumptions can be subjective and complex and consequently actual results could differ materially from those estimates.

Reclassifications

For presentation purposes, certain prior period amounts have been reclassified to conform to the reporting in the current period financial statements. Specifically, in the fourth quarter of 2011, we reclassified certain current and prior period costs of \$5.2 million in 2010 and \$2.1 million in 2009 related to our spare parts business from selling, general and administrative expense to cost of sales, as they more appropriately reflect costs associated with revenue generating activities. These reclassifications do not affect our net income, cash flows or stockholders' equity.

Cash and Cash Equivalents

We consider all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents. Our cash and cash equivalents are carried at fair market value, and consist primarily of cash balances, high-grade money market funds and commercial paper.

Short-term Investments

Our short-term investments, which primarily consist of U.S. agency securities and U.S. corporate bonds, are carried at fair market value. Our short-term investments are classified as available-for-sale investments, with unrealized gains and losses, net of tax, recorded as a component of stockholders' equity in the accompanying consolidated balance sheets; and realized gains and losses as well as declines in fair value that are other than temporary are recorded in the accompanying consolidated statements of operations. As of December 31, 2011, we had no short-term investments. As of December 31, 2010, we had \$2.2 million in short-term investments, with maturities of one year or less.

Concentration of Credit Risk

We maintain our cash and cash equivalents with several financial institutions. Deposits held with banks may exceed the amount of insurance provided on such deposits. Generally these deposits may be redeemed upon demand and are maintained with financial institutions with reputable credit.

We may invest in a variety of financial instruments, such as U.S. treasury bills and notes, commercial paper, money market funds and corporate bonds. We limit the amount of credit exposure to any one financial institution or commercial issuer. Historically, we have not experienced significant losses on these investments.

Our trade accounts receivable are concentrated with companies in the semiconductor industry and are derived from sales in the U.S., Asia and Europe. As of December 31, 2011, three customers accounted for 48 percent, 15 percent and 13 percent of our accounts receivable. As of December 31, 2010, four customers accounted for 19 percent, 13 percent, 11 percent and 11 percent of our accounts receivable.

Allowance for Doubtful Accounts

We perform ongoing credit evaluations of our customers and record specific allowances for bad debts when a customer is unable to meet its financial obligations, as in the case of bankruptcy filings or deteriorated financial position. We estimate the allowances for bad debts for all other customers based on factors such as current trends, the length of time the receivables are past due and historical collection experience. We write-off a receivable when all rights, remedies and recourses against the account and its principals are exhausted and record a benefit when previously reserved accounts are collected.

Fair Value Measurements of Assets and Liabilities

We measure certain of our assets at fair value, using observable market data. The authoritative guidance on fair value measurement defines fair value as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants, and establishes a valuation hierarchy based on the level of independent objective evidence available regarding the value of assets or liabilities. The authoritative guidance also establishes three classes of assets or liabilities: Level 1 consisting of assets and liabilities for which there are quoted prices in active markets; Level 2 consisting of assets and liabilities for which observable inputs other than Level 1 inputs are used such as prices for similar assets or liabilities in active markets or for identical assets or liabilities in less active markets and model-derived valuations for which the variables are derived from or corroborated by observable market data; and Level 3 consisting of assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value.

Inventories

Inventories are stated at the lower of cost or market, with cost determined on a first-in, first-out basis, and include material, labor and manufacturing overhead costs. Finished goods are reported as inventories until the point of title transfers to the customer. Under our terms of sale, title generally transfers when we complete physical transfer of the

products to the freight carrier, unless other customer practices or terms and conditions prevail. All intercompany profits pertaining to the sales and purchases of inventory among our subsidiaries are eliminated from the consolidated financial statements.

We assess the valuation of all inventories, including manufacturing raw materials, work-in-process, finished goods and spare parts, at the end of each reporting period. Although we attempt to forecast future inventory demand, given the competitive pressures and cyclical nature of the semiconductor industry, there may be significant unanticipated changes in demand or technological developments that could have a significant impact on the value of our inventories and reported operating results in future periods. The carrying value of our inventory is reduced for estimated excess and obsolescence by the difference between its cost and the estimated market value based upon assumptions about future demand. We evaluate the inventory carrying value for potential excess and obsolete inventory exposures by analyzing historical and anticipated demand. In addition, inventories are evaluated for potential obsolescence due to the effect of known and anticipated engineering change orders and new products. If actual demand were to be substantially lower than estimated, additional inventory adjustments for excess or obsolete inventory might be required, which could have a material adverse effect on our business, financial condition and results of operations.

Inventory includes evaluation tools placed at customer sites as part of our marketing efforts. We amortize the cost of the evaluation tools over an estimated two to three years, taking into consideration the estimated cost to refurbish the tools and the estimated net realizable value of the tools. The amortization charges are reported as selling, general and administrative expenses. Amortization expense was \$3.1 million, \$2.2 million and \$5.3 million for the years ended December 31, 2011, 2010 and 2009, respectively.

Property and Equipment

Property and equipment are stated at cost. Depreciation is computed using the straight-line method based upon the estimated useful lives of the assets, which range from three to seven years. Leasehold improvements are amortized using the straight-line method over the useful lives or the term of the related lease, whichever is shorter.

Depreciation expense was \$5.7 million, \$6.7 million and \$8.4 million for the years ended December 31, 2011, 2010 and 2009, respectively. When assets are retired or otherwise disposed of, the assets and the associated accumulated depreciation are removed from the accounts. Repair and maintenance costs are expensed as incurred.

Impairment of Long-Lived Assets

We review our long-lived assets, including property and equipment and intangibles, for impairment whenever events or changes in circumstances indicate that the carrying amounts of these assets may not be recoverable. Recoverability is measured by a comparison of the assets' carrying amount to their expected future undiscounted net cash flows. If such assets are considered to be impaired, the impairment to be recognized is measured based on the amount by which the carrying amount of the asset exceeds its fair value. We had no impairment charges in 2011, 2010 or 2009.

Warranty

The warranty offered by us on our system sales is generally 12 months, except where previous customer agreements state otherwise, and excludes certain consumable maintenance items. A provision for the estimated cost of warranty obligations, based on historical costs, is recorded as cost of sales when the revenue is recognized. Our warranty obligations require us to repair or replace defective products or parts during the warranty period at no cost to the customer. The actual system performance and/or field warranty expense profiles may differ from historical experience, and in those cases, we adjust our warranty accruals accordingly. Actual warranty obligations and settlements against reserves are highly dependent on our system volumes.

Revenue Recognition

We derive revenues from the following primary sources - equipment (tool or system) sales, spare part sales and service and maintenance contracts. In accordance with the authoritative guidance on revenue recognition, we recognize revenue on equipment sales as follows: 1) for equipment sales of existing products with new specifications and for sales of new products, revenue is recognized upon customer acceptance; 2) for equipment

sales to existing customers who have purchased the same equipment with the same specifications and previously demonstrated acceptance, or equipment sales to new customers purchasing existing products with established reliability, we recognize revenue on a multiple element approach in which revenue is recognized upon the delivery of the separate elements to the customer and when we receive customer acceptance or is otherwise released from our customer acceptance obligations. For multiple element arrangements initiated at or prior to December 31, 2010, the revenue relating to the undelivered elements is deferred at its estimated fair values until delivery of the deferred elements; and for arrangements initiated or materially modified subsequent to December 31, 2010 containing multiple elements, the revenue relating to the undelivered elements is deferred using the relative selling price method, which allocates revenue to each element using the estimated selling prices for the deliverables when vendor-specific objective evidence or third-party evidence is not available. The maximum revenue we recognize on a delivered element is limited to the amount that is not contingent upon the delivery of additional items such as installation and customer acceptance. Under this approach, generally 90 percent of the total invoice amount is recognized as revenue upon shipment and transfer of title; 100 percent of the associated tool costs is also recognized upon shipment; and the remaining portion, generally 10 percent of the total invoice amount, is contingent upon customer acceptance and is recognized once installation services are completed and final customer acceptance of the tool is received. From time to time, we allow customers to evaluate systems, with the customer maintaining the right to return the systems at its discretion with limited or no penalty. For this type of arrangement, we do not recognize revenue on the evaluation systems until customer acceptance is received. For spare parts, we recognize revenue upon shipment. For service and maintenance contracts, we recognize revenue on a straight-line basis over the service period of the related contract or as services are performed. In all cases, revenue is only recognized when persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable and collectability is reasonably assured. Accounts receivable for which revenue has not been recognized are classified as advance billings.

Research, Development and Engineering Expenses

Research, development and engineering costs are expensed as incurred.

Restructuring

We recognize expenses related to employee termination benefits when the benefit arrangement is communicated to the employee and no significant future services are required. If an employee is required to render service until a specific termination date in order to receive the termination benefits, the fair value of the associated liability would be recognized ratably over the future service period. Severance costs are determined in accordance with local statutory requirements and our policies. For some entities, where salaries are paid during the notice period, a portion of the severance reserves would be based on estimates of the ability to find employment during the notice period, and we would determine the reserves in accordance with these estimates.

