



2011 Form 10-K

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

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**FORM 10-K**

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(Mark one)

- ☒ **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 001-33834

**RUBICON TECHNOLOGY, INC.**

(Exact Name of Registrant as Specified in Its Charter)

Delaware  
(State or Other Jurisdiction of  
Incorporation or Organization)

36-4419301

(I.R.S. Employer Identification No.)

900 East Green Street  
Bensenville, Illinois  
(Address of Principal Executive Offices)

60106  
(Zip Code)

Registrant's Telephone Number, Including Area Code: (847) 295-7000

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

Title of each class  
Common Stock, Par Value \$0.001 per share

Name of each exchange on which registered  
The NASDAQ Global 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 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 such 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 Website, 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 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 the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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 ☒

As of June 30, 2011, there were 17,537,632 shares of common stock outstanding held by nonaffiliates of the registrant, and the aggregate market value of the common stock (based upon the closing price of these shares on the NASDAQ Global Market) was approximately \$295,684,476.

The number of shares of the registrant's common stock outstanding as of the close of business on March 9, 2012 was 22,532,224

**Documents incorporated by reference:**

Portions of the Registrant's Proxy Statement for its Annual Meeting of Stockholders are incorporated by reference into Part III, of this Annual Report on Form 10-K provided, that if such proxy statement is not filed with the Commission within 120 days after the end of the fiscal year covered by this Form 10-K, an amendment to this Form 10-K shall be filed no later than the end of such 120-day period.

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## PART I

All statements, other than statements of historical facts, included in this Annual Report on Form 10-K regarding our estimates, expectations, beliefs, intentions, projections or strategies for the future, results of operations, financial position, net sales, projected costs, prospects and plans and objectives of management for future operations may be “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995. We have based these forward-looking statements on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives and financial needs. These forward-looking statements can be identified by the use of terms and phrases such as “believe,” “plan,” “intend,” “anticipate,” “target,” “estimate,” “expect,” and the like, and/or future-tense or conditional constructions such as “will,” “may,” “could,” “should,” etc. (or the negative thereof). Items contemplating or making assumptions about actual or potential future sales, market size and trends or operating results also constitute forward-looking statements.

Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Before investing in our common stock, investors should be aware that the occurrence of the risks, uncertainties and events described in the section entitled “Risk factors” and elsewhere in this Annual Report could have a material adverse effect on our business, results of operations and financial condition.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, forward-looking statements are inherently subject to known and unknown risks and business, economic and other risks and uncertainties that may cause actual results to be materially different from those discussed in these forward-looking statements. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report. We assume no obligation to update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report, other than as may be required by applicable law or regulation. If one or more of these risks or uncertainties materialize, or if the underlying assumptions prove incorrect, our actual results may vary materially from those expected or projected.

This Annual Report also contains statistical data and estimates, including those relating to market size and growth rates of the markets in which we participate, that we obtained from industry publications and reports generated by market research firms. These publications typically indicate that they have obtained their information from sources they believe to be reliable, but do not guarantee the accuracy and completeness of their information. Although we have assessed the information in the publications and found it to be reasonable and believe the publications are reliable, we have not independently verified their data.

You should read this Annual Report and the documents that we reference in this Annual Report and have filed with the SEC as exhibits with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

Unless otherwise indicated, the terms “Rubicon,” the “Company,” “we,” “us,” and “our” refer to Rubicon Technology, Inc.

## **ITEM 1. BUSINESS**

### **OVERVIEW**

We are an advanced electronic materials provider that develops, manufactures and sells monocrystalline sapphire and other innovative crystalline products for light-emitting diodes (“LEDs”), radio frequency integrated circuits (“RFICs”), blue laser diodes, optoelectronics and other optical applications. The emergence of sapphire in commercial volumes at competitive prices has enabled the development of new technologies such as high brightness (“HB”) white, blue and green LEDs and highly-integrated RFICs. We apply our proprietary crystal growth technology to produce high-quality sapphire products efficiently to supply our end-markets, and we work closely with our customers to meet their quality and delivery needs. We believe we are the leading supplier of sapphire products to the LED industry.

We are a vertically integrated manufacturer of high-quality sapphire substrates and optical windows that are used in a variety of high-growth, high-volume end market applications. Our largest sales of product in 2010 were two to four inch sapphire cores and wafers for use in LEDs and blue laser diodes for solid state lighting and electronic applications. In 2011, sales of core product were surpassed by sales of six-inch polished sapphire wafers that are used in the same LED applications and in Silicon-on-Sapphire (“SoS”) RFICs. We also sell sapphire products used for windows and lenses in military, aerospace, sensor and other applications. We have extended our technology, giving us the ability to produce cores and wafers of up to twelve inches in diameter to support next generation LED and RFIC production. We believe that LED and SoS RFIC production are following a similar path to that of production of integrated circuits on silicon substrates, which gradually migrated to production on larger and larger substrates in order to reduce manufacturing costs. We feel that this migration to larger substrates and the related efficiency gains will help reduce the prices of LED devices and thereby facilitate greater adoption of LED technology in the backlighting and general lighting markets.

Our fully integrated in-house capabilities enable us to design, assemble and maintain proprietary crystal growth furnaces to grow high purity, low-stress, ultra low defect density sapphire crystals. In addition, we possess state-of-the-art capabilities in high precision core drilling, wafer slicing, surface lapping, edge bevel grinding and wafer cleaning processes. We foster a strong sense of innovation and agility in our product development teams in an attempt to develop new products more effectively and to rapidly capture market growth.

We plan to leverage our technological advantage in efficiently producing high-quality, large-diameter sapphire products to maintain our leadership position and capitalize on future growth opportunities. To attain this goal, we are investing in research and development activities, continuing to enhance our operational capabilities, increasing our brand recognition and diversifying into new market segments.

We are a Delaware corporation incorporated on February 7, 2001. Our common stock is listed on the NASDAQ Global Market under the symbol “RBCN”.

### **INDUSTRY OVERVIEW**

Integrated circuits and other semiconductor devices have traditionally been fabricated on silicon substrates. However, for certain advanced applications, new electronic materials have emerged as the substrates of choice due to evolving integration and performance considerations. For example, sapphire is the preferred substrate material for HB white, blue and green LED applications due to its crystal lattice compatibility with the aluminum gallium nitride (“AlGaN”) epitaxial layers, thermal expansion properties, commercial availability and cost efficiency.

#### **LED applications**

Advancements in solid state lighting utilizing HB white, blue and green LEDs over the past decade represent a disruptive technology in the lighting industry, providing significant performance, environmental and economic improvements compared to traditional incandescent or fluorescent lighting. For example, traditional

incandescent lamps are inefficient and costly, emitting over 90% of consumed power as heat and lasting only 1,500 to 2,000 hours. Fluorescent lamps produce light by passing electricity through toxic mercury vapor, which creates an environmental disposal problem. LEDs do not contain mercury or lead and are 4.0 to 6.6 times as efficient as traditional incandescent lamps, while providing 35,000 to 50,000 hours of light. These factors, along with their durability, small form factor, excellent color performance, and decreasing costs, have led to growing demand for LEDs in applications such as small displays for mobile devices, flashes for digital cameras, backlighting units (“BLUs”) for displays used in notebook computers, desktop monitors, LCD televisions, public display signs, automotive lights, traffic signals, and general and specialty lighting. Applications using LEDs have unit volumes in the billions and are expected to grow significantly over the next several years. The majority of HB LEDs are produced on sapphire substrates. Therefore, as the HB LED market grows, we believe the sapphire substrate market will grow as well.

*Mobile devices.* LEDs are used in color displays for mobile phones and other portable electronics such as GPS systems, MP3 players and digital camera flashes. LEDs are well-suited for mobile devices due to their low current drain which extends battery life and durability while generating less heat. For these reasons, the vast majority of mobile devices utilize LED lighting.

*LED backlighting units for large displays.* LED BLUs now frequently replace conventional fluorescent BLUs in LCD flat panel televisions, notebook computers and desktop monitors. Benefits of LED BLUs in these applications are reduced power consumption/extended battery life, thinner displays, quicker response time and better color rendition. Displays made with LED BLUs also have no toxic materials, which help electronics manufacturers to comply with environmental regulations.

*Automotive lighting.* Automobile manufacturers are increasingly using LEDs in car and truck headlights, turning and tail light functions as well as interior lighting. Benefits include near-instant response time, reduced power usage and more stylish and effective designs. Increased LED usage in other transportation vehicles such as motorcycles and commercial jets offers additional growth potential.

*Commercial signage/displays.* LEDs are widely used as light sources on large signs, LED displays, and outdoor displays, such as jumbo screens used in sporting arenas and electronic billboard displays.

*General illumination.* LEDs are increasingly being used for outdoor and indoor commercial and public lighting, architectural lighting, street lights, traffic signals, retail displays, residential lighting, replacement lamps, and off-grid lighting for developing countries. General illumination is expected to be one of the fastest growing applications for HB LEDs.

### **SoS RFIC and optical applications**

SoS integrated circuits consist of a thin layer of silicon grown on a sapphire substrate and are primarily used in advanced wireless and military applications, such as RFICs. In particular, SoS RFICs are currently used in high volumes for mobile phones, broadband television set-top boxes, satellites and radiation-hardened applications for the defense industry. We believe SoS devices also represent a large potential market opportunity for sapphire due to sapphire’s outstanding properties as an insulating substrate material with outstanding thermal conductivity and crystal lattice compatibility with silicon, which, among other things, enables monolithic integration in RFICs.

Sapphire and various fluoride materials are utilized for windows and optics for aerospace, sensor, medical and laser applications. Sapphire is used in these applications due to its wide-band transmission, superior strength, scratch resistance and high strength-to-weight ratio. Sapphire’s physical properties make it very well suited for jet fighter targeting pod windows, forward-looking infrared (“FLIR”) windows for commercial and business jets as well as unmanned air vehicles or drones, rocket domes and transparent armor for military vehicles. Sapphire substrates are also used in the production of blue laser diodes. Blue laser diode technology allows much higher

data storage for HD-DVD applications. Blue laser diodes are just beginning to penetrate potentially high volume applications, such as the Blu-ray Disc DVD players and leading-edge video game systems.

### **Sapphire substrate industry supply chain**

The production process for sapphire substrates is substantially similar to that of silicon wafers. A typical process flow consists of crystal growth, fabrication, slicing, lapping and polishing steps. Output quality is measured in flatness, desired crystal planar orientation, etch pitch density and crystalline structure uniformity. A great emphasis is placed on continuously improving yields and increasing production capacity to drive costs lower to take advantage of emerging high-volume opportunities. Device manufacturers are seeking larger diameter sapphire wafers to allow them to gain efficiency in their production processes through higher throughput and reduced edge loss. Historical methods of sapphire crystal growth, which rely on lower-volume batch processes, are less able to meet the needs of leading end-market customers for high quality crystals, demanding dimensional tolerances, high production volumes, cost efficiency and on-time delivery. Sapphire is the base material that “feeds” the entire value chain.

### **THE RUBICON SOLUTION**

As a leading producer of sapphire and provider of other crystals, we believe that the following are our principal competitive advantages:

#### **Proprietary technology for crystal growth**

We refer to the proprietary technology, equipment and processes we use in the production of our sapphire crystals as “ES2,” which stands for “evolving science, evolving solutions.” Due to our understanding of sapphire crystal growth seeding and crystal growth furnace operational parameters, we have developed a full in-house capability to design, build and maintain ES2 crystal growth furnaces with proprietary features. Our ES2 technology enables us to maintain a highly scalable, efficient operation and to produce large diameter sapphire wafers that we believe exceed the quality of any other sapphire producer today. Our competitors primarily employ the Kyropoulos, Czochralski (“CZ”) or Edge-defined Film-fed Growth (“EFG”) method to grow sapphire crystals. We believe that our ES2 technology, which employs an enhanced Kyropoulos methodology, significantly outperforms other methods of sapphire production with respect to capital costs, operating costs, throughput, quality and diameter size. Using our ES2 technology, we currently have the capability to produce sapphire products with diameters of up to eight inches in production volumes and we have produced wafers as large as twelve inches diameter in our research and development.

#### **High quality sapphire products**

We believe our sapphire crystal wafers are best-in-class in terms of quality. Our quality advantage is exhibited by our ability to produce crystals without defects such as grain boundaries and with low density of dislocations (10-100 per square centimeter) that is significantly better than the industry standard range. According to *Sapphire Material, Manufacturing, Applications* by E. Dobrovinskaya, L. Lytvynov and V. Pishchik (Springer 2009), sapphire grown using other methods have grain boundaries with different angles of disorientation, and significantly larger density of dislocations (5,000-100,000 per square centimeter). Our sapphire also has ultra high purity levels as high as 99.999%. Our high purity sapphire helps our customers realize high yields in their processing. In addition, because of the high purity of our products, our customers have the ability to utilize our sapphire for optical applications requiring high transmission in the ultraviolet through mid-infrared spectral ranges. Through our operational expertise in crystal growth, post-growth processing and in-process manufacturing controls of sapphire wafer production, we are able to meet or exceed our customers’ key product specifications, such as crystalline quality, dimensional tolerances and crystal orientation, while maintaining high production yields.

## **Vertical integration**

We possess critical know-how and proprietary processes and metrology for crystal growth and sapphire processing. We grow sapphire crystals and have extensive capabilities to process sapphire into products that meet our customers' needs, from cores, wafers and window blanks to large diameter epi-polished wafers. We have recently developed the capability to process powdered aluminum oxide into the raw material used in our crystal growth process, providing both cost reduction and greater quality control. In the areas of fabrication and slicing, we employ high volume manufacturing techniques and utilize customized tooling and metrology to hold very tight dimensional and orientation tolerances for sapphire cores and wafers. We also have high precision lapping, edge bevel grinding and annealing capabilities for as-ground wafers and window blanks. We have proprietary six and eight inch polishing and ultra-cleaning equipment and processes for LED, SoS RFIC and other applications that demand larger-diameter epi-polished wafers. By vertically integrating our processes, we are able to achieve significant operating efficiencies and produce high-quality, high-precision products that offer cost and quality benefits to our customers. This vertical integration also helps us expand our range of products, protect our technology and manufacturing trade secrets and improve our reliability as a supplier.

## **High volume and flexible manufacturing capability**

We provide a high volume and stable supply of products for our customers. We offer reliable, consistent on-time delivery to our customers through our flexible and scalable production operations. We have developed automated manufacturing and metrology platforms at each stage of our production process that enable us to increase capacity rapidly and switch products in manufacturing easily so that we can meet our customers' specific product demands.

## **Lowest total cost for customers**

We compete on the quality of our products and our service levels to supplement our competitive pricing. We believe our high sustained yields, our dedication to consistent production and performance and our commitment to lasting customer relationships help assure our customers of a reliable source of high-quality sapphire products at stable prices. Our in-process quality control practices lead to predictable customer process yields, reduced inspection costs and overall high customer satisfaction. In addition, we work closely with our customers to understand their product specifications and then align our operations to meet their needs. Through close collaboration with our customers, we help them develop new applications for our advanced sapphire products and establish ourselves as a preferred supplier. As such, we believe our solution offers the lowest total cost for our customers.

## **STRATEGY**

Our goal is to be the leading global provider of advanced monocrystalline substrate and window materials to the solid state lighting, SoS RFIC, aerospace and optical markets. We believe we currently occupy a leading position among sapphire producers worldwide in market volume for two through eight inch sapphire products for LEDs. A key element of our strategy is to increase the proportion of our shipments of six inch and greater diameter products. Six inch wafers made up 48% of our revenue in 2011, and we expect that revenues from large diameter wafers will eventually grow as a proportion of our sales as more LED chip manufacturers move to a large diameter substrate platform. The manufacturing processes and metrology required to meet customer requirements for flatness and smoothness of large diameter wafers are more sophisticated than those required for two inch wafers; thus the large-diameter market has fewer sapphire competitors. As the first to market with large-diameter sapphire wafers, we have gained significant experience and expertise. As LED manufacturers gravitate toward larger substrates, we believe we have an advantage as a proven supplier of these products. We have provided eight inch wafers for research and development purposes to both the LED and SoS industry.



Our strategy includes the following key elements:

### **Extend our technology and manufacturing leadership position**

We believe our specialized manufacturing processes and proprietary technology and trade secrets provide us with significant competitive advantages. We have designed and developed product, equipment and process technology platforms from which we can rapidly increase capacity and stay flexible to meet our customers' needs. At each phase of our manufacturing process, we have developed and standardized automated equipment that employs similar processes to produce a full range of products. For example, most of our furnaces can grow sapphire crystals of the same size in various orientations to produce two through six inch wafers and cores. At our new crystal growth facility in Batavia, Illinois, we have installed larger furnaces that grow sapphire crystals large enough to produce two through eight inch wafers and cores. This flexibility in crystal growth production reduces our operating costs and significantly improves our product development cycles. Recently, we further extended our technology and now have the ability to produce up to twelve inch cores and wafers and produce even larger diameter optical material. We intend to continue to develop advanced technology platforms to further increase the size of crystals produced and offer market-leading product specifications, while maintaining product quality and manufacturing efficiencies.

### **Capitalize on opportunities in high-growth markets**

Our sapphire products are used in multiple applications in the high-growth LED and SoS RFIC markets. We also participate in optical market segments where sapphire and fluoride materials are being adopted rapidly in new applications. We intend to continue to expand our opportunities by adding new categories and sizes of products with the goal of providing our customers in multiple high-growth end markets with a robust set of sapphire solutions. For example, one of the largest market segment opportunities is likely to come from the solid state lighting market, which will require higher brightness, lower-cost white LEDs that require larger-size LED chips. Larger LED chips are increasingly being manufactured in volume on four and six inch sapphire wafers. Our process to manufacture large diameter, high quality sapphire wafers is well-suited to this market and we believe our processes will help enable its growth. We already produce high volumes of four and six inch sapphire products and we continue to add large diameter sapphire production capacity in anticipation of market growth, as evidenced by the addition of eight inch diameter capabilities in 2008 and twelve inch diameter capabilities in 2009. We believe that LED chip manufacturers will continue to focus on using larger diameter substrates in order to further drive efficiencies in their manufacturing processes.

### **Enhance operational excellence**

Our unique expertise in producing high-quality sapphire products in many sizes gives us a significant edge in process and product technology. We plan to further refine our proprietary ES2 crystal growth techniques, sapphire processing platforms and process controls to produce even higher quality crystals at greater yields. Our engineering efforts focus on the capability to design, build and maintain ES2 crystal growth furnaces with new proprietary features. We seek to continuously improve our sapphire processing and material inspection capabilities. We also promote operational excellence through lowering cycle times, raising yields, and reducing overhead costs. Our ability to understand our customers' design and manufacturing processes enhances our ability to reach these goals. We employ Six Sigma methodologies to continuously improve our operational platforms and we provide extensive training to current and new employees.

### **Expand our sales and marketing efforts**

We plan to enhance our brand recognition worldwide by increasing our marketing and communications programs and resources. For example, we have sponsored several LED conferences and we plan to extend our sponsorships into other markets, such as SoS RFICs and aerospace. We plan to further enhance our website, extend our public relations campaigns and increase our brand visibility in trade publications and with technical

organizations. We rely on direct sales for the majority of our business. Although we have already entered multiple markets globally, we plan to increase the scale and geographical coverage of our sales efforts.

### **Penetrate new market segments**

We target high growth market segments where we believe we can gain a leadership position. Although production of sapphire cores and wafers is our focus today, we intend to leverage our crystal growth and processing know-how to develop high-quality crystal products for new substrate and window applications. Sapphire is becoming increasingly popular and is replacing quartz and glass in high-performance and harsh environment applications in the aerospace, petroleum and laser industries. For example, the U.S. military uses sapphire optical windows to construct targeting mechanisms for its jet fighters and drones and transparent armor for land vehicles. We intend to use our proprietary manufacturing technology to produce additional single crystal materials that can be used in optical applications as well as alternative substrates for certain electronic materials applications. As the electronics and optical industries continue to develop new applications that take advantage of the unique properties of both sapphire and other single crystal products, our goal is to be the provider of choice for these applications.

### **TECHNOLOGY**

Our proprietary ES2 crystal growth technique produces high-quality sapphire crystals for use in our sapphire products. ES2 is derived from the standard Kyropoulos method of crystal growth. We developed this technique with the goal of establishing greater control over the crystal growth process while maintaining minimal temperature variations. Unlike other techniques, during the ES2 technique, the growing sapphire crystal exists in an unconstrained, low stress environment inside a closed growth chamber. The closed system allows for enhanced control of the melt, resulting in higher quality crystals. The temperature gradient between the melt and the crystal in the ES2 technique is significantly lower than in other crystal growth techniques. These aspects of the ES2 technique enable us to grow crystals that have a significantly lower dislocation density, higher crystal purity and higher uniformity than sapphire crystals grown using other techniques. The ES2 technique provides an inherent annealing process once the crystal is fully grown. This thermal annealing is an integral means of relieving stress in the crystal during the ES2 process. We believe we can readily scale our ES2 technology in a production environment while maintaining high crystal quality even as crystal boule size is increased. As a result of our proprietary ES2 technology, we believe that we currently offer the most efficient method for manufacturing large form factor, high quality sapphire in the market today.

We have automated the crystal growth process of our proprietary ES2 technique. Our furnace environments are controlled by closed-loop control systems and the overall crystal growth process is run with minimal operator intervention, which reduces the potential for human error. In addition, a single operator can supervise the control of multiple ES2 furnaces simultaneously, which reduces cost.

We believe our proprietary ES2 process provides significant advantages over other crystal growth methods such as CZ and EFG. Unlike the ES2 technique, the CZ and EFG methods grow crystals with much higher levels of stress. This stress can decrease the overall quality of the sapphire crystal and requires increased processing time to relieve this stress, which increases production costs and decreases throughput, especially in larger diameter crystals. During the EFG process, the crystal is grown in a sheet form by pulling it through a die directly from the melt; while in the CZ process, the crystal must be rotated and pulled as the aluminum oxide melt is consumed. These constrained growth environments with higher thermal gradients increase stress and decrease crystal quality.

Our research and development (“R&D”) activity plays a vital role in supporting our technology, product and revenue roadmaps. In 2011, 2010 and 2009, our R&D expenses totaled \$1.8 million, \$1.1 million and \$801,000, respectively. Our R&D is focused on three key areas: large diameter sapphire growth and fabrication; higher precision sapphire processing; and new crystal development. Our technical staff possesses deep and broad

expertise in materials science and engineering. We also develop and utilize sophisticated metrology equipment to perform material and process characterization.