We recognize the present value of facility lease termination obligations, net of estimated sublease income and other exit costs, when it has future lease payments with no future economic benefit. Sublease income is estimated based on current market rates for similar properties. If we are unable to sublease the facility on a timely basis or if we are forced to sublease the facility at lower rates due to changes in market conditions, we would adjust the restructuring liability accordingly.

Stock-Based Compensation

We measure the fair value of all stock-based awards, including stock options, restricted stock units, and purchase rights under our employee stock purchase plan, on the date of grant and recognizes the related stock-based compensation expense on a straight-line basis over the requisite service period, which is generally the vesting period.

We use the Black-Scholes option-pricing model to determine the fair value of certain of our stock-based awards. The determination of fair value using the Black-Scholes model is affected by our stock price as well as assumptions regarding a number of complex and subjective variables, which includes expected stock price volatility over the term of the awards, actual and projected employee exercise and cancellation behaviors, risk-free interest rates, and expected dividends.

We estimate the expected life of options based on an analysis of our historical experience of employee exercise and post-vesting termination behavior considered in relation to the contractual life of the option; expected volatility is based on the historical volatility of our common stock; and the risk-free interest rate is equal to the U.S. Treasury rates, with maturity approximating the expected life of the option. We do not currently pay cash dividends on our common stock and do not anticipate doing so in the foreseeable future; accordingly, the expected dividend yield is zero.

We estimate forfeiture rates on stock-based awards at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. Such forfeiture estimates are based on historical experience. If the assumptions for estimating stock-based compensation expense change in future periods, the amount of future stock-based compensation may differ significantly from the amount that we recorded in the current and prior periods.

Stock-based compensation expenses for the years ended December 31, 2011, 2010 and 2009 were \$2.3 million, \$2.7 million and \$2.9 million, respectively.

Foreign Currency Translation

The functional currencies of our foreign subsidiaries are their local currencies. All assets and liabilities of these foreign operations are translated into the U.S. dollar using exchange rates in effect at the end of the period, and revenues and costs are translated using average exchange rates for the period. Gains or losses from translation of foreign operations where the local currencies are the functional currency are included as a component of accumulated other comprehensive income in the accompanying consolidated balance sheets. Foreign currency transaction gains and losses are recorded in other income (expense), net in the accompanying consolidated statements of operations.

Income Taxes

We provide for income taxes in accordance with the authoritative guidance, which requires a liability-based approach in accounting for income taxes. Deferred income tax assets and liabilities are recorded based on the differences between the financial statement and tax bases of assets and liabilities using enacted tax rates. Valuation allowances are provided against deferred income tax assets, which are not likely to be realized.

We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate resolution.

New Accounting Pronouncements

In December 2011, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2011-11, *Disclosures about Offsetting Assets and Liabilities*, which requires us to disclose gross information and net information about instruments and transactions eligible for offset in the statement of financial position. ASU No. 2011-11 will be effective for our fiscal year beginning on January 1, 2013. The adoption of this update is not expected to have a material impact on our consolidated financial statements.

In September 2011, the FASB issued ASU No. 2011-08, *Intangibles—Goodwill and Other - Testing Goodwill for Impairment* to simplify goodwill impairment testing by permitting an assessment of qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. If it is concluded that this is the case, it is necessary to perform the currently prescribed two-step goodwill impairment test. Otherwise, the two-step goodwill impairment test is not required. ASU 2011-08 will be effective for our fiscal year beginning January 1, 2012. The adoption of this update is not expected to have a material impact on our financial position, since we currently have no goodwill recorded on our balance sheet.

In June 2011, the FASB issued ASU No. 2011-05, which amends current comprehensive income guidance. This accounting update eliminates the option to present the components of other comprehensive income as part of the statement of stockholders' equity. Instead, we must report comprehensive income in either a single continuous statement of comprehensive income that contains two sections, net income and other comprehensive income, or in two separate but consecutive statements. This portion of ASU No. 2011-05 will be effective for our fiscal year beginning January 1, 2012. The adoption of this update will not have an impact on our consolidated financial position, results of operations or cash flows, as it only requires a change in the format of the current presentation. In December 2011, the FASB issued additional guidance that defers the effective date of the requirement to present separate line items on the income statement for reclassification adjustments of items out of accumulated other comprehensive income into net income. The deferral is temporary until the FASB reconsiders the operational concerns and needs of financial statement users.

In May 2011, the FASB issued ASU No. 2011-04, an amendment to ASC 820, *Fair Value Measurements*, providing a consistent definition and measurement of fair value, as well as similar disclosure requirements between U.S. GAAP and International Financial Reporting Standards. ASU 2011-04 changes certain fair value measurement principles, clarifies the application of existing fair value measurement and expands the ASC 820 disclosure requirements, particularly for Level 3 fair value measurements. This amendment will be effective for our fiscal year beginning January 1, 2012. The adoption of this amendment is not expected to have a material effect on our consolidated financial statements, but may require certain additional disclosures.

In January 2010, the FASB issued additional guidance on fair value disclosures. The new guidance clarifies two existing disclosure requirements and requires two new disclosures as follows: (1) a "gross" presentation of activities (purchases, sales, and settlements) within the Level 3 roll-forward reconciliation, which will replace the "net" presentation format; and (2) detailed disclosures about the transfers in and out of Level 1 and 2 measurements. This guidance is effective for our fiscal year beginning January 1, 2010, and for interim reporting periods thereafter, except for the gross presentation of the Level 3 roll-forward information, which is effective for our fiscal year beginning January 1, 2011, and for interim reporting periods thereafter. We adopted the amended fair value disclosures, including the gross presentation of the Level 3 roll-forward information, on January 1, 2010. In 2010 and 2011, we did not have any assets or liabilities subject to Level 3 measurement.

In October 2009, the FASB issued an amendment to its previously released guidance related to revenue recognition for sales arrangements with multiple deliverables. The amended guidance requires an entity at the inception of an arrangement to allocate the arrangement's consideration to all of its deliverables using the relative selling price method, which allows for management's best estimate of a deliverable's selling price when vendor-specific or other third-party evidence of fair value are not available. The residual method of allocating consideration, required under previous guidance, is no longer permitted. Effective January 1, 2011, we adopted this guidance for revenue arrangements entered into or materially modified on or after that date. The adoption of this guidance did not have a material impact on our consolidated financial statements.

3. BALANCE SHEET DETAILS

The table below shows the composition of cash and cash equivalents, short-term investments and restricted cash by security type as of December 31, 2011 and 2010:

	December 31, 2011			December 31, 2010		
	Amortized Cost	Unrealized Gains /(Losses) (thousands)	Estimated Fair Value	Amortized Cost	Unrealized Gains /(Losses) (thousands)	Estimated Fair Value
Cash and cash equivalents:						
Cash in bank	\$ 18,034	\$ -	\$ 18,034	\$ 13,978	\$ -	\$ 13,978
Money market funds	13,039	-	13,039	2,885	-	2,885
	<u>\$ 31,073</u>	<u>\$ -</u>	<u>\$ 31,073</u>	<u>\$ 16,863</u>	<u>\$ -</u>	<u>\$ 16,863</u>
Short-term investments:						
U.S. agency securities	\$ -	\$ -	\$ -	\$ 2,151	\$ -	\$ 2,151
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 2,151</u>	<u>\$ -</u>	<u>\$ 2,151</u>
Restricted cash:						
Money market accounts	1,877	-	\$ 1,877	\$ -	\$ -	\$ -
Certificates of deposit	-	-	-	4,026	-	4,026
	<u>\$ 1,877</u>	<u>\$ -</u>	<u>\$ 1,877</u>	<u>\$ 4,026</u>	<u>\$ -</u>	<u>\$ 4,026</u>

All short-term investments are considered available-for-sale and are marked to market, with unrealized gains and losses recorded as a component of other comprehensive income (loss). For 2011, 2010 and 2009, realized gains and losses on sales of short-term investments were not significant. As of December 31, 2010, all short-term investments had contractual maturities due within one year.

Our restricted cash is comprised of money market accounts and certificates of deposit that secure standby letters of credit provided to certain landlords and vendors.

Our prepaid expenses and other current assets consisted of the following on December 31, 2011 and 2010:

	December 31, 2011	December 31, 2010
	(thousands)	
Prepaid expenses and other current assets:		
Value-added tax	\$ 2,996	\$ 2,387
Retirement insurance - foreign employees	1,185	971
Insurance	439	435
Income tax receivable	89	568
Other	4,315	1,409
	<u>\$ 9,024</u>	<u>\$ 5,770</u>

Our inventories consisted of the following on December 31, 2011 and 2010:

	December 31, 2011	December 31, 2010
	(thousands)	
Inventories:		
Purchased parts and raw materials	\$ 17,693	\$ 14,266
Work-in-process	7,266	9,225
Finished goods	4,244	11,182
	<u>\$ 29,203</u>	<u>\$ 34,673</u>

Inventories are stated at the lower of cost or market, with cost determined on a first-in, first-out basis, and include material, labor and manufacturing overhead costs. Amounts in the table above are presented net of inventory valuation charges to reflect inventories considered excess and/or obsolete, which inherently involve judgments, using assumptions about expected future demand and the impact of market conditions on those assumptions. In 2011, 2010 and 2009, we recorded a net benefit of \$1.7 million, a net benefit of \$3.1 million, and a net charge of \$14.2 million, respectively, related to the sale of previously written down inventories, net of inventory valuation charges.

Our property and equipment consisted of the following on December 31, 2011 and 2010:

	December 31, 2011	December 31, 2010
	(thousands)	
Property and equipment, net:		
Machinery and equipment	\$ 45,174	\$ 52,608
Furniture and fixtures	10,002	10,741
Leasehold improvements	17,759	17,813
	72,935	81,162
Less: accumulated depreciation	(62,383)	(66,151)
	<u>\$ 10,552</u>	<u>\$ 15,011</u>

Depreciation expense totaled \$5.7 million, \$6.7 million, and \$8.4 million for the years ended December 31, 2011, 2010 and 2009, respectively.

Our accrued liabilities consisted of the following on December 31, 2011 and 2010:

	December 31, 2011	December 31, 2010
	(thousands)	
Accrued liabilities:		
Compensation and benefits	\$ 5,781	\$ 5,941
Warranty	3,419	2,539
Value-added tax	2,073	748
Restructuring	1,230	436
Customer deposits	451	-
Other	3,493	3,788
	<u>\$ 16,447</u>	<u>\$ 13,452</u>

Other accrued liabilities in the table above primarily includes liabilities accrued for income taxes payable, professional fees, retrofit reserves and other miscellaneous liabilities.

In 2011, we recognized \$1.6 million in other income related to the extinguishment of certain liabilities previously recorded in accrued liabilities other.

Our other liabilities consisted of the following on December 31, 2011 and 2010:

	December 31, 2011	December 31, 2010
	(thousands)	
Other liabilities:		
Deferred revenue, non-current	\$ 3,158	\$ 2,875
Other	3,879	2,146
	<u>\$ 7,037</u>	<u>\$ 5,021</u>

4. FAIR VALUE

We measure assets and liabilities at fair value based on exit price, which is defined by the authoritative guidance on fair value measurements as the amount that would be received on the sale of an asset or paid to transfer a liability in an orderly transaction between market participants.

Fair Value Hierarchy

The authoritative guidance on fair value measurements establishes a three-tier value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1. Quoted prices in active markets for identical assets or liabilities.

Level 2. Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets with insufficient volume or infrequent transactions (less active markets), or model-derived valuations in which all significant inputs are observable or can be derived principally from or corroborated with observable market data for substantially the full term of the assets or liabilities.

Level 3. Unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of assets or liabilities.

Our cash equivalents and investment instruments are classified within Level 1 of the fair value hierarchy, as these instruments are valued using quoted market prices. Specifically, we value our investments in U.S. government and agency securities, money market securities, certificates of deposit and plan assets under our Deferred Compensation Plan based on quoted market prices in active markets; and values our investments in corporate bonds, commercial paper and state, municipal and provincial obligations based on other observable inputs. As of December 31, 2011 and 2010, and for the years then ended, we had no assets or liabilities classified within Level 2 or Level 3 and there were no transfers of instruments between Level 1 and Level 2 regarding fair value measurement.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Assets measured at fair value on a recurring basis consisted of the following types of instruments as of December 31, 2011 and 2010:

	December 31, 2011			December 31, 2010		
	Fair Value Measurements at Reporting Date Using			Fair Value Measurements at Reporting Date Using		
	(Level 1)	(Level 2)	Total	(Level 1)	(Level 2)	Total
	(thousands)			(thousands)		
Assets measured at fair value:						
Cash equivalents:						
Money market funds	\$13,039	\$ -	\$13,039	\$ 2,885	\$ -	\$ 2,885
Short-term investments:						
United States agency securities	-	-	-	2,151	-	2,151
Other assets:						
Equity instruments	168	-	168	164	-	164
	<u>\$13,207</u>	<u>\$ -</u>	<u>\$13,207</u>	<u>\$ 5,200</u>	<u>\$ -</u>	<u>\$ 5,200</u>
Liabilities measured at fair value:						
Other liabilities:						
Deferred compensation	\$ 168	\$ -	\$ 168	\$ 164	\$ -	\$ 164

In the table above, equity instruments represent plan assets under our Deferred Compensation Plan, which effectively offset corresponding Deferred Compensation Plan liabilities as of the dates presented.

5. INTANGIBLE ASSETS

In December 2009, we acquired intellectual property assets related to our etch and strip plasma processes for \$1.3 million, which are included in intangibles, net in the accompanying consolidated balance sheets. These assets are being amortized over a 5-year period in research, development and engineering in the accompanying consolidated statements of operations. We had amortization charges of \$0.3 million and \$0.3 million in 2011 and 2010, respectively.

The following table summarizes intangible asset activities for the years ended December 31, 2011, 2010 and 2009:

	Developed Technology		
	Cost	Accumulated Amortization (thousands)	Net
Balance at December 31, 2009	\$ 1,250	\$ -	\$ 1,250
Amortization	-	(250)	(250)
Balance at December 31, 2010	1,250	(250)	1,000
Amortization	-	(250)	(250)
Balance at December 31, 2011	<u>\$ 1,250</u>	<u>\$ (500)</u>	<u>\$ 750</u>

6. RESTRUCTURING CHARGES

In 2011, we incurred \$1.4 million in contract termination costs related to revised estimates of our future rent obligations associated with a vacated leased facility, net of sublease income. The revised estimates are based on a final settlement with the landlord, which includes exiting from the lease arrangement in July 2015, rather than the initial lease expiration of March 2019. The final settlement also reduces our total future lease commitments from \$9.6 million to \$3.8 million, which includes a lease termination and other fees of \$1.0 million. Of the \$3.8 million in future lease commitments, we expect to pay out \$1.7 million in 2012 and the remaining balance on a declining basis through July 2015.

In December 2011, we also initiated a cost reduction plan, which included workforce reductions and a plan to transition our operations in Canada to our Germany facility. We expect to recognize synergies through the consolidation of our operations and anticipate a cost reduction of approximately \$0.5 million in 2012 and approximately \$1.2 million per year thereafter. As of December 31, 2011, we recorded \$0.5 million in employee severance benefits related to this restructuring. We expect to incur an additional \$1.1 million in employee separation and other charges related to this restructuring plan in 2012.

In 2009, we incurred \$2.6 million in restructuring charges, net of reserve adjustments. These restructuring charges primarily consisted of employee severance costs related to a significant reduction in our workforce.

The following table summarizes our restructuring activities for the years ended December 31, 2011, 2010 and 2009:

	Employee Severance Benefits	Contract Termination Costs	Total
		(thousands)	
Balance at December 31, 2008	\$ 3,496	\$ 1,240	\$ 4,736
Restructuring charges	2,859	159	3,018
Payments	(5,859)	-	(5,859)
Reserve adjustments	(407)	(15)	(422)
Balance at December 31, 2009	89	1,384	1,473
Restructuring charges	-	-	-
Payments	(83)	-	(83)
Reserve adjustments	88	(178)	(90)
Balance at December 31, 2010	94	1,206	1,300
Restructuring charges	452	1,437	1,889
Payments and settlements	(370)	(76)	(446)
Reserve adjustments	(94)	94	-
Balance at December 31, 2011	<u>\$ 82</u>	<u>\$ 2,661</u>	<u>\$ 2,743</u>

As of December 31, 2011, \$1.2 million of the restructuring balance was classified as short-term and recorded within accrued liabilities in the consolidated balance sheet, and the remaining \$1.5 million of the restructuring balance was classified as long-term and recorded within other liabilities in the consolidated balance sheet.

7. COMMITMENTS AND CONTINGENCIES

Warranty

The warranty offered by us on our system sales is generally 12 months, except where previous customer agreements state otherwise, and excludes certain consumable maintenance items. A provision for the estimated cost of warranty, based on historical costs, is recorded as cost of sales when the revenue is recognized. Our warranty obligations require us to repair or replace defective products or parts during the warranty period at no cost to the customer. The actual system performance and/or field warranty expense profiles may differ from historical experience, and in those cases, we adjust our warranty accruals accordingly.