## PRODUCTS

We offer a wide variety of sapphire products designed to meet the stringent specifications of our customers. Using our proprietary ES2 technology, we grow high-quality sapphire boules. We fabricate our products from the boules and sell them in four general categories: core, as-cut, as-ground and polished. We currently offer two inch, three inch, four inch, six inch and eight inch diameter wafers, in C, R, A, and M planar orientations. A sapphire crystal has multiple orientation planes resulting from its crystalline structure symmetry.

Each orientation of the crystal structure is represented by a letter and differs in lattice structure. These variations result in different chemical, electrical, and physical properties depending on the particular orientation plane. As a result, customers require different orientation planes depending on the intended application. For example, LED manufacturers typically request C plane crystals while SoS manufacturers typically request R plane crystals.

While we continue to offer all of the following products, our sales efforts are now focused on selling two through four inch cores to our polishing customers and six and eight inch polished wafers to our semiconductor device manufacturing customers.

Product	Size	Orientation	Applications
Core	2," 3," 4"	C, R, A, M	<ul style="list-style-type: none"> <li>• LED</li> <li>• Optical windows</li> <li>• Blue laser diode</li> </ul>
As-Cut	2," 3," 4," 6", 8"	C, R, A, M	<ul style="list-style-type: none"> <li>• Wafers for LED</li> <li>• Wafers for blue laser diodes</li> <li>• Wafers for SOS RFICs</li> </ul>
As-Ground	2," 3," 4," 6", 8"	C, R, A, M	<ul style="list-style-type: none"> <li>• Wafers for LED</li> <li>• Wafers for SOS RFICs</li> <li>• Blanks for optical windows</li> <li>• Wafer carriers</li> </ul>
Polished	6", 8"	C, R, A	<ul style="list-style-type: none"> <li>• Epi-polished wafers for SOS RFICs</li> <li>• Polished optical windows</li> <li>• Double-side polished wafer carriers</li> </ul>

### Core

Our core product line consists of our sapphire cores drilled from sapphire boules with high-precision. In 2011, 2010 and 2009, sales of core accounted for 46%, 70% and 66% of our revenue, respectively. Demand for sapphire cores was limited in the second half of 2011 due to excess inventory at customers but demand for this product is expected to increase in the first half of 2012.

### As-cut

Our as-cut product line consists of sapphire cores sliced using a wire saw machine. We believe we are able to offer our customers one of the highest-precision cut sapphire wafers in the market. This is especially important to customers who require precise orientation planes for applications such as LEDs, SoS, RFICs and blue laser diodes. In 2011, 2010 and 2009, sales of as-cut wafers accounted for less than 10% of our revenue.

## **As-ground**

Our as-ground product line consists of cut sapphire wafers that undergo a double-sided lapping and edge grinding process. The lapping process ensures that the surface of the wafer is flat and smooth and has a high degree of parallelism. The grinding process bevels the edges of the wafers, making them more durable and less susceptible to chipping and cracking. In 2011, 2010 and 2009, sales of as-ground wafers accounted for less than 10% of our revenue.

## **Polished**

Our polished product line consists of finely polished, ultra-clean, six and eight inch sapphire wafers. Our polished wafers undergo two polishing phases including both a mechanical and a chemical mechanical planarization phase. We believe we are currently one of very few fully vertically integrated firms offering six and eight inch, high-quality C-plane and R-plane polished wafers. In 2011, 2010 and 2009 sales of polished wafers accounted for 49%, 25% and 11% of our revenue, respectively. During 2009, our key customer for R-plane polished substrates had supply chain management challenges and also experienced decreased demand due to the global recession. Demand for R-plane polished substrates is expected to strengthen in 2012 as our key customers' products appear to be gaining market share. The LED industry began using six inch C-plane polished substrates more heavily in 2010, which resulted in increased polished wafer revenue in 2010 and 2011. Demand from the LED market for six inch polished is expected to be limited in the first half of 2012 due to excess inventory at our customers but demand is expected to strengthen for this product in the second half of 2012.

## **Other**

We also offer optically-polished windows and ground window blanks of sapphire and various fluoride compounds, such as calcium, barium and magnesium fluoride. We provide sapphire and other crystal products in many sizes, shapes and product formats for specialty applications.

## **MANUFACTURING**

The process of growing the crystal begins by heating the raw material, aluminum oxide, until it reaches an ideal temperature above its melting point. This ideal temperature is essential for our process because it allows us to produce high-purity crystals with very low defect rates. Following the heating, a seed rod is inserted in the melted material as the material is being cooled to crystallize into a boule. Following the growth process, each boule is rigorously inspected by using polarized lighting and magnification to find imperfections, such as bubbles, dislocations and granular deposits within the crystal.

We then drill the resulting boules into cylindrical cores using our custom high-precision crystal orientation equipment and proprietary processes. We use wire saws to slice each core into wafers of precise size and shape. These wafers are then pre-polished using precision lapping and edge-grinding equipment and then are ready to be polished into epitaxial wafers. All of these processes are performed in clean environments to reduce the chance of crystal contamination. Epi-polishing and wafer cleaning are performed in Class 10,000 and Class 100 clean-room environments, respectively.

We are dedicated to quality assurance throughout our entire operation. We employ detailed material traceability from raw material to finished product. Our quality system is certified as ISO9001:2000 and we have in-house expertise at the Six Sigma Black Belt level.

All of our long-lived assets are located in the U.S. and Malaysia.

## **SALES AND MARKETING**

We market and sell our products through our direct sales force to customers in Asia, North America and Europe. Our direct sales force includes experienced and technically sophisticated sales professionals and

engineers who are knowledgeable in the development, manufacturing and use of sapphire substrates, windows and other optical materials. Our sales staff works with customers during all stages of the substrate manufacturing process, from developing the precise composition of the substrate through manufacturing and processing the substrate to the customer's specifications.

A key component of our marketing strategy is developing and maintaining strong relationships with our customers, especially at the senior management level. We achieve this through working closely with our customers to optimize our products for their production processes. In addition, we are able to develop long-term relationships with key customers by offering product specification assistance, providing direct access to enable them to evaluate and audit our operations, delivering high quality products and providing superior customer service. We believe that maintaining close relationships with senior management and providing technical support improves customer satisfaction and provides us with a competitive advantage when selling our products.

In order to increase brand recognition of our products and of Rubicon in general, we publish technical articles, advertise in trade journals, distribute promotional materials and participate in industry trade shows and conferences.

## **CUSTOMERS**

Our principal customers are wafer polishing companies and semiconductor device manufacturers. A significant portion of our sales have been to relatively few customers. In 2011, 2010 and 2009, our top three customers accounted for approximately 69%, 46% and 48% of our revenue, respectively. Although we are attempting to diversify and expand our customer base, we expect our sales to continue to be concentrated among a small number of customers. However, we also expect that our significant customers may change from time to time. In 2011, sales to LG Innotek, Tera Xtal Technology Corp., and Crystalwise Technology represented approximately 38%, 19% and 12% of our revenues, respectively. In 2010, sales to LG Innotek, Tera Xtal Technology Corp., and Iljin Display Co, Ltd. represented approximately 17%, 15% and 14% of our revenues, respectively. In 2009, sales to Crystalwise, Tera Xtal Technology Corp., and Iljin Display Co, Ltd. represented approximately 20%, 17% and 11% of our revenues, respectively. No other customer accounted for 10% or more of our revenues during those periods.

In 2011, 87% of our sales were made to customers in Asia, 9% of our sales were made to customers in North America and 4% of our sales were made to customers in Europe. In 2010, 90% of our sales were made to customers in Asia, 8% of our sales were made to customers in North America and 2% of our sales were made to customers in Europe. In 2009, 72% of our sales were made to customers in Asia, 25% of our sales were made to customers in North America and 3% of sales were made to customers in Europe. Our customer supply agreements tend to be for short periods of time, typically 90 days. Therefore, fluctuations in demand could cause our quarterly revenue to vary significantly. Our standard arrangement with most customers includes payment terms.

## **INTELLECTUAL PROPERTY**

Our ability to compete successfully depends upon our ability to protect our proprietary technologies and other confidential information. We rely primarily upon a combination of trade secret laws and non-disclosure agreements with employees, customers and potential customers to protect our intellectual property. We have three pending patent applications with the U.S. Patent and Trademark Office covering aspects of our core production, wafer grinding and lapping technologies. However, we believe that factors such as the technological and innovative abilities of our personnel, the success of our ongoing product development efforts and our efforts to maintain trade secret protection are more important than patents in maintaining our competitive position. We pursue the registration of certain of our trademarks in the U.S. and currently have five registered trademarks.

## **COMPETITION**

We participate in an innovative, specialized and competitive industry. The products we produce must meet certain demanding requirements to succeed in the marketplace. Although we account for a significant percentage of the total market volume today, we face significant competition from other established providers of similar products as well as from potential new entrants into our markets.

We have several competitors that compete directly with us. These companies tend to focus on providing core and as-cut products rather than offering polished products. There are a limited number of companies that are substantially larger than us that compete with us in a relatively small segment of their overall business. These larger companies tend to focus on providing polished products to customers rather than providing core, as-cut and as-ground products.

We believe that the key competitive factors in our markets are:

- consistently producing high-quality products in the desired size, orientation and finish;
- driving innovation through focused research and development efforts;
- possessing sufficient supply capacity to meet end-market customer demands;
- offering solutions through collaborative efforts with customers;
- pricing; and
- providing a low total cost-of-ownership for customers.

Although we face significant competition, we believe that our proprietary ES2 crystal growth technology and business practices allow us to compete effectively on all of the above factors.

## **ENVIRONMENTAL REGULATION**

In our manufacturing process, we use water, oils, slurries, acids, adhesives and other industrial chemicals. We are subject to a variety of federal, state and local laws regulating the discharge of these materials into the environment or otherwise relating to the protection of the environment. These include statutory and regulatory provisions under which we are responsible for the management of hazardous materials we use and the disposition of hazardous wastes resulting from our manufacturing processes. Failure to comply with such provisions, whether intentional or inadvertent, could result in fines and other liabilities to the government or third parties, injunctions requiring us to suspend or curtail operations or other remedies, which could have a material adverse effect on our business.

## **EMPLOYEES**

As of December 31, 2011, we had 376 full-time employees, of which 349 work in technology and operations. None of our employees are represented by a labor union. We consider our employee relations to be good.

## **OTHER INFORMATION**

You may access, free of charge, our reports filed with the SEC (for example, our Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K and any amendments to those forms) indirectly through our Internet website ([www.rubicon-es2.com](http://www.rubicon-es2.com)). Reports filed with or furnished to the SEC will be available as soon as reasonably practicable after they are filed with or furnished to the SEC. Alternatively, if you would like a paper copy of any such SEC report (without exhibits) or document, write to Investor Relations, Rubicon Technology, Inc., 900 East Green Street, Bensenville, Illinois 60106, and a copy of such requested document will be provided to you, free of charge. The information found on our website is not part of this or any other report filed with or furnished to the SEC.