The following table summarizes changes in the product warranty accrual for the years ended December 31, 2011, 2010 and 2009:

	Year Ended December 31,		
	2011	2010	2009
		(thousands)	
Balance at the beginning of the year	\$ 2,539	\$ 1,310	\$ 4,381
Accrual for warranties issued during the year	3,577	3,599	1,273
Changes in liability related to pre-existing warranties	566	(166)	(1,834)
Settlements made during the year	(3,263)	(2,204)	(2,510)
Balance at the end of the year	<u>\$ 3,419</u>	<u>\$ 2,539</u>	<u>\$ 1,310</u>

Operating Leases

We hold various operating leases related to our facilities and equipment worldwide. Our minimum annual rental commitments with respect to our operating leases were as follows as of December 31, 2011:

Year	Operating Lease Payments
	(thousands)
2012	\$ 3,943
2013	3,545
2014	3,302
2015	3,088
2016	1,884
Thereafter	2,291
	<u>\$ 18,053</u>

Rent expense was \$5.0 million, \$4.6 million and \$4.2 million in 2011, 2010 and 2009, respectively. We recorded sublease income related to our Exton, Pennsylvania facility of \$0.6 million, \$1.1 million and \$1.5 million in 2011, 2010 and 2009, respectively.

In 2005, we entered into a new lease agreement for our existing corporate headquarters building in Fremont, California. The lease is for a period of 10 years, which commenced on May 31, 2007, and has an initial annual base rent cost of approximately \$1.4 million, with annual increases of approximately 3.5 percent. We are also responsible for an additional minimum lease payment at the end of the lease term of approximately \$1.5 million, subject to adjustment, under a restoration cost obligation provision, which is being recognized on a straight-line basis over the lease term. To secure this obligation, we provided the landlord a standby letter of credit of \$1.5 million.

We continue to lease one building previously used to house the administrative functions related to wet surface preparation products in Exton, Pennsylvania. The original lease for the administrative building was scheduled to expire on March 31, 2019, with a current rental cost of approximately \$0.9 million annually. In December 2011, we reached a final settlement with the landlord, which includes exiting from the lease arrangement in July 2015. The final settlement also reduces our total future lease obligations from \$9.6 million to \$3.8 million, which includes \$1.0 million in lease termination and other fees. Of the \$3.8 million in future lease commitments, we expect to pay out \$1.7 million in 2012 and the remaining balance on a declining basis through July 2015. We continue to sublease a portion of the Exton facility, cancelable by our subtenant anytime after December 31, 2012. The sublease income under the current sublease agreement was \$0.6 million as of December 31, 2011. In determining facilities lease loss liability, various assumptions were made, including the time period over which the buildings will be vacant, expected sublease terms and expected sublease rates. At December 31, 2011 and 2010, we had an accrued liability balance of \$2.3 million and \$0.9 million, respectively, related to this facility. Adjustments to this accrual will be made in future periods, if events and circumstances change.

Guarantees

In the ordinary course of business, our bank provides standby letters of credit or other guarantee instruments on behalf of us to certain parties as required. The standby letters of credit are secured by certificates of deposit, which are classified as restricted cash in the accompanying consolidated balance sheets. We have never recorded any liability in connection with these guarantee arrangements beyond what is required to appropriately account for the underlying transaction being guaranteed. We do not believe, based on historical experience and information currently available, that it is probable that any amounts will be required to be paid under such guarantee arrangements. As of December 31, 2011, the maximum potential amount that we could be required to pay was \$1.9 million, the total amount of outstanding standby letters of credit, which were secured by \$1.9 million in money market collateral accounts.

We are a party to a variety of agreements, pursuant to which we may be obligated to indemnify other parties with respect to certain matters. Typically, these obligations arise in the context of contracts under which we may agree to hold other parties harmless against losses arising from a breach of representations or with respect to certain

intellectual property, operations or tax-related matters. Our obligations under these agreements may be limited in terms of time and/or amount, and in some instances, we may have defenses to asserted claims and/or recourse against third parties for payments made by us. It is not possible to predict the maximum potential amount of future payments under these or similar agreements due to the conditional nature of our obligations and the unique facts and circumstances involved in each particular agreement. Historically, payments made by us under these agreements have not had a material effect on our financial position, results of operations or cash flows. We believe if it were to incur a loss in any of these matters, such loss would not have a material effect on its financial position, results of operations or cash flows.

In connection with our acquisition of Vortek Industries, Ltd (Vortek) in 2004, we became party to an agreement between Vortek and the Canadian Minister of Industry (the Minister) relating to an investment in Vortek by Technology Partnerships Canada. Under the agreement, as amended, we, or Vortek (renamed Mattson Technology, Canada, Inc. or MTC) agreed to various covenants, including (i) payment by us of a royalty to the Minister of 1.4 percent of revenues from certain Flash RTP products, up to a total of CAD 14,269,290 (approximately \$14.0 million based on the applicable exchange rate as of December 31, 2011), (ii) MTC maintaining a specified average workforce of employees in Canada through October 27, 2009, (iii) investment of a certain amount by October 27, 2009 and certain other covenants concerning manufacturing obligations. Under the provisions of this agreement, if we, or MTC, did not materially satisfy its obligations pursuant to the covenants, the Minister could have demanded payment of liquidated damages in the amount of CAD 14,269,290 less any royalties paid by MTC or us to the Minister. As of December 31, 2009, we were no longer subject to covenants (ii) and (iii), as discussed above; but are still subject to covenant (i), relating to the payment of royalty on revenues from certain Flash RTP products until 2020. However, if MTC is dissolved, files for bankruptcy or does not materially comply with certain other terms and conditions of the contract prior to its expiration on December 31, 2020, we could be subject to liquidated damages in the amount of CAD 14,269,290 less any royalties paid by MTC or us to the Minister.

We indemnify our directors and certain employees as permitted by law, and have entered into indemnification agreements with our directors and certain senior officers. We have not recorded a liability associated with these indemnification arrangements as we historically have not incurred any material costs associated with such indemnification arrangements. Costs associated with such indemnification arrangements may be mitigated, in whole or only in part, by insurance coverage that we maintain.

Government Agencies

As an exporter, we must comply with various laws and regulations relating to the export of products and technology from the U.S. and other countries having jurisdiction over our operations. In the U.S. these laws include the International Traffic in Arms Regulations (ITAR) administered by the State Department's Directorate of Defense Trade Controls, the Export Administration Regulations (EAR) administered by the Bureau of Industry and Security ("BIS"), and trade sanctions against embargoed countries and destinations administered by the U.S. Department of Treasury, Office of Foreign Assets Control (OFAC). The EAR governs products, parts, technology and software which present military or weapons proliferation concerns, so-called "dual use" items, and ITAR governs military items listed on the United States Munitions List. Prior to shipping certain items, we must obtain an export license or verify that license exemptions are available. In addition, we must comply with certain requirements related to documentation, record keeping, plant visits and hiring of foreign nationals.

In 2008, we self-disclosed to BIS certain inadvertent EAR violations, and are currently working with BIS to resolve these. As of December 31, 2011, we have accrued an amount to reflect what management believes to be the minimum estimated liability. We believe this accrual to be immaterial. We are unable to estimate the extent of any higher fines or penalties or other potential losses that may be incurred with respect to this matter, though we could face substantial civil fines or other penalties, which could have a material adverse effect on us.

Litigation

In the ordinary course of business, we are subject to claims and litigation, including claims that we infringe third party patents, trademarks and other intellectual property rights. Although we believe that it is unlikely that any current claims or actions will have a material adverse impact on our operating results or its financial position, given the uncertainty of litigation, we cannot be certain of this. The defense of claims or actions against us, even if not meritorious, could result in the expenditure of significant financial and managerial resources.

We record a legal liability when we believe it is both probable that a liability has been incurred, and the amount can be reasonably estimated. We monitor developments in our legal matters that could affect the estimate we have previously accrued. Significant judgment is required to determine both probability and the estimated amount.

8. STOCKHOLDERS' EQUITY

Common Stock

On May 16, 2011, we completed a registered public offering of 7.8 million newly issued shares of our common stock. The common stock was issued at a price to the public of \$1.80 per share. We received net proceeds of approximately \$12.6 million from the offering after deducting underwriting discounts and estimated offering expenses of \$1.5 million.

Common Stock Repurchase Program

In March 2007, our Board of Directors approved a common stock repurchase plan (Repurchase Plan) that authorized the repurchase of up to \$20.0 million of outstanding shares of our common stock through open-market purchases or private transactions. In October 2007, our Board of Directors expanded the Repurchase Plan, authorizing the repurchase of up to an additional \$30.0 million of shares of our common stock through open-market purchases or private transactions. By December 31, 2008, a total of 3.8 million shares had been repurchased against the original and expanded Repurchase Plan, at a weighted-average purchase price of \$9.20 for a total purchase price of approximately \$35.0 million. Our last repurchase of common stock under this plan was in the first quarter of 2008. On May 2, 2011, we terminated the Repurchase Plan.

We report common stock repurchased as treasury stock in the accompanying consolidated balance sheets. Including previous common stock repurchase plans from 1997 and 1998, our treasury stock as of December 31, 2011 was 4.2 million shares at a total purchase price of \$38.0 million.

Accumulated Other Comprehensive Income

The components of accumulated other comprehensive income, net of related tax, at December 31, 2011 and 2010 are as follows:

	December 31,	
	2011	2010
	(thousands)	
Accumulated other comprehensive income:		
Cumulative translation adjustments	\$ 20,466	\$ 20,308
Unrealized investment gain (loss), net of tax	6	(101)
	<u>\$ 20,472</u>	<u>\$ 20,207</u>

Stockholder Rights Plan

On July 28, 2005, we adopted a Stockholder Rights Plan (Rights Plan), under which stockholders of record at the close of business on August 15, 2005 received one share purchase right (Right) for each share of our common stock held on that date. The Rights, which currently trade with our common stock and represent the right to purchase one one-thousandth of a share of preferred stock at \$55.00 per share, become exercisable when a person or group acquires 15 percent or more of our common stock (acquiror) without prior approval of our Board of Directors. In that event, the Rights would permit our stockholders, other than the acquiror, to purchase shares of the our common stock having a market value of twice the exercise price of the Rights, in lieu of the preferred stock. Also, under the Rights Plan, (i) prior to a person or group acquiring 15 percent of our common stock, we can redeem the Rights for \$0.001 each; (ii) we can issue one Right for each share of common stock that becomes outstanding after the record date and before the acquisition of 15 percent of its common stock by an acquiror; (iii) when the Rights become exercisable, our Board of Directors may authorize the issuance of one share of our common stock in exchange for each Right that is then exercisable; and (iv) in the event of certain business combinations, the Rights permit the purchase of the common stock of an acquiror at a 50 percent discount. The

Rights expire on July 27, 2015. As of December 31, 2011, we had approximately 50.0 million share purchase rights outstanding.

9. EMPLOYEE STOCK AND SAVING PLANS

In May 2005, we amended and restated our 1989 Stock Option Plan (the 1989 Plan) as the 2005 Equity Incentive Plan (the 2005 Plan), under which a total of approximately 12 million shares of common stock were reserved for issuance. In June 2007, our shareholders approved an amendment to the 2005 Plan by reserving an additional 2.5 million shares of common stock for issuance under the 2005 Plan, bringing the total shares reserved to approximately 14.5 million shares of common stock. As of December 31, 2011, we had approximately 2.1 million shares available for future grants under the 2005 Plan.

The following table summarizes the combined activity under all of our equity incentive plans for the three years ended December 31, 2011:

	Awards Available For Grant (thousands)	Stock Options Outstanding (thousands)	Weighted- Average Exercise Price	Restricted Stock Units Outstanding (thousands)	Weighted- Average Grant Date Fair Value
Balances at December 31, 2008	2,452	5,772	\$ 8.85	768	\$ 5.12
Stock options:					
Granted	(1,583)	1,583	\$ 0.91	-	-
Exercised	-	(5)	\$ 1.69	-	-
Cancelled or forfeited	2,317	(2,317)	\$ 8.28	-	-
Restricted stock units:					
Granted	-	-	-	-	-
Released	3	-	-	(120)	\$ 6.87
Cancelled or forfeited	462	-	-	(264)	\$ 4.01
Balances at December 31, 2009	3,651	5,033	\$ 6.62	384	\$ 4.21
Stock options:					
Granted	(2,057)	2,057	\$ 3.19	-	-
Exercised	-	(170)	\$ 0.81	-	-
Cancelled or forfeited	642	(642)	\$ 8.09	-	-
Restricted stock units:					
Granted	(5)	-	-	3	\$ 3.96
Released	23	-	-	(39)	\$ 7.92
Cancelled or forfeited	9	-	-	(5)	\$ 6.91
Balances at December 31, 2010	2,263	6,278	\$ 5.51	343	\$ 3.67
Stock options:					
Granted	(1,643)	1,643	\$ 2.16	-	-
Exercised	-	(128)	\$ 0.85	-	-
Cancelled or forfeited	1,304	(1,304)	\$ 7.40	-	-
Restricted stock units:					
Granted	-	-	-	-	-
Released	13	-	-	(23)	\$ 6.33
Cancelled or forfeited	130	-	-	(74)	\$ 3.39
Balances at December 31, 2011	<u>2,067</u>	<u>6,489</u>	\$ 4.37	<u>246</u>	\$ 3.50

The following table provides information pertaining to the our stock options and restricted stock units with time-based vesting for the years ended December 31, 2011, 2010 and 2009:

	Year Ended December 31,		
	2011	2010	2009
(thousands, except weighted-average fair values)			
Stock options:			
Weighted-average fair value of options granted	\$ 1.36	\$ 1.96	\$ 0.52
Intrinsic value of options exercised	\$ 122	\$ 441	\$ 4
Cash received from options exercised	\$ 109	\$ 138	\$ 9
Restricted stock units with time-based vesting:			
Weighted-average fair value of RSUs granted	-	\$ 3.96	-

Stock Options

Stock option grants under the 2005 Plan generally vest 25 percent on the first anniversary of the date of grant, and 1/36 per month thereafter. We granted 1.6 million, 2.1 million and 1.6 million stock options during 2011, 2010 and 2009, respectively, with an estimated total grant-date fair value of \$2.2 million, \$4.0 million and \$0.8 million, respectively. We settle employee stock option exercises with newly issued common shares.

The following table summarizes information about stock options outstanding as of December 31, 2011:

Range of Exercise Prices	Outstanding Options			Exercisable Options	
	Number of	Weighted Average	Weighted	Number of	Weighted
	Shares	Remaining	Average	Shares	Average
	(thousands)	Contractual Life	Exercise Price	(thousands)	Exercise Price
\$0.76 - \$2.62	2,666	5.0	\$ 1.73	919	\$ 1.12
\$2.63 - \$5.86	2,178	4.2	\$ 3.65	1,449	\$ 3.80
\$5.87 - \$13.93	1,645	2.0	\$ 9.61	1,643	\$ 9.61
Total	6,489	4.0	\$ 4.37	4,011	\$ 5.57

The table below contains additional information with respect to our stock options outstanding at December 31, 2011:

	Shares	Weighted Average	Weighted Average	Aggregate
	(thousands)	Exercise Price	Remaining Contractual Life	Intrinsic Value
	(thousands)		(years)	(thousands)
Vested and exercisable options	4,011	\$ 5.57	3.0	\$ 404
Unvested options expected to vest	2,478	\$ 2.43	5.5	\$ 117
Total outstanding options	6,489	\$ 4.37	4.0	\$ 521

The aggregate intrinsic value shown in the table above represents the total pre-tax intrinsic value, based on the closing price of our common stock of \$1.38 on December 31, 2011, which would have been received by the option holders had all in-the-money option holders exercised their options as of that date. There were approximately 0.7 million shares of common stock subject to in-the-money options that were exercisable as of December 31, 2011.

Restricted Stock Units (RSUs)

Our 2005 Plan provides for grants of timed-based and performance-based RSUs.

Time-Based Restricted Stock Units

Time-based RSUs generally vest at ¼ per year. On occasion and for varying purposes, we grant time-based RSUs with different vesting criteria and duration. In 2011 and 2009, we did not grant any time-based RSUs. During 2011 and 2009, we did not grant any time-based RSUs. During 2010, we granted 3,000 time-based RSUs with a fair value of \$12,000.

RSUs under the 2005 Plan are counted against the total number of shares of common stock issuable at 1.75 shares for every RSU.

Performance-Based Restricted Stock Units

The vesting of performance-based RSUs is contingent on our achievement of certain predetermined financial goals and in some cases, the achievement of certain market performance targets. The amount of stock-based compensation expense recognized in any one period can vary based on the achievement or anticipated achievement of specific performance goals. If a performance goal is not met or is not expected to be met, no compensation cost would be recognized on the underlying RSUs, and any previously recognized compensation expense on those RSUs would be reversed.

In 2008, our Board of Directors approved the grant of 683,000 performance-based RSUs to certain of our executives, officers and senior-level management, with vesting in four equal tranches upon the achievement of four sequentially increasing revenue performance targets and contingent on the achievement of certain operating profit margin and stock price thresholds. The fair value of these RSUs was determined using the Monte Carlo valuation methodology. At December 31, 2008, we determined that due to the deteriorating market conditions during the fourth quarter of 2008, it was not probable that any of the four revenue targets and the operating profit targets would be met by the specified dates. As a result, the stock-based compensation related to these RSUs was deemed unrecognizable. We continue to evaluate the likelihood of achieving the performance targets. If and when we determine that the related targets are probable of being achieved, we will begin recognizing expense in the period that such determination is made. We have not recorded any compensation expense related to these performance-based RSUs in 2011, 2010 and 2009. As of December 31, 2011, 0.5 million of the performance-based RSUs had been canceled based on employee terminations, leaving 0.2 million units outstanding.

Employee Stock Purchase Plan

We have a noncompensatory employee stock purchase plan (ESPP) which allows each eligible employee to withhold up to 15 percent of gross compensation over semiannual six-month ESPP periods to purchase shares of our common stock, limited to 2,000 shares per ESPP period. Under the ESPP, employees purchase stock at a price equal to 90 percent of the fair market value (generally the closing price of our common stock) on the trading day prior to the exercise when stock is purchased.