## ITEM 1A. RISK FACTORS

*You should carefully read the risk factors set forth below, together with the financial statements, related notes and other information contained in this Annual Report on Form 10-K. Our business is subject to a number of important risks and uncertainties, some of which are described below. The risks described below, however, are not the only risks that we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also impair our business operations. Any of these risks may have a material adverse effect on our business, financial condition, results of operations and cash flows. Please refer to the discussion of “forward-looking” statements on page one of this Annual Report of Form 10-K in connection with your consideration of the risk factors and other important factors that may affect future results described below.*

### **Our results of operations, financial condition and business will be harmed if we are unable to effectively match our capacity with customer demand.**

The global economic crisis resulted in weak demand for LED and SoS products in late 2008 and most of 2009, causing a significant reduction in orders for our sapphire substrates. As a result, our manufacturing facilities were underutilized, which negatively impacted our gross margins and overall business. Similarly, due to weakness in the LED backlighting market in 2011, demand for our products from our LED customers declined at the end of 2011 which resulted in lower utilization of some of our manufacturing facilities. We expect this underutilization of some of our manufacturing facilities to continue into the first half of 2012. There can be no assurance that such sudden market changes will not occur again in the future adversely affecting our profitability.

We plan to continue to expand our production capacity as demand for our products strengthens. Our capacity expansion involves significant risks, including the availability of capital equipment and the timing of its installation, availability and timing of required electric power, management of expansion costs, timing of production ramp-up, qualification of our new equipment and demands on management’s time. If our business does not grow fast enough to utilize this new capacity effectively, our business and financial results could be adversely affected. Conversely, delays in expanding our manufacturing capacity could impact our ability to meet future demand for our products. As a result, we might not be able to fulfill customer orders in a timely manner, which could adversely affect our customer relationships and operating results. Moreover, our efforts to increase our production capacity may not succeed in enabling us to manufacture the required quantities of our products in a timely manner or at the gross margins that we achieved in the past. There can be no assurance that we will be able to successfully reach our production, timing and cost goals for our expansion.

### **The average selling prices of products in the LED supply chain have historically been volatile.**

Historically, our industry has experienced volatility in product demand and pricing. Changes in average selling prices of our products as a result of competitive pricing pressures, increased sales discounts and new product introductions by our competitors could have a significant impact on our profitability. Although we attempt to optimize our product mix, introduce new products, reduce manufacturing costs and pass along certain increases in costs to our customers in order to lessen the effect of decreases in selling prices, we may not be able to successfully do so in a timely manner and our results of operations and business may be harmed. In addition, rapid changes in market conditions have at times, caused financial hardship for our customers resulting in some write-offs of our accounts receivable. While we monitor the financial health of our customers, rapid changes in market conditions may result in additional accounts receivable write-offs in the future which could affect our results of operations.

### **If LED lighting does not achieve greater market acceptance, or if alternative technologies are developed and gain market traction, prospects for our growth and profitability would be limited.**

Our future success depends on increased market acceptance of LED lighting. Approximately 93% of our revenue during 2011 and 2010 was from sales of our products for use in the manufacture of LED products. Potential customers for LED lighting systems may be reluctant to adopt LED lighting as an alternative to

traditional lighting technology because of its higher initial cost and relatively low light output per unit in comparison with the most powerful traditional lighting devices. In addition, our potential customers may have substantial investments and know-how related to their existing lighting technologies, and may perceive risks relating to the novelty, complexity, reliability, quality, usefulness and cost-effectiveness of LED products compared to other lighting sources available in the market. If acceptance of LED lighting does not increase significantly, then opportunities to increase our revenues and operate profitably would be limited.

Moreover, if effective new sources of light other than LED devices are developed, our current products and technologies could become less competitive or obsolete. Any of these factors could have a material and adverse impact on our growth and profitability.

**The technology used in the LED industry continues to change rapidly, and if we are unable to modify our products to adapt to future changes in the LED industry, we will be unable to attract or retain customers.**

We do not design or manufacture LEDs. Our ability to expand into new applications in the LED market depends on continued advancement in the design and manufacture of LEDs by others. The LED industry has been characterized by a rapid rate of development of new technologies and manufacturing processes, rapid changes in customer requirements, frequent product introductions and ongoing demands for greater functionality. Our future success will depend on our ability to develop new products for use in LED applications and to adjust our product specifications, such as our previous development of larger diameter wafers, in response to these developments in a timely manner. If our development efforts are not successful or are delayed, or if our newly developed products do not achieve market acceptance, we may be unable to attract or retain customers and our operating results could be harmed. In addition, although sapphire is currently the preferred substrate material for HB white, blue and green LED applications, we cannot assure you that the LED market will continue to demand the performance attributes of sapphire. Silicon carbide is another substrate material currently used for certain LED applications, including some that also use sapphire substrates. Other substrates being investigated and used in research and development for certain LED applications are aluminum nitride, zinc oxide and bulk gallium nitride. Research is also ongoing for the use of silicon substrates in LED applications. If sapphire is displaced as the substrate of choice for certain LED applications, our financial condition and results of operations would be materially and adversely affected unless we were able to successfully offer the competing substrate material.

Our continuing efforts to enhance our current products and to develop new products involve several risks, including:

- our ability to anticipate and respond in a timely manner to changes in customer requirements;
- the possibility that sapphire may in the future be replaced as a preferred substrate in certain LED applications;
- the significant research and development investment that we may be required to make before market acceptance of a particular new or enhanced product;
- the possibility that the LED industry may not accept our new or enhanced products after we have invested a significant amount of resources in development; and
- competition from new technologies, processes and products introduced by our current and/or future competitors.

**If the development and acceptance of our products for the SoS RFIC market do not meet our expectations, our future operating results may be harmed.**

The level of market acceptance of our SoS RFIC products may impact our future operating results. Our success in the SoS RFIC market depends on a number of factors, including:

- the success of our customers' products in current applications; and
- the acceptance of SoS RFIC products for newly targeted applications.



In addition, it is possible that other solutions, such as silicon-on-insulator, may become preferred over SoS. We cannot assure you that the RFIC market will continue to require the performance attributes of SoS solutions. If our products are not accepted more broadly in the RFIC market, our results of operations and business may be harmed.

**We depend on a few customers for a major portion of our sales and our results of operations would be adversely impacted if they reduced their order volumes.**

Historically, we have earned, and believe that in the future we will continue to earn, a substantial portion of our revenue from a small number of customers. In 2011 and 2010, sales to our top three customers represented approximately 69% and 46% of our revenues, respectively. If we were to lose one of our major customers or have a major customer significantly reduce its volume of business with us, our revenues and profitability would be materially reduced unless we are able to replace such demand with other orders promptly. We expect to continue to be dependent on our significant customers, the number and identity of which may change from period to period.

We generally sell our products on the basis of purchase orders. Delays in product orders could cause our quarterly revenue to vary significantly. A number of factors could cause our customers to cancel or defer orders, including interruptions to their operations due to a downturn in their industries, natural disasters, delays in manufacturing their own product offerings into which our products are incorporated, securing other sources for the products that we manufacture or developing such products internally.

**Our manufacturing processes may be interrupted or our production may be delayed if we cannot maintain sufficient electrical supply, which could adversely affect our business, financial condition and operating results.**

Our manufacturing process requires a stable source of electricity. From time to time, we have experienced limited disruptions in our supply of electricity. Such disruptions, depending upon their duration, could result in a significant drop in throughput and yield of in-process crystal boules and create delays in our production. Although we use generators and other back-up sources of electricity, these replacement sources of electricity are only capable of providing effective back-up for limited periods of time. We cannot assure you that we will be successful in avoiding future disruptions in power or in mitigating the effects of such disruptions. Any material disruption in electrical supply could delay our production and could adversely affect our business, financial condition and operating results.

**Our gross margins and profitability may be adversely affected by rising energy costs.**

Most of our power consumption takes place in our crystal growth facilities in the U.S. Electricity prices could increase due to overall changes to the price of energy due to conditions in the Middle East, natural gas shortages in the U.S. and other economic conditions and uncertainties regarding the outcome and implications of such events. Once our current agreements expire, if electricity prices increase significantly, we may not be able to pass these price increases through to our customers on a timely basis, if at all, which could adversely affect our gross margins and results of operations.

**Our future operating results may fluctuate significantly, which makes our future results difficult to predict and could cause our operating results for particular periods to fall below expectations.**

Our revenues and operating results have fluctuated in the past and are likely to fluctuate in the future. These fluctuations are due to a number of factors, many of which are beyond our control. These factors include, among others:

- timing of orders from and shipments to major customers;

- the gain or loss of significant customers;
- fluctuations in gross margins as a result of changes in capacity utilization, product mix or other factors;
- market acceptance of our products and our customers' products;
- our ability to develop, introduce and market new products and technologies on a timely basis;
- the need to pay higher labor costs as we continue to grow;
- announcements of technological innovations, new products or upgrades to existing products by us or our competitors;
- competitive market conditions, including pricing actions by our competitors and our customers' competitors;
- developments in trade secrets, patent or other proprietary rights by us or our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships or divestitures;
- interruption of operations at our manufacturing facilities or the facilities of our suppliers;
- the level and timing of capital spending of our customers;
- additions or departures of key personnel;
- potential seasonal fluctuations in our customers' business activities; and
- natural disasters, such as floods, hurricanes and earthquakes, as well as interruptions in power supply resulting from such events or due to other causes.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly or annual operating results. If our revenues or operating results fall below the expectations of investors or any securities analysts that may publish research on our company, the price of our common stock would likely decline.

**Our gross margins could decline as a result of changes in our product mix and other factors, which may adversely impact our operating results.**

We anticipate that our gross margins will fluctuate from period to period as a result of the mix of products that we sell in any given period. If our sales mix shifts to lower margin products in future periods, our overall gross margin levels and operating results would be adversely impacted. Increased competition and the adoption of alternatives to our products, more complex engineering requirements, lower demand and other factors may lead to a further downward shift in our product margins, leading to price erosion and lower revenues for us in the future.

**Our proprietary intellectual property rights may not adequately protect our products and technologies, and the failure to protect such rights could harm our competitive position and adversely affect our operating results.**

To protect our technology, we have chosen to rely primarily on trade secrets rather than seeking protection through publicly filed patents. Trade secrets are inherently difficult to protect. While we believe we use reasonable efforts to protect our trade secrets, our directors, employees, consultants or contractors may unintentionally or willfully disclose our information to competitors, whether during or after the termination of their services to our company. If we were to seek to enforce a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time consuming, and the outcome would be unpredictable.

In addition, courts outside the U.S. are sometimes less willing to protect trade secrets than U.S. courts. Moreover, if our competitors independently develop equivalent knowledge, methods and know-how, it will be more difficult for us to protect our intellectual property and our business could be harmed.

We have no issued patents covering our products and technologies. Although we have filed applications for three patents, there can be no assurance that these patents will be issued or that any patents issued will be of significant value to our business. Our commercial success will depend on obtaining and maintaining trade secret, patent and other intellectual property protection of our products and technologies. We will only be able to protect products and technologies from unauthorized use by third parties to the extent that valid, protectable and enforceable trade secrets, patents or other intellectual property rights cover them.

If we are not able to defend the trade secret or patent protection positions of our products and technologies, then we may not be able to successfully compete with competitors developing or marketing competing products and we may not generate enough revenue from product sales to justify the cost of development of our products and to achieve or maintain profitability.