We reserved 6.2 million shares of common stock for issuance under the ESPP, of which 2.7 million shares were available for issuance as of December 31, 2011. During 2011, 2010 and 2009, we issued shares under the ESPP totaling 0.1 million, 0.1 million and 0.2 million, respectively, with average purchase prices of \$1.29, \$3.19 and \$1.50, respectively.

Employee Savings Plan (ESP)

We have a retirement/savings plan (the ESP), which qualifies under section 401(k) of the Internal Revenue Code. All full-time employees of eligible age (over twenty-one years old) can participate in the ESP and can contribute up to an amount allowed by the applicable Internal Revenue Service guidelines. At our discretion, we can make matching contributions to the ESP equal to a percentage of the participants' contributions. In March 2009, we suspended matching contributions under the ESP as a cost-cutting measure and it was reinstated in July 2011.

Deferred Compensation Plan

In 2006, we adopted a Deferred Compensation Plan (the DC Plan), under which we allow eligible employees and non-employee members of our Board of Directors to defer a specified percentage of their base salary or retainer fees, as appropriate. We are obligated to deliver on a future date the contributions to the DC Plan plus income earned on such contributions. These liabilities represent an unsecured general obligation of ours and rank in parity with other unsecured and unsubordinated indebtedness of ours and are non-transferable and non-tradable.

As of December 31, 2011 and 2010, we had approximately \$0.2 million and \$0.2 million, respectively, in net assets under the DC Plan, which were invested primarily in equity investment funds. These assets are reflected as a component of other assets and the corresponding liabilities are reflected as a component of other liabilities in the accompanying consolidated balance sheets.

10. STOCK-BASED COMPENSATION

We account for stock-based compensation in accordance with the applicable authoritative guidance, which requires the measurement of stock-based compensation on the date of grant based on the fair value of the award, and the recognition of the expense over the requisite service period for the employee. Compensation related to restricted stock units is the intrinsic value on the date of grant, which is the closing price of our common stock less the employee exercise price, if any. Compensation related to stock options is determined using a stock option valuation model.

Valuation Assumptions

We use the Black-Scholes valuation model to determine the fair value of stock options. The Black-Scholes model requires the input of highly subjective assumptions, which are summarized in the table below for 2011, 2010 and 2009:

	Year Ended December 31,		
	2011	2010	2009
Expected dividend yield	—	—	—
Expected stock price's volatility	77%	74%	67%
Risk-free interest rate	1.8%	2.1%	1.9%
Expected life of options in years	5	5	5

We estimate the expected life of options based on an analysis of our historical experience of employee exercise and post-vesting termination behavior considered in relation to the contractual life of the option; expected volatility is based on the historical volatility of our common stock; and the risk-free interest rate is equal to the U.S. Treasury rates, with maturity approximating the expected life of the option. We do not currently pay cash dividends on our common stock and do not anticipate doing so in the foreseeable future; accordingly, the expected dividend yield is zero.

Our stock-based compensation in 2011, 2010 and 2009 was as follows:

	Year Ended December 31,		
	2011	2010	2009
		(thousands)	
Stock-based compensation by type of award:			
Stock options	\$ 2,167	\$ 2,442	\$ 2,280
Restricted stock units	112	263	626
Employee stock purchase plan	25	39	38
	<u>\$ 2,304</u>	<u>\$ 2,744</u>	<u>\$ 2,944</u>
Stock-based compensation by category of expense:			
Cost of sales	\$ 82	\$ 96	\$ 105
Research, development and engineering	367	451	426
Selling, general and administrative	1,855	2,197	2,413
	<u>\$ 2,304</u>	<u>\$ 2,744</u>	<u>\$ 2,944</u>

We did not capitalize any stock-based compensation as inventory in 2011, 2010 and 2009, as such amounts were not material. As of December 31, 2011, we had \$2.5 million in unrecognized stock-based compensation expense related to stock options, net of estimated forfeitures, which will be recognized over a weighted-average period of 2.7 years. As of December 31, 2011, we had \$19,000 in unrecognized stock-based compensation expense related to unvested time-based RSUs outstanding, net of estimated forfeitures, which will be recognized over a weighted-average period of 0.4 years.

11. GEOGRAPHIC AND CUSTOMER CONCENTRATION INFORMATION

We have one operating segment, the design, manufacturing and marketing of advanced fabrication equipment to the semiconductor manufacturing industry. The authoritative guidance on segment reporting and disclosure defines operating segment as a component of an enterprise for which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. As our business is completely focused on one industry segment, the design, manufacturing and marketing of advanced fabrication equipment to the semiconductor manufacturing industry, management believes that we have one reportable segment. Our revenues and profits are generated from the sales of systems and services in this one segment. For the purposes of evaluating our reportable segments, our Chief Executive Officer is the chief operating decision maker, as defined in the applicable authoritative guidance.

The following table summarizes net sales by geographic areas based on the installation locations of the systems and the location of services rendered:

	Year Ended December 31,					
	2011		2010		2009	
	(thousands)	%	(thousands)	%	(thousands)	%
Net sales:						
United States	\$ 10,311	6	\$ 7,211	5	\$ 3,601	8
Korea	84,623	46	67,973	49	14,619	34
Taiwan	37,507	20	18,878	14	7,233	17
China	12,110	7	16,210	12	5,143	12
Japan	14,764	8	7,005	5	1,272	3
Other Asia	6,238	3	13,641	10	6,842	17
Europe and others	19,394	10	7,418	5	4,038	9
	<u>\$ 184,947</u>	<u>100</u>	<u>\$ 138,336</u>	<u>100</u>	<u>\$ 42,748</u>	<u>100</u>

In 2011, two customers accounted for 42 percent and 10 percent of total revenues, respectively. In 2010, two customers accounted for 40 percent and 12 percent of total revenues, respectively. In 2009, three customers accounted for 30 percent, 15 percent and 10 percent of total revenues, respectively.

At December 31, 2011, three customers accounted for 48 percent, 15 percent and 13 percent of our accounts receivable, respectively. At December 31, 2010, four customers accounted for 19 percent, 13 percent, 11 percent and 11 percent of our accounts receivable, respectively.

Geographical information relating to our property and equipment as of December 31, 2011 and 2010 is as follows:

	December 31,	
	2011	2010
	(thousands)	
Property and equipment,		
United States	\$ 5,306	\$ 9,880
Germany	2,396	2,236
Canada	2,281	2,507
Others	569	388
	<u>\$ 10,552</u>	<u>\$ 15,011</u>

12. INCOME TAXES

The components of income (loss) before income taxes are as follows:

	Year Ended December 31,		
	2011	2010	2009
	(thousands)		
Domestic loss	\$ (17,052)	\$ (32,620)	\$ (71,241)
Foreign income (loss)	772	(462)	(3,867)
Loss before income taxes	<u>\$ (16,280)</u>	<u>\$ (33,082)</u>	<u>\$ (75,108)</u>

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

	Year Ended December 31,		
	2011	2010	2009
	(thousands)		
Current:			
Federal	\$ 16	\$ (451)	\$ 66
State	4	4	(1)
Foreign	(1,949)	77	(8,787)
Total current	<u>(1,929)</u>	<u>(370)</u>	<u>(8,722)</u>
Deferred:			
Federal	-	-	-
State	-	-	-
Foreign	3,599	691	656
Total deferred	<u>3,599</u>	<u>691</u>	<u>656</u>
Provision for (benefit from) income taxes	<u>\$ 1,670</u>	<u>\$ 321</u>	<u>\$ (8,066)</u>

The provision for (benefit from) income taxes reconciles to the amount computed by multiplying loss before income taxes by the U.S. statutory rate of 35 percent as follows:

	Year Ended December 31,		
	2011	2010	2009
	(thousands)		
Provision (benefit) at statutory rate	\$ (5,691)	\$ (11,579)	\$ (26,286)
Deferred tax asset valuation allowance	5,169	9,699	24,060
Foreign earnings taxed at different rates	4,822	2,261	3,492
State taxes, net of federal benefit	2	2	(1)
Nondeductible stock option expense	507	573	512
Uncertain tax position reserve release	(3,151)	(697)	(9,319)
Other	12	62	(524)
Provision for (benefit from) income taxes	\$ 1,670	\$ 321	\$ (8,066)

Deferred tax assets are comprised of the following:

	December 31,	
	2011	2010
	(thousands)	
Net operating loss carryforwards	\$ 156,589	\$ 149,246
Reserves not currently deductible	10,691	11,328
Tax credit carryforwards	985	1,242
Depreciation	4,969	4,604
Deferred revenue	751	513
Research and development capitalization	17	151
Other	1	1,119
Total deferred tax asset	174,003	168,203
Valuation allowance	(174,003)	(164,400)
Net deferred tax asset	\$ -	\$ 3,803

The valuation allowance at December 31, 2011 is against all deferred tax and at December 31, 2010 is attributable to federal and state deferred tax assets, as well as certain foreign deferred tax assets. Our valuation allowance was determined in accordance with the applicable authoritative guidance, which requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred assets are recoverable, with such assessment being required on a jurisdiction-by-jurisdiction basis. As of December 31, 2011, a full valuation allowance was set up against our German deferred tax assets. In assessing the need for a valuation allowance in the current year on these German deferred tax assets, management considered historical levels of income and losses, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies. For our other tax assets, management believes that sufficient uncertainty exists with regard to the realizability of these tax assets such that a valuation allowance is necessary. Factors considered in providing a valuation allowance include the lack of a significant history of consistent profits, the cyclical nature of the overall semiconductor market thereby negatively impacting our ability to sustain or grow revenues and earnings and the lack of carry-back capacity to realize these assets. Based on the absence of sufficient positive objective evidence, management is unable to assert that it is more likely than not that we will generate sufficient taxable income to realize these remaining net deferred assets. The amount of the deferred tax asset valuation allowance, however, could be reduced in future periods to the extent that future taxable income is realized.