**The protection of our intellectual property rights and the defense of claims of infringement against us by third parties may subject us to costly litigation.**

Other companies might allege that we are infringing certain of their patents or other rights. If we are unable to resolve these matters satisfactorily, or to obtain licenses on acceptable terms, we may face litigation. Any litigation to enforce patents issued to us, to protect trade secrets or know-how possessed by us or to defend us or indemnify others against claimed infringement of the rights of others could have a material adverse effect on our financial condition and operating results. Regardless of the validity or successful outcome of any such intellectual property claims, we may need to expend significant time and expense to protect our intellectual property rights or to defend against claims of infringement by third parties, which could have a material adverse effect on us. If we lose any such litigation where we are alleged to infringe the rights of others, we may be required to:

- pay substantial damages;
- seek licenses from others; or
- change, or stop manufacturing or selling, some or all of our products.

Any of these outcomes could have an adverse effect on our business, results of operations or financial condition.

**The markets in which we operate are very competitive, and many of our competitors and potential competitors are larger, more established and better capitalized than we are.**

The markets for selling high-quality sapphire products are very competitive and have been characterized by rapid technological change. This competition could result in increased pricing pressure, reduced profit margins, increased sales and marketing expenses, and failure to increase, or the loss of, market share or expected market share, any of which would likely seriously harm our business, operating results and financial condition.

Some of our competitors and potential competitors are substantially larger and have greater financial, technical, marketing and other resources than we do. Given their capital resources, the large companies with which we compete, or may compete in the future, are in a better position to substantially increase their manufacturing capacity and research and development efforts or to withstand any significant reduction in orders by customers in our markets. Such larger companies typically have broader product lines and market focus and thus are not as susceptible to downturns in a particular market. In addition, some of our competitors have been in operation much longer than we have and therefore may have more long-standing and established relationships with our current and potential domestic and foreign customers.

We would be at a competitive disadvantage if our competitors bring their products to market earlier, if their products are more technologically capable than ours, or if any of our competitors' products or technologies were to become preferred in the industry. Moreover, we cannot assure you that existing or potential customers will not develop their own products, or acquire companies with products that are competitive with our products. Any of these competitive threats could have a material adverse effect on our business, operating results or financial condition.

**We are subject to risks from international sales that may harm our operating results.**

In 2011 and 2010 revenue from international sales was approximately 91% and 92%, respectively, of our total revenue. We expect that revenue from international sales will continue to constitute a significant portion of our total revenue for the foreseeable future. Our international sales are subject to a variety of risks, including risks arising from:

- trading restrictions, tariffs, trade barriers and taxes;
- economic and political risks, wars, acts of terrorism, political unrest, pandemics, such as a recurrence of the SARS outbreak or avian flu, boycotts, curtailments of trade and other business restrictions;
- the difficulty of enforcing contracts and collecting receivables through some foreign legal systems;
- unexpected changes in regulatory requirements and other governmental approvals, permits and licenses;
- sales variability as a result of transacting our foreign sales in U.S. dollars as prices for our products become less competitive in countries with currencies that are low or are declining in value against the U.S. dollar and more competitive in countries with currencies that are high or increasing in value against the U.S. dollar; and
- periodic foreign economic downturns.

Our future success will depend on our ability to anticipate and effectively manage these and other risks associated with our international sales. Our failure to manage any of these risks could harm our operating results.

**We are dependent on the continued services and performance of our senior management, the loss of any of whom could adversely affect our business, operating results and financial condition.**

Our future success is dependent on the continued services and continuing contributions of our senior management who must work together effectively in order to design our products, expand our business, increase our revenues and improve our operating results. The loss of services of senior management, particularly Raja M. Parvez, our president and chief executive officer, and William F. Weissman, our chief financial officer, could significantly delay or prevent the achievement of our development and strategic objectives. In addition, key personnel may be distracted by activities unrelated to our business. The loss of the services, or distraction, of our senior management for any reason could adversely affect our business, operating results and financial condition.

**If we are unable to attract or retain qualified personnel, our business and product development efforts could be harmed.**

Our success depends on our continued ability to identify, attract, hire, train, retain and motivate highly skilled technical, managerial, manufacturing, administrative and sales and marketing personnel. Competition for these individuals is intense, and we may not be able to successfully recruit, assimilate or retain sufficiently qualified personnel. In particular, we may encounter difficulties in recruiting and retaining a sufficient number of qualified technical personnel. The inability to attract and retain necessary technical, managerial, manufacturing, administrative and sales and marketing personnel could harm our ability to obtain new customers and develop new products and could adversely affect our business and operating results.

**We rely on a limited number of suppliers for raw materials and key components.**

We depend on a small number of suppliers for certain raw materials, components, services and equipment used in manufacturing our products, including key materials such as aluminum oxide and certain furnace components. We generally purchase these items with purchase orders, and we have no guaranteed supply arrangements with such suppliers. We are subject to variations in the cost of raw materials and consumables from period to period. We do not control the time and resources that these suppliers devote to our business, and we cannot be sure that these suppliers will perform their obligations to us or do so on a timely basis. In addition, some of these suppliers are located in regions of the world that may experience periods of political or economic instability.

Any significant delay in product delivery or other interruption or variation in supply from our key suppliers could prevent us from meeting demand for our products and from obtaining future business. If we were to lose key suppliers or our key suppliers were unable to support our demand, our manufacturing operations could be interrupted and we could be required to attempt to establish supply arrangements with other suppliers. In addition, the inability of our suppliers to support our demand could be indicative of a marketwide scarcity of the materials, which could result in even longer interruptions. Any such delay or interruption would impair our ability to meet our customers' needs and, therefore, could damage our customer relationships and have a material adverse effect on our business and operating results.

**Our products must meet exacting specifications, and undetected defects may occur, which may cause customers to return or stop buying our products.**

Our customers establish demanding specifications for quality, performance, and reliability that our products must meet. While we inspect our products before shipment, they still may contain undetected defects. If defects occur in our products, we could experience lost revenue, increased costs, delays in, or cancellations or rescheduling of orders or shipments, product returns or discounts or damage to our reputation, any of which would harm our operating results and our business.

**We are subject to numerous environmental laws and regulations, which could expose us to environmental liabilities, increase our manufacturing and related compliance costs or otherwise adversely affect our business and operating results.**

In our manufacturing process, we use water, oils, slurries, acids, adhesives and other industrial chemicals. We are subject to a variety of foreign, federal, state and local laws and regulations governing the protection of the environment. These environmental laws and regulations include those relating to the use, storage, handling, discharge, emission, disposal and reporting of toxic, volatile or otherwise hazardous materials used in our manufacturing processes. These materials may have been or could be released into the environment at properties currently or previously operated by us, at other locations during the transport of the materials, or at properties to which we send substances for treatment or disposal. If we were to violate or become liable under environmental laws and regulations or become non-compliant with permits required at some of our facilities, we could be held financially responsible and incur substantial costs, including investigation and cleanup costs, fines and civil or criminal sanctions, third-party property damages or personal injury claims. In addition, new laws and regulations or stricter enforcement of existing laws and regulations could give rise to additional compliance costs and liabilities.

**Our operations are concentrated in a small number of nearby facilities, and the unavailability of one or more of these facilities could harm our business.**

Our manufacturing, research and development, sales and marketing, and administrative activities are concentrated in three facilities in the Chicago metropolitan area and one facility in Penang, Malaysia. Should a natural disaster, such as a tornado or flood, act or terrorism, war or outbreak of disease severely affect the

Chicago area, our operations could be significantly impacted. We may not be able to replicate the manufacturing capacity and other operations of our Chicago facilities in our Malaysian facility or elsewhere, or such replication could take significant time and resources to accomplish. The disruption from such an event could adversely affect or interrupt entirely our ability to conduct our business. Similarly, should a disruption from such an event occur at our Malaysia facility, the disruption could adversely affect or interrupt our ability to conduct our business.

**We may acquire other businesses, products or technologies; if we do, we may be unable to integrate them with our business effectively or at all, which may adversely affect our business, financial condition and operating results.**

If we find appropriate opportunities, we may acquire complementary businesses, product lines or technologies. However, if we acquire a business, product line or technology, the process of integration may produce unforeseen operating difficulties and expenditures and may absorb significant attention of our management that would otherwise be available for the ongoing development of our business. Further, the acquisition of a business may result in the assumption of unknown liabilities or create risks with respect to our existing relationships with suppliers and customers. If we make acquisitions, we may issue shares of stock that dilute other stockholders, expend cash, incur debt, assume contingent liabilities or create additional expenses related to amortizing intangible assets, any of which may adversely affect our business, financial condition or operating results.

**We have incurred significant losses in prior periods and may incur losses in the future.**

We have incurred significant losses in prior periods. As of December 31, 2011, we had an accumulated deficit of \$91.7 million. While we had net income of \$38.1 million in 2011 and \$29.1 million in 2010, we incurred a net loss of \$9.6 million in 2009 and we incurred net losses in 2007 and 2006 of \$2.9 million and \$7.6 million, respectively. There can be no assurance that we will have sufficient revenue growth to offset expenses or to achieve profitability in future periods.

**RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK**

The price of our common stock has fluctuated substantially and may continue to do so.

Our common stock has only been publicly traded since November 16, 2007, and the trading price of our common stock has fluctuated substantially. From our initial public offering through March 14, 2012, the trading price of our common stock has ranged from a low of \$2.50 to a high of \$35.90.

Factors related to our company and our business, as well as broad market and industry factors, may adversely affect the market price of our common stock, regardless of our actual operating performance. Factors that could cause fluctuations in our stock price include, among other things:

- changes in market valuations of other companies in our industry;
- changes in financial guidance or estimates by us, by investors or by any financial analysts who might cover our stock or our industry;
- our ability to meet the performance expectations of financial analysts or investors;
- announcements by us or our competitors of significant products, contracts, acquisitions or strategic partnerships;
- general market and economic conditions; and
- the size of the public float of our stock.

Fluctuations caused by factors such as these may negatively affect the market price of our common stock. In addition, the other risks described elsewhere in this prospectus could adversely affect our stock price.

**Our board of directors does not intend to declare or pay any dividends to our stockholders in the foreseeable future.**

The declaration, payment and amount of any future dividends will be made at the discretion of our board of directors, and will depend upon, among other things, the results of our operations, cash flows and financial condition, operating and capital requirements, and other factors the board of directors considers relevant. There is no plan to pay dividends in the foreseeable future, and if dividends are paid, there can be no assurance with respect to the amount of any such dividend.

**The concentration of our capital stock ownership with the affiliates of one of our directors will limit your ability to influence corporate matters.**

One of our directors and affiliates he controls together own 23% of our outstanding capital stock and voting power. For the foreseeable future, they will have significant influence over our management and affairs and over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or our assets. Their ownership may limit your ability to influence corporate matters and, as a result, the market price of our common stock could be adversely affected.

**We could be the subject of securities class action litigation due to future stock price volatility.**

The stock market in general, and market prices for the securities of companies like ours, recently have experienced extreme volatility that often has been unrelated to the operating performance of the underlying companies. These broad market and industry fluctuations may adversely affect the market price of our common stock, regardless of our operating performance. When the market price of a stock declines significantly, holders of that stock have sometimes instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, our defense of the lawsuit could be costly and divert the time and attention of our management.