As of December 31, 2011, we had federal and state net operating loss carryforwards of \$427.1 million and \$100.1 million, respectively, which will begin expiring in 2018 for federal and 2012 for state. We also have foreign net operating loss carryforwards in Canada, Japan and Germany of \$29.0 million, \$1.6 million and \$12.1 million, respectively. Canada and Japan net operating loss carryforwards will begin expiring in 2014. The German net operating loss carryforward has an indefinite carryover life.

We acquired \$48.0 million of deferred tax assets as a result of our acquisitions of Vortek, STEAG Semiconductor Division, CFM and Concept Systems Design, Inc. The federal and state net operating losses acquired from the STEAG Semiconductor Division, CFM and Concept are also subject to change in control limitations as defined in Section 382 of the Internal Revenue Code. In addition, we had a change in control in April 2002, which limited our net operating losses generated prior to the date the ownership change occurred. If certain substantial changes in our ownership occur, there would be an additional annual limitation on the amount of the net operating loss carryforwards that can be utilized.

As of December 31, 2011, we had research credit carryforwards of approximately \$3.4 million and \$4.0 million for federal and state income tax purposes, respectively. If not utilized, the federal carryforward will expire in various amounts beginning in 2026. The California tax credit can be carried forward indefinitely.

We provide U.S. income taxes on the earnings of foreign subsidiaries unless subsidiary earnings are considered indefinitely reinvested outside the U.S. As of December 31, 2011, U.S. income taxes were not provided for on a cumulative total of \$6.1 million of undistributed earnings for certain foreign subsidiaries. If these earnings were repatriated, we would be subject to additional U.S. income taxes (subject to an adjustment for foreign tax credits). It is not practical to determine the income tax liability that might be incurred if these earnings were to be repatriated. We intend to permanently reinvest all foreign unremitted earnings of foreign subsidiaries outside of the U.S., except for Germany. We permanently reinvested non-U.S. earnings that have been deployed in active business operations, and we do not intend to repatriate any portion of our permanently reinvested non-U.S. earnings in the future.

As of December 31, 2011, our total unrecognized tax benefits were \$25.1 million exclusive of interest and penalties described below. Included in the \$25.1 million is approximately \$1.1 million of unrecognized tax benefits (net of federal benefit), that if recognized, would favorably affect the effective tax rate in a future period before consideration of changes in the valuation allowance. We anticipate there may be a decrease of \$0.4 million in our unrecognized tax benefit within the next twelve months.

Our practice is to recognize interest and/or penalties related to unrecognized tax benefits in income tax expense. Income tax expense included an estimated interest of \$0.2 million for 2011, \$0.3 million for 2010 and \$0.3 million for 2009. As of December 31, 2011 and 2010, we had \$0.3 million and \$1.2 million, respectively, accrued for estimated interest. As of December 31, 2011 and 2010, we had zero and \$0.1 million, respectively, accrued for estimated penalties.

We are subject to U.S. federal income tax as well as to income taxes in Germany and various other foreign and state jurisdictions. Our federal and state income tax returns are generally not subject to examination by tax authorities for years before 2008 and 2007, respectively. We had no tax audits in progress as of December 31, 2011.

A reconciliation of unrecognized tax benefits is as follows:

	Year Ended December 31,		
	2011	2010	2009
	(millions)		
Balance at the beginning of the year	\$ 27.1	\$ 27.6	\$ 36.3
Tax positions related to current year:			
Additions	-	-	0.4
Reductions	-	-	-
Tax positions related to prior years:			
Additions	-	-	0.3
Reductions	(0.1)	-	-
Settlement with taxing authorities	-	-	(9.3)
Expiration of statutes of limitations	(1.9)	(0.5)	(0.1)
Balance at the end of the year	<u>\$ 25.1</u>	<u>\$ 27.1</u>	<u>\$ 27.6</u>

13. NET LOSS PER SHARE

We present both basic and diluted net loss per share on the face of our consolidated statements of operations in accordance with the authoritative guidance on earnings per share. Basic net loss per share is computed by dividing net loss by the weighted-average number of shares of common stock outstanding for the period. Since we had net losses in 2011, 2010 and 2009, none of the stock options and restricted stock units were included in the computation of diluted shares for those years, as inclusion of such shares would have been antidilutive.

The following table summarizes the incremental shares of common stock from potentially dilutive securities, calculated using the treasury stock method:

	Year Ended December 31,		
	2011	2010	2009
	(thousands)		
Weighted average common shares outstanding - basic	55,299	50,073	49,832
Effect of dilutive potential common shares from stock options and restricted stock units	-	-	-
Weighted average common shares - diluted	<u>55,299</u>	<u>50,073</u>	<u>49,832</u>

All outstanding stock options and restricted stock units are potentially dilutive securities, and as of December 31, 2011, 2010 and 2009, the combined total of stock options and restricted stock units outstanding were 6.7 million, 6.6 million and 5.4 million, respectively.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Mattson Technology, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows present fairly, in all material respects, the financial position of Mattson Technology, Inc. and its subsidiaries at December 31, 2011 and 2010 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the Management's Report on Internal Control over Financial Reporting under Item 9A. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included 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, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP

San Jose, California
February 21, 2012

Supplementary Financial Information

Selected Quarterly Consolidated Financial Data (Unaudited)

The following tables set forth our unaudited condensed consolidated statements of operations data for each of the eight quarterly periods ended December 31, 2011. We have prepared this unaudited information on a basis consistent with our audited consolidated financial statements, reflecting all normal recurring adjustments that we consider necessary for a fair presentation of our financial position and operating results for the fiscal quarters presented. Basic and diluted losses per share are computed independently for each of the quarters presented. Therefore, the sum of quarterly basic and diluted per share information may not equal annual basic and diluted losses per share.

	Three Months Ended (1)			
	April 3, 2011	July 3, 2011	October 2, 2011	December 31, 2011
	(thousands, except per share amounts)			
Net sales	\$ 47,049	\$ 51,259	\$ 44,945	\$ 41,694
Gross profit	\$ 12,881	\$ 13,984	\$ 15,516	\$ 13,867
Loss from operations	\$ (5,081)	\$ (4,028)	\$ (2,625)	\$ (4,816)
Net loss	\$ (6,274)	\$ (5,213)	\$ (2,289)	\$ (4,174)
Net loss per share:				
Basic and diluted	\$ (0.12)	\$ (0.10)	\$ (0.04)	\$ (0.07)
Shares used in computing net loss per share:				
Basic and diluted	50,287	54,550	58,224	58,276

	Three Months Ended (1)			
	March 28, 2010	June 27, 2010	September 26, 2010	December 31, 2010
	(thousands, except per share amounts)			
Net sales	\$ 25,195	\$ 32,120	\$ 39,762	\$ 41,259
Gross profit	\$ 6,517	\$ 8,530	\$ 13,231	\$ 11,106
Loss from operations	\$ (11,033)	\$ (9,598)	\$ (4,984)	\$ (7,580)
Net loss	\$ (10,756)	\$ (8,380)	\$ (6,366)	\$ (7,901)
Net loss per share:				
Basic and diluted	\$ (0.22)	\$ (0.17)	\$ (0.13)	\$ (0.16)
Shares used in computing net loss per share:				
Basic and diluted	49,984	50,052	50,094	50,153

⁽¹⁾ For presentation purposes, we reclassified certain prior period costs related to our spare parts business from selling, general and administrative expense to cost of sales as they more appropriately reflect costs associated with revenue generating activities. The results of these reclassifications do not affect our net income, cash flows or stockholders' equity.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended, as of December 31, 2011. Our disclosure controls and procedures are intended to ensure that the information we are required to disclose in the reports that we file or submit under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as the principal executive and financial officers, respectively, to allow timely decisions regarding required disclosures. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

It should be noted that any system of controls, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system will be met. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting; as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended. A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and disposition of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2011. In making this assessment, management used the criteria set forth in the framework established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) entitled *Internal Control—Integrated Framework*. Based on our evaluation under the framework in *Internal Control—Integrated Framework*, our management concluded that our internal control over financial reporting was effective as of December 31, 2011.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2011 has been audited by PricewaterhouseCoopers, LLP, an independent registered public accounting firm, as stated in their report, which appears in Item 8 of this report.