**Our certificate of incorporation, bylaws and Delaware law may discourage takeovers and business combinations that our stockholders might consider in their best interests.**

A number of provisions in our certificate of incorporation and bylaws, as well as anti-takeover provisions of Delaware law, may have the effect of delaying, deterring, preventing or rendering more difficult a change in control of Rubicon that our stockholders might consider in their best interests. These provisions include:

- establishment of a classified board of directors;
- granting to the board of directors sole power to set the number of directors and to fill any vacancy on the board of directors, whether such vacancy occurs as a result of an increase in the number of directors or otherwise;
- limitations on the ability of stockholders to remove directors;
- the ability of our board of directors to designate and issue one or more series of preferred stock without stockholder approval, the terms of which may be determined at the sole discretion of the board of directors;
- prohibition on stockholders from calling special meetings of stockholders;
- prohibition on stockholders from acting by written consent; and

- establishment of advance notice requirements for stockholder proposals and nominations for election to the board of directors at stockholder meetings.

These provisions may prevent our stockholders from receiving the benefit from any premium to the market price of our common stock offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of our common stock if they are viewed as discouraging takeover attempts in the future.

The foregoing provisions of our certificate of incorporation and bylaws may also make it difficult for stockholders to replace or remove our management. These provisions may facilitate management entrenchment that may delay, deter, render more difficult or prevent a change in our control, which may not be in the best interests of our stockholders.

#### **ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

#### **ITEM 2. PROPERTIES**

Our executive, research and development and manufacturing functions are located on properties that we lease or own. We lease properties in Franklin Park, Illinois and Bensenville, Illinois. These facilities total approximately 102,600 square feet in seven buildings, which includes 30,000 square feet in our Bensenville, Illinois facility. The leases for these facilities terminate from July 2014 through August 2015. We own a 134,400 square foot facility in Batavia, Illinois. We also own a 65,000 square foot facility in Penang, Malaysia, which processes sapphire grown by us in our Illinois facilities into finished cores and wafers.

#### **ITEM 3. LEGAL PROCEEDINGS**

From time to time we may be named in claims arising in the ordinary course of business. Currently, there are no legal proceedings or claims pending against us or involving us that, in the opinion of our management, could reasonably be expected to have a material adverse effect on our business or financial condition.

#### **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 Information.

Our common stock began trading on the NASDAQ Global Market under the symbol "RBCN" on November 16, 2007. The following table sets forth the high and low sales prices for our common stock as reported on the NASDAQ Global Market for the periods indicated:

	<u>High</u>	<u>Low</u>
<b>Fiscal year ended December 31, 2010</b>		
First Quarter .....	\$22.50	\$14.50
Second Quarter .....	\$34.19	\$20.17
Third Quarter .....	\$35.90	\$19.51
Fourth Quarter .....	\$26.60	\$18.05
	<u>High</u>	<u>Low</u>
<b>Fiscal year ended December 31, 2011</b>		
First Quarter .....	\$27.68	\$17.83
Second Quarter .....	\$28.97	\$16.15
Third Quarter .....	\$17.57	\$10.66
Fourth Quarter .....	\$12.82	\$ 8.23

#### Holders.

As of March 9, 2012, our common stock was held by approximately 27 stockholders of record and there were 22,532,224 shares of our common stock outstanding.

#### Dividend Policy

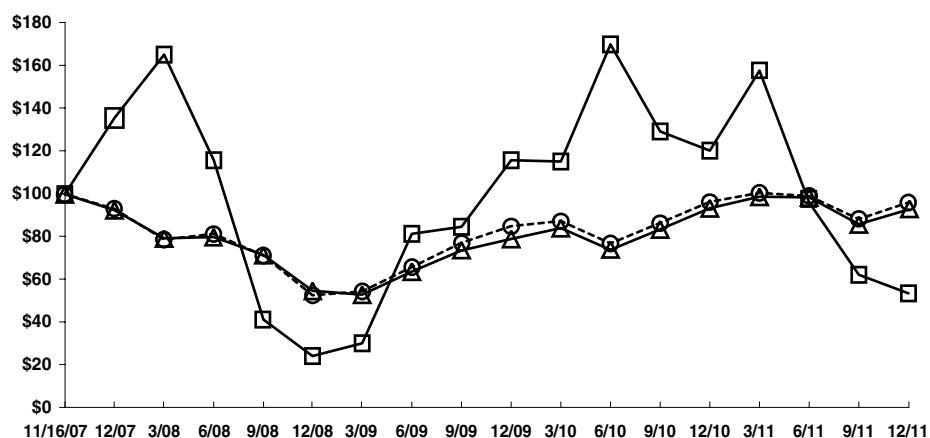
We have never declared or paid cash dividends on our common stock. We currently intend to retain future earnings to finance the growth and development of our business, and we do not anticipate declaring or paying any cash dividends in the foreseeable future.

## Performance Graph

The following graph compares the cumulative total stockholder return on our common stock during the period from November 16, 2007 (the first trading day following our initial public offering) through December 31, 2011, with the cumulative total returns of the NASDAQ Composite Index and the RDG Technology Composite Index. The graph assumes that the value of the investment in our common stock and in each of the indices (including reinvestment of dividends) was \$100 on November 16, 2007.

### COMPARISON OF 49 MONTH CUMULATIVE TOTAL RETURN\*

Among Rubicon Technology, Inc., The NASDAQ Composite Index  
And The RDG Technology Composite Index



—□— Rubicon Technology, Inc.      —△— NASDAQ Composite      —○— RDG Technology Composite

	11/16/07	12/31/07	3/31/08	6/30/08	9/30/08	12/31/08	3/31/09	6/30/09	9/30/09	12/31/09	3/31/10	6/30/10	9/30/10	12/31/10	3/31/11	6/30/11	9/30/11	12/31/11
Rubicon Technology, Inc. ....	\$100.00	135.71	165.60	116.11	41.26	24.34	30.34	81.60	84.80	116.06	115.43	170.23	129.66	120.46	\$158.17	96.34	62.46	53.66
NASDAQ Composite ...	\$100.00	92.70	79.30	80.02	71.48	54.79	53.10	63.77	73.84	79.14	84.16	74.15	83.64	93.63	\$ 98.84	98.70	85.90	93.00
RDG Technology Composite ...	\$100.00	93.34	78.88	81.44	71.37	52.72	54.52	65.92	77.20	85.04	87.38	76.99	86.53	96.45	\$100.71	99.30	88.54	96.16

The stock price performance reflected in this graph is not necessarily indicative of future stock price performance.

## Recent Sales of Unregistered Securities

None.

## Issuer Purchases of Equity Securities

In August 2011, we announced a repurchase plan approved by our Board of Directors authorizing the purchase of up to \$25.0 million of our outstanding common stock over a period of two years. The stock repurchase program authorizes us to purchase shares of our common stock in the open market at times and prices considered appropriate by us depending upon prevailing market conditions and other corporate considerations.

The following table provides information about purchases made during the quarter ended December 31, 2011 of equity securities that are registered by us pursuant to Section 12 of the Exchange Act:

	<b>Total number of shares purchased</b>	<b>Average price paid per share</b>	<b>Total number of shares purchased as part of publically announced Plans or Programs</b>	<b>Approximate dollar value that may yet be purchased under the Plans or Programs</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>
October 1, 2011—October 31, 2011 . . . . .	40,000	\$10.20	40,000	\$19,110,461
November 1, 2011—November 30, 2011 . . . . .	60,000	\$ 9.94	60,000	\$18,514,261
December 1, 2011—December 31, 2011 . . . . .	—	\$ —	—	\$ —
Total . . . . .	<u>100,000</u>	\$10.04	<u>100,000</u>	\$18,514,261

## ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes included elsewhere herein. The consolidated balance sheet data as of December 31, 2011 and 2010 and the consolidated statements of operations data for the years ended December 31, 2011, 2010 and 2009 are derived from our audited consolidated financial statements included elsewhere herein, which have been prepared in accordance with generally accepted accounting principles in the U.S.. The consolidated balance sheet data as of December 31, 2009, 2008 and 2007 and the consolidated statements of operations data for the years ended December 31, 2008 and 2007 have been derived from our audited consolidated financial statements, which are not included in this Form 10-K.

### SELECTED CONSOLIDATED FINANCIAL DATA

	Year ended December 31,				
	2011	2010	2009	2008	2007
(In thousands, other than share and per share data)					
<b>Consolidated statements of operations data:</b>					
Revenue	\$ 134,000	\$ 77,362	\$ 19,808	\$ 37,838	\$ 34,110
Cost of goods sold	64,365	36,205	23,427	25,746	22,045
Gross profit (loss)	69,635	41,157	(3,619)	12,092	12,065
Operating expenses:					
General and administrative	11,336	9,883	4,811	6,691	6,157
Sales and marketing	1,658	1,267	1,137	968	675
Research and development	1,806	1,079	801	862	769
Loss on disposal of assets	84	234	—	1,215	139
Total operating expenses	14,884	12,463	6,749	9,736	7,740
Income (loss) from operations	54,751	28,694	(10,368)	2,356	4,325
Other income (expense), net	(118)	346	738	2,003	(7,104)
Income (loss) before income taxes	54,633	29,040	(9,630)	4,359	(2,779)
Income tax benefit (expense)	(16,574)	71	—	(4)	(75)
Net income (loss)	38,059	29,111	(9,630)	4,355	(2,854)
Dividends on preferred stock	—	—	—	—	(5,625)
Accretion of redeemable preferred stock	—	—	—	—	(59,934)
Net income (loss) attributable to common stockholders	\$ 38,059	\$ 29,111	\$ (9,630)	\$ 4,355	\$ (68,413)
Net income (loss) per common share attributable to common stockholders					
Basic	\$ 1.67	\$ 1.34	\$ (0.48)	\$ 0.21	\$ (27.22)
Diluted	\$ 1.61	\$ 1.28	\$ (0.48)	\$ 0.19	\$ (27.22)
Shares used in computing net income (loss) per common share attributable to common stockholders					
Basic	22,852,205	21,726,090	20,117,543	20,892,040	2,513,487
Diluted	23,596,162	22,790,896	20,117,543	21,920,861	2,513,487
<b>As of December 31,</b>					
	2011	2010	2009	2008	2007
(In thousands)					
<b>Consolidated balance sheet data:</b>					
Cash and cash equivalents	\$ 4,290	\$ 16,073	\$ 3,860	\$ 7,629	\$ 4,380
Working capital	119,056	106,524	55,121	55,725	75,538
Total assets	259,952	206,742	101,186	112,345	111,411
Total stockholders' equity	228,231	192,094	97,440	108,393	105,682

## **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 together with our financial statements and related notes appearing elsewhere in this annual report. This discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. You should review the “Risk Factors” section of this annual report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements described in the following discussion and analysis.*

### **OVERVIEW**

We are an advanced electronic materials provider that develops, manufactures and sells monocrystalline sapphire and other innovative crystalline products for Light-Emitting Diodes (“LEDs”), radio frequency integrated circuits (“RFICs”), blue laser diodes, optoelectronics and other optical applications. The emergence of sapphire in commercial volumes at competitive prices has enabled the development of new technologies such as high brightness (“HB”) white, blue and green LEDs and highly-integrated RFICs. We apply our proprietary crystal growth technology to produce high-quality sapphire products efficiently to supply our end-markets, and we work closely with our customers to meet their quality and delivery needs.