Changes in Internal Control over Financial Reporting

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, also conducted an evaluation of our internal control over financial reporting to determine whether any change occurred during the year ended December 31, 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Based on that evaluation, our management concluded that there was no such change during the fourth quarter.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item will be included under the captions “Executive Compensation,” “Election of Directors,” “Report of the Audit Committee” and “Section 16(a) Beneficial Ownership Reporting Compliance” for the 2012 Annual Meeting in our Proxy Statement with the SEC within 120 days of the year-end December 31, 2011 (2012 Proxy Statement) and is incorporated herein by reference.

We have adopted a Code of Ethics and Business Conduct for all officers, directors and employees. We have posted the Code of Ethics and Business Conduct on our website located at <http://www.mattson.com>. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding an amendment to, or a waiver from, this Code of Ethics by posting such information on our website.

Item 11. Executive Compensation

The information required by this item will be set forth in our 2012 Proxy Statement under the captions “Executive Compensation” and “Report of the Compensation Committee on Executive Compensation” and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information related to the security ownership of certain beneficial owners and management will be set forth in our 2012 Proxy Statement under the caption “Security Ownership of Management and Principal Stockholders,” and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item will be set forth in our 2012 Proxy Statement under the caption “Certain Relationships and Related Transactions, and Director Independence” and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item will be set forth in our 2012 Proxy Statement under the captions “Audit and Related Fees” and “Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Auditors” and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

The financial statements filed as part of this report are listed on the index to consolidated financial statements in Item 8.

(a)(2) Financial Statement Schedules

Schedule II — Valuation and Qualifying Accounts for the three years ended December 31, 2011, 2010 and 2009, which is included in Schedule II of this Form 10-K.

(a)(3) Exhibits

<u>Exhibit Number</u>	<u>Description</u>	<u>Notes</u>
3.1	Amended and Restated Certificate of Incorporation of Mattson Technology, Inc.	(1)
3.2	Amended and Restated Bylaws of Mattson Technology, Inc.	(3)
4.5	Form of Rights Agreement between the Mattson Technology, Inc. and Mellon Investor Services, LLC as Rights Agent (including as <u>Exhibit A</u> the form of Certificate of Designation, Preferences and Rights of the Terms of the Series A Preferred Stock, as <u>Exhibit B</u> the form of Right Certificate, and as <u>Exhibit C</u> the Summary of Terms of Rights Agreement)	(4)
4.6	Amendment No. 1 to Rights Agreement between Mattson Technology, Inc. and Mellon Investor Services, LLC as Rights Agent	(5)
4.7	Amendment No. 2 to Rights Agreement between Mattson Technology, Inc. and Mellon Investor Services, LLC as Rights Agent	(14)
10.1	2005 Equity Incentive Plan	(6) (C)
10.2	Amendment #1 to 2005 Equity Incentive Plan	(7) (C)
10.3	Nonqualified Deferred Compensation Plan	(8) (C)
10.4	1989 Stock Option plan, as amended	(2) (C)
10.5	Amended and Restated 1994 Employee Stock Purchase Plan	16
10.6	Form of Indemnity Agreement	(9) (C)
10.10	Industrial Space Lease, dated August 1, 2005, between Mattson Technology, Inc. and Renco Equities IV, a California partnership.	(10)
10.11	Sublease Agreement dated February 27, 2003, by and between Lam Research Corporation, a Delaware Corporation, and Mattson Technology, Inc., a Delaware Corporation, for lease of building.	(11)
10.12	Lease Agreement dated September 2, 2001, by and between Renco Equities IV, a California partnership, and Lam Research Corporation, a Delaware Corporation, for lease of building.	(11)
10.13	Form of Performance Based Restricted Stock Units Agreement between Mattson Technology and some employees.	(12)
10.15	Severance and Executive Change of Control Agreement for David Dutton, President and Chief Executive Officer	(13) (C)
10.16	Severance and Executive Change of Control Agreement for J. Michael Dodson, Chief Financial Officer	(15) (C)

10.17	Transition Agreement and Release for Andy Moring, Chief Financial Officer, Secretary and Executive Vice President - Finance	17 (C)
10.18	Offer Letter between Mattson Technology, Inc. and J. Michael Dodson	17 (C)
21.1	Subsidiaries of Registrant.	*
23.1	Consent of Independent Registered Public Accounting Firm	*
31.1	Certification of Chief Executive Officer Pursuant to Sarbanes-Oxley Act Section 302(a)	*
31.2	Certification of Chief Financial Officer Pursuant to Sarbanes-Oxley Act Section 302(a)	*
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350	*
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350	*
101.INS	XBRL Instance Document.	(18)
101.SCH	XBRL Taxonomy Extension Schema Document.	(18)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	(18)
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	(18)
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	(18)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	(18)

Notes:

* Filed herewith.

(C) Management contract or compensatory plan or arrangement.

- (1) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. current report on Form 8-K/A filed on January 30, 2001.
- (2) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. quarterly report on Form 10-Q filed on August 14, 2002.
- (3) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. current report on Form 8-K filed on December 22, 2010.
- (4) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. current report on Form 8-A12G filed on August 22, 2005.
- (5) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. annual report on Form 10-K filed on March 2, 2007.
- (6) Incorporated by reference to Appendix A to Mattson Technology, Inc. proxy statement filed on April 20, 2005.
- (7) Incorporated by reference to Appendix 1 to Mattson Technology, Inc. proxy statement filed on April 26, 2007.
- (8) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. on Form S-8 filed on December 16, 2005.
- (9) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. current report on Form 8-K filed on June 10, 2010.
- (10) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. quarterly report on Form 10-Q filed on November 4, 2005.
- (11) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. quarterly report on Form 10-Q filed on May 14, 2003.
- (12) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. quarterly report on Form 10-Q filed on May 9, 2008.
- (13) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. current report on Form 8-K filed on June 1, 2011.
- (14) Incorporated by reference to the corresponding exhibit to Mattson Technology, Inc. current report on Form 8-K filed on July 14, 2008.
- (15) Incorporated by reference to the corresponding exhibit to Mattson Technology, Inc. current report on Form 8-K filed on January 6, 2012.

- (16) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. annual report on Form 10-K filed on March 11, 2011.
- (17) Incorporated by reference to corresponding exhibit to Mattson Technology, Inc. quarterly report on Form 10-Q filed on November 7, 2011.
- (18) The financial information contained in these XBRL documents are not the official publicly filed financial statements of Mattson Technology, Inc. The purpose of submitting these XBRL documents is to test the related format and technology, and, as a result, investors should continue to rely on the official filed version of the furnished documents and not rely on this information in making investment decisions. In accordance with Rule 402 of Regulation S-T, the information in these exhibits shall not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liability of that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

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.

MATTSON TECHNOLOGY, INC.
(Registrant)

February 21, 2012

By: /s/ David Dutton
David Dutton
President, Chief Executive Officer and Director
(Principal Executive Officer)

February 21, 2012

By: /s/ J. Michael Dodson
J. Michael Dodson
*Chief Financial Officer, Executive Vice President —
Finance and Secretary*
(Principal Financial and Accounting Officer)

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Hans-Georg Betz</u> Hans-Georg Betz	Chairman of the Board and Director	February 21, 2012
<u>/s/ Richard E. Dyck</u> Richard E. Dyck	Director	February 21, 2012
<u>/s/ Kenneth Kannappan</u> Kenneth Kannappan	Director	February 21, 2012
<u>/s/ Scott Kramer</u> Scott Kramer	Director	February 21, 2012
<u>/s/ Shigeru Nakayama</u> Shigeru Nakayama	Director	February 21, 2012
<u>/s/ Scott Peterson</u> Scott Peterson	Director	February 21, 2012
<u>/s/ Kenneth Smith</u> Kenneth Smith	Director	February 21, 2012

SCHEDULE II
VALUATION AND QUALIFYING ACCOUNTS
Allowance for Doubtful Accounts

<u>Year Ended December 31,</u>	<u>Balance at Beginning of Year</u>	<u>Charged (Credited) to Income</u>	<u>Deductions and Other</u>	<u>Balance at End of Year</u>
	(thousands)			
2011	\$ 681	\$ 8	\$ (5)	\$ 684
2010	\$ 2,167	\$ (1,154)	\$ (332)	\$ 681
2009	\$ 4,606	\$ (2,440)	\$ 1	\$ 2,167

Schedules other than those listed above have been omitted since they are either not required, not applicable, or because the information required is included in the consolidated financial statements or the notes thereto.