We are a vertically-integrated manufacturer of high-quality sapphire substrates and optical windows that are used in a variety of high-growth, high-volume end-market applications. Our largest product line is two inch to six inch sapphire cores and wafers for use in LEDs and blue laser diodes for solid state lighting and electronic applications. For the LED market we sell two inch to four inch material primarily in core form and six and eight inch material primarily in polished wafer form. Eight inch wafers are sold primarily for research and development efforts at this time. In addition, we sell six inch sapphire wafers that are used for Silicon-on-Sapphire (“SoS”) RFICs, as well as products for military, aerospace, sensor and other applications. We have extended our technology, which gives us the ability to produce cores and wafers of up to twelve inches in diameter to support next-generation LED and SoS RFIC production. We have also developed the ability to produce large diameter circular and rectangular sapphire windows for use in various optical window applications.

Our revenue consists of sales of sapphire materials sold in core, as-cut, as-ground and polished wafer forms in two, three, four, six and eight inch diameters as well as optical materials sold as blanks or polished windows. Products are made to varying specifications, such as crystal planar orientations and thicknesses.

We sell our products on a global basis. The Asian, North American and European markets accounted for 87%, 9% and 4%, respectively, of our revenue for the year ended December 31, 2011, 90%, 8% and 2%, respectively, of our revenue for the year ended December 31, 2010, and 72%, 25% and 3%, respectively, of our revenue for the year ended December 31, 2009. Demand from the LED market was very strong starting in 2010 continuing through mid-year 2011, particularly in Asia where there is a high concentration of customers that participate in the LED market. Demand for our products from the LED market slowed in the second half of 2011 due to a build-up of inventory in the LED supply chain. Strong growth is expected to resume by the second half of 2012 as customer inventories return to normal levels and LED applications continue to gain market share.

We currently depend on a small number of suppliers for certain raw materials, components, services and equipment, including key materials such as aluminum oxide and certain furnace components. If the supply of these components were to be disrupted or terminated, or if these suppliers were unable to supply the quantities of raw materials required, we may have difficulty in finding or may be unable to find alternative sources for these items. As a result, we may be unable to meet the demand for our products, which could have a material adverse impact on us.

We manage direct sales primarily from our Bensenville, Illinois offices. Substantially all of our revenue is generated by our direct sales force and we expect this to continue in the future.

We manufacture and ship our products from our facilities in the Chicago metropolitan area and from our facility in Penang, Malaysia. We have approximately 102,600 square feet of manufacturing and office space in Franklin Park and Bensenville, Illinois. In 2010, we completed construction of a 65,000 square foot facility in Penang, Malaysia, which is processing sapphire grown by us in our Illinois facilities into finished cores and wafers. Our Malaysia facility currently finishes essentially all cores and is now producing production volumes of six inch polished wafers. During 2011, this facility was qualified by multiple customers and was awarded an ISO 9001 certification. We also acquired in April 2010 a 134,400 square foot building in Batavia, Illinois to expand our crystal growth operations. This facility began operations in the fourth quarter of 2010 and additional capacity became available during the year ended December 31, 2011.

## **Financial operations**

*Revenue.* Our revenue consists of sales of sapphire materials sold in core, as-cut, as-ground and polished forms in two, three, four, six and eight inch diameters as well as optical materials sold as blanks or polished windows. Products are made to varying specifications, such as crystal planar orientations and thicknesses. We have focused on increasing sales of larger diameter substrates, which we define as three inch or greater in diameter, as they generally yield higher gross margins. Sales increased significantly across most product lines and diameters for the year ended December 31, 2010, as demand for our products increased due to improved market and pricing environment. For the year ended December 31, 2011, we experienced a significant increase in revenue in large diameter polished product lines due to increased demand for our polished products and higher revenue from our core products due to increased pricing.

Historically, a significant portion of our revenue has been derived from sales to relatively few customers. For the years ended December 31, 2011, 2010 and 2009 our top three customers accounted for approximately 69%, 46% and 47% of our revenue, respectively. Other than as discussed above, none of our customers accounted for more than 10% of our revenue for such periods. Although we are attempting to diversify and expand our customer base, we expect our revenue to continue to be concentrated among a small number of customers. We expect that our significant customers may change from period to period.

We recognize revenue upon shipment to our customers. Delays in product orders or changes to the timing of shipments could cause our quarterly revenue to vary significantly. We derive a significant portion of our revenue from customers outside of the U.S. The majority of our sales are to the Asian market and we expect that region to continue to be a major source of revenue for us. All of our revenue and corresponding accounts receivable are denominated in U.S. dollars.

*Cost of goods sold.* Our cost of goods sold consists primarily of manufacturing materials, labor, manufacturing-related overhead such as utilities, depreciation and rent, provisions for excess and obsolete inventory reserves, freight and warranties. We manufacture our products at our Illinois and Malaysia manufacturing facilities based on customer orders. We purchase materials and supplies to support such demand. We are subject to variations in the cost of raw materials and consumables from period to period because we do not have long-term fixed-price agreements with most of our suppliers. For the years ended December 31, 2011, 2010, and 2009, utility costs represented approximately 11%, 13% and 12% of our cost of goods sold, respectively. We mitigate the potential impact of fluctuations in energy costs by entering into long term purchase agreements. Once our current agreements expire, if electricity prices increase significantly, we may not be able to pass these price increases through to our customers on a timely basis, if at all, which could adversely affect our gross margins and results of operations.

*Gross profit.* Our gross profit has been and will continue to be affected by a variety of factors, including average sales prices of our products, product mix, our ability to reduce manufacturing costs and fluctuations in the cost of electricity, raw materials and other supplies.

*General and administrative expenses.* General and administrative expenses (“G&A”) consist primarily of salaries and associated costs for employees in finance, human resources, information technology and administrative activities, as well as charges for outside accounting, legal, insurance fees and stock-based compensation.

*Sales and marketing expenses.* Sales and marketing expenses consist primarily of salaries and associated costs for employees engaged in sales activities, product samples, charges for participation in trade shows and travel.

*Research and development expenses.* Research and development (“R&D”) expenses include costs related to engineering personnel, materials and other product development related costs. R&D is expensed as incurred. We believe our R&D expenses will generally increase as we continue to develop new products.

*Other income (expense).* Other income (expense) consists of interest income and expense and gains and losses on investments and currency translation.

*Provision for income tax.* We account for income taxes under the asset and liability method whereby the expected future tax consequences of temporary differences between the book value and the tax basis of assets and liabilities are recognized as deferred tax assets and liabilities, using enacted tax rates in effect for the year in which the differences are expected to be recognized. We have updated our analysis of ownership changes that limit the utilization of the NOLs. This analysis shows an ownership change, but we believe that we are not restricted in our ability to use the full amount of the NOLs. A full valuation allowance was provided and no tax benefit was recorded until we could conclude that it is more likely than not that our deferred tax assets will be realized. During the twelve months ended December 31, 2011, we concluded that based on the current level of sustainable profitability that generates taxable income, it is more likely than not that our deferred tax assets will be realizable. We recognized a tax benefit of \$3.3 million to record current and long-term deferred tax assets during the twelve months ended December 31, 2011. With the release of the valuation allowance, we began recording federal and certain state and non-U.S. income taxes attributable to the fiscal year’s pre-tax income. The reversal of the valuation allowance favorably impacts our effective tax rate in 2011. The Illinois State Legislature has suspended the use of NOLs for taxable years ending after December 31, 2010 and before December 31, 2014 and has increased the corporate income tax rate which unfavorably impacts our effective tax rate. Our effective tax rate could fluctuate significantly on a quarterly basis and could be adversely affected to the extent earnings are lower than anticipated. Our effective tax rate could also fluctuate due to changes in the valuation of our deferred tax assets or liabilities, or by changes in tax laws, regulations, or accounting principles, as well as certain discrete items.

*Stock-based compensation.* The majority of our stock-based compensation relates primarily to administrative personnel and is accounted for as a general and administrative expense. For the years ended December 31, 2011, 2010 and 2009, our stock-based compensation expense was \$2.5 million, \$2.3 million and \$937,000, respectively.

## RESULTS OF OPERATIONS

The following table sets forth our statements of operations for the periods indicated:

	Year ended December 31,		
	2011	2010	2009
	(in millions)		
Revenue . . . . .	\$134.0	\$77.4	\$ 19.8
Cost of goods sold . . . . .	64.4	36.2	23.4
Gross profit (loss) . . . . .	69.6	41.2	(3.6)
Operating expenses:			
General and administrative . . . . .	11.3	9.9	4.8
Sales and marketing . . . . .	1.7	1.3	1.1
Research and development . . . . .	1.8	1.1	0.8
Loss on disposal of assets . . . . .	0.1	0.2	—
Total operating expenses . . . . .	14.9	12.5	6.7
Income (loss) from operations . . . . .	54.7	28.7	(10.3)
Other income (expense) . . . . .	(0.1)	0.3	0.7
Income (loss) before income taxes . . . . .	54.6	29.0	(9.6)
Income tax (expense) benefit . . . . .	(16.5)	0.1	—
Net income (loss) . . . . .	<u>\$ 38.1</u>	<u>\$29.1</u>	<u>\$ (9.6)</u>

The following table sets forth our statements of operations as a percentage of revenue for the periods indicated:

	Year ended December 31,		
	2011	2010	2009
	(percentage of total)		
Revenue . . . . .	100%	100%	100%
Cost of goods sold . . . . .	48	47	118
Gross profit (loss) . . . . .	52	53	(18)
Operating expenses:			
General and administrative . . . . .	8	13	25
Sales and marketing . . . . .	1	2	5
Research and development . . . . .	2	1	4
Loss on disposal of assets . . . . .	—	—	—
Total operating expenses . . . . .	11	16	34
Income (loss) from operations . . . . .	41	37	(52)
Other income (expense) . . . . .	—	1	4
Income (loss) before income taxes . . . . .	41	38	(48)
Income tax (expense) benefit . . . . .	(13)	—	—
Net income (loss) . . . . .	<u>28%</u>	<u>38%</u>	<u>(48)%</u>



### Comparison of years ended December 31, 2011 and 2010

*Revenue.* Revenue was \$134.0 million for the year ended December 31, 2011 and \$77.4 million for the year ended December 31, 2010, an increase of \$56.6 million. We experienced a significant increase in revenue across most product lines and diameters due to increased demand for our products which led to a large price increase in the first half of 2011. We directed most of our additional crystal growth production capacity to support the growing demand for six inch polished wafers. As a result, we increased our sales of polished wafers by \$45.7 million primarily on higher volume of \$55.1 million partially offset by lower pricing of \$9.4 million, as demand for these products increased in both the LED and SoS RFIC markets. Revenue from the sale of core products for the year ended December 31, 2011 increased by \$8.0 million, of which \$23.0 million is due to an increase in pricing partially offset by a decrease of \$15.0 million due to lower volume. We also had higher revenue of \$3.1 million from optical products due to increased sales of sapphire for sensor and instrumentation applications.

During the second half of 2011, demand from the LED market weakened due to excess inventory in the supply chain. As a result, prices for our products declined. We expect the demand for our core products to improve beginning in the first quarter of 2012 as customers for core products have reduced their inventory levels close to normal levels. However, pricing will likely initially remain low early in the recovery. While demand for large diameter polished wafers was strong throughout 2011, the prolonged weakness in the LED market impacted pricing for this product in the fourth quarter as customers for this product accumulated excess inventory as well. We expect orders for LED polished wafers to be lower in the first half of 2012 and improve in the second half of 2012. Our price for large diameter polished wafers will likely be lower in 2012 due to the expected weaker demand in the first half of the year and the need to encourage greater adoption of the larger diameter platform among LED chip manufacturers. We expect orders for polished wafers to the SoS market to increase as that technology continues to gain market share, however, this is a smaller market than the LED market.

*Gross profit.* Gross profit was \$69.6 million for the year ended December 31, 2011 and \$41.2 million for the year ended December 31, 2010, an increase of \$28.4 million. The increase in gross profit is primarily attributable to higher revenue due to increased core pricing in the first half of 2011 and higher volume sales of polished wafers. We believe the softening in core and polished wafer prices and volumes will lower our first quarter 2012 gross profit.

*General and administrative expenses.* G&A expenses were \$11.3 million for the year ended December 31, 2011 and \$9.9 million for the year ended December 31, 2010, an increase of \$1.4 million. Our bad debt expense increased by \$1.7 million as we made accommodations to certain key customers of our small diameter cores by agreeing to write-off a portion of their accounts receivable balances. Also, investor relations expense increased \$728,000, primarily due to increased outside support services and investor relations consulting, audit fees increased \$84,000; tax consulting expense increased \$102,000 and executive travel expenses increased \$111,000, primarily due to increased frequency in travel outside the U.S. G&A expenses for the Malaysia facility were also \$202,000 higher as the facility began to incur G&A expenses starting in the third quarter of 2010. The G&A increases noted above were partially offset by a decrease of employee compensation costs of \$1.8 million, resulting from a lower performance based bonus of \$2.1 million, offset by an increase of \$143,000 from annual salary increases and expenses associated with issuance and exercise of employee stock options and \$158,000 of recruiting expenses.

*Sales and marketing expenses.* Sales and marketing expenses were \$1.7 million for the year ended December 31, 2011 and \$1.3 million for the year ended December 31, 2010, an increase of \$391,000. The increase in sales and marketing expenses is attributable to additional employee compensation costs primarily due to annual salary increases, employee stock options expense and additional sales hires to support expansion as well as increased travel expense.

*Research and development expenses.* R&D expenses were \$1.8 million for the year ended December 31, 2011 and \$1.1 million for the year ended December 31, 2010, an increase of \$727,000. The increase is attributable to higher employee compensation costs of \$246,000 and an increase in spending on research projects of \$458,000.

*Other income (expense).* Other expense was \$118,000 for the year ended December 31, 2011 and other income \$346,000 for the year ended December 31, 2010, a decrease in other income of \$464,000. The decrease was primarily due to a \$106,000 decrease in interest income on lower investment balances as well as a \$350,000 realized loss on foreign currency translation.

*Income tax expenses.* Income tax expenses were \$16.5 million for the year ended December 31, 2011, as our effective tax rate was 30.3% for the year. Due to our tax net operating loss position, there were no income taxes for the year ended December 31, 2010. During the year ended December 31, 2011, management concluded that based on the current level of sustainable profitability that generates taxable income, that it is more likely than not that our deferred tax assets will be realizable. With the release of the valuation allowance, we began recording federal and certain state and non-U.S. income taxes attributable to the fiscal year's pre-tax income at the statutory rates adjusted for various tax benefits that lower the rate. To the extent pretax income varies from estimates made at the end of an interim period, the actual tax provision recognized in 2012 could be different than the amount used for the 2011 tax provision. Based on our current estimated pretax income, we expect our 2012 full year tax rate to be between 30.0% and 35.0%.

### **Comparison of years ended December 31, 2010 and 2009**

*Revenue.* Revenue was \$77.4 million for the year ended December 31, 2010 and \$19.8 million for the year ended December 31, 2009, an increase of \$57.6 million. We experienced a significant increase in revenue across most product lines and diameters due to increased demand for our products due to an improved market and pricing environment. Revenue from the sales of core products for the year ended December 31, 2010 increased by \$41.3 million, of which \$13.6 million was attributed to volume and \$27.7 million was attributed to increased pricing. Revenue from the sales of polished products for the year ended December 31, 2010 increased by \$17.0 million, of which \$13.6 million was related to an increase in volume, and \$3.4 million was attributed to pricing. Of that increase in revenue from the sales of polished products for the year ended December 31, 2010, \$15.8 million was attributed to the increase in the sale of our LED substrate products and \$1.2 million was attributed to the increase in the sale of our SoS RFIC products. Revenue for the sale of our as-cut and as-ground products decreased \$1.8 million, attributed to focusing production on higher margin core and polished wafer products. We also experienced an increase in revenue from the sale of our optical products for the year ended December 31, 2010, of \$1.1 million.

*Gross profit (loss).* Gross profit (loss) was \$41.2 million for the year ended December 31, 2010 and (\$3.6) million for the year ended December 31, 2009, an increase of \$44.8 million. The increase in gross profit is primarily attributable to higher revenue of \$57.6 million and better utilization of equipment and staff, which led to improved operating leverage and throughput. In addition, sales of larger diameter products, which generally had a higher gross profit margin, increased by \$17.0 million.

*General and administrative expenses.* G&A expenses were \$9.9 million for the year ended December 31, 2010 and \$4.8 million for the year ended December 31, 2009, an increase of \$5.1 million. The increase was primarily due to an increase of employee compensation costs of \$3.2 million, of which \$2.1 million was from performance based bonus costs as no bonus was earned in 2009 and \$1.1 million from annual salary increases and expenses associated with issuance and exercise of employee stock options. Our bad debt expense increased by \$676,000 as compared to 2009 due to the considerable increase in sales volume in 2010 and due to lower than normal bad debt expense in 2009 as we were able to reduce our reserve as our customer's improved economic condition reduced the uncertainty regarding our customer's ability to pay an over 90 day past due receivable. We also experienced an increase in expenses of \$582,000 from additional recruiting, training, travel, information technology and other miscellaneous expenses related to the startup of the Malaysian facility. In addition, franchise taxes increased by \$292,000 primarily due to higher stock share count.

*Sales and marketing expenses.* Sales and marketing expenses were \$1.3 million for the year ended December 31, 2010 and \$1.1 million for the year ended December 31, 2009, an increase of \$130,000. The

increase in sales and marketing expenses is primarily attributable to additional employee compensation costs from additional sales hires to support expansion, annual salary increases and employee stock options expense.

*Research and development expenses.* R&D expenses were \$1.1 million for the year ended December 31, 2010 and \$801,000 for the year ended December 31, 2009, an increase of \$278,000. The increase is attributable to higher employee compensation costs and an increase in spending on research projects.

*Other income.* Other income was \$346,000 for the year ended December 31, 2010 and \$738,000 for the year ended December 31, 2009, a decrease in other income of \$392,000. The decrease was primarily due to a \$335,000 decrease in interest income as a result of lower interest rates as well as a \$20,000 loss on currency translation not incurred in 2009.

## **LIQUIDITY AND CAPITAL RESOURCES**

We have historically funded our operations using a combination of issuances of common stock and cash generated from our operations.

As of December 31, 2011, we had cash and short term investments totaling \$54.8 million, including cash of \$3.5 million held in deposits at major banks, \$839,000 invested in money market funds and short term investments in commercial paper, corporate bonds, and U.S. treasury securities of \$50.5 million. Our long term investment consists of a \$2.0 million investment in Peregrine Semiconductor, Corp. (one of our customers) Series D1 preferred stock. In February 2008, we began experiencing failed auctions of our entire auction-rate securities portfolio, resulting in our inability to sell these securities in the short term. We held put options associated with an agreement with UBS, AG related to all of our auction-rate securities purchased through them. We had the option to sell these securities to UBS, AG at par value from June 30, 2010 through July 2, 2012. We exercised these put options on June 30, 2010 with settlement on July 1, 2010 for a payment equal to full par value of the auction-rate securities.

Our right to sell the auction-rate securities to UBS, AG commencing on June 30, 2010, represented put options for a payment equal to the par value of the auction-rate securities. During the years ended December 31, 2010 and 2009, we recorded a realized loss of (\$55,000) and (\$460,000), respectively, representing the changes in fair value of the put options. We also recorded during the years ended December 31, 2010 and 2009, a realized gain of \$63,000 and \$507,000, respectively, representing the changes in fair value of the auction-rate securities. Both the gain and loss from recording the change in fair value of the put options and auction-rate securities were recorded in gain (loss) on investments in our consolidated statements of operations. Our investment policy no longer allows auction-rate securities as an approved investment.

## Cash flows from operating activities

	Year ended December 31,		
	2011	2010	2009
	(in thousands)		
Net income (loss) . . . . .	\$ 38.1	\$ 29.1	\$(9.6)
<b>Non-cash items:</b>			
Depreciation and amortization . . . . .	9.7	6.0	5.3
Stock based compensation and other, net . . . . .	2.5	2.5	0.9
Deferred taxes . . . . .	13.5	—	—
Excess tax benefits from stock based compensation . . . . .	(1.4)	—	—
<b>Total non-cash items:</b> . . . . .	<u>24.3</u>	<u>8.5</u>	<u>6.2</u>
<b>Working capital:</b>			
Accounts receivable . . . . .	(14.0)	(13.7)	(2.4)
Accounts payable . . . . .	3.7	7.1	(0.5)
Other accruals . . . . .	(1.6)	3.6	0.2
Inventories . . . . .	(12.0)	(4.4)	1.3
Prepaid expenses and other assets . . . . .	(13.9)	(6.1)	1.5
<b>Total working capital items:</b> . . . . .	<u>(37.8)</u>	<u>(13.5)</u>	<u>0.1</u>
<b>Net cash provided by (used in) operating activities</b> . . . . .	<u>\$ 24.6</u>	<u>\$ 24.1</u>	<u>\$(3.3)</u>

Cash provided by operating activities was \$24.6 million for the year ended December 31, 2011. During such period, we generated net income of \$38.1 million, which included non-cash charges of \$24.3 million, including depreciation expense of \$9.7 million and stock-based compensation expense of \$2.5 million. We also incurred a non-cash expense of \$13.5 from deferred taxes partially offset by a \$1.4 million tax benefit related to stock based compensation. Cash from net working capital decreased \$37.8 million, which was comprised of an increase in accounts receivable of \$14.0 million due to timing of collections, a decrease in other accruals of \$1.6 million consisting primarily of a decrease in deposits of \$1.1 million from customer prepayments, an increase in prepaid expenses and other current assets of \$13.9 million due to an increase in purchases of furnace construction and replacement parts for both the Illinois and Malaysia facilities, an increase in inventory of \$12.0 million, which was attributed to an increase in raw materials inventory as we continued to grow our safety stock, as well as an increase in work-in-progress and finished goods inventory due to lower demand of the two and four inch core products in the fourth quarter. This was offset by an increase in accounts payable of \$3.7 million due to timing of payments.

Cash provided by operating activities was \$24.1 million for the year ended December 31, 2010. During such period, we generated net income of \$29.1 million, which included non-cash charges of \$8.5 million, including depreciation expense of \$6.0 million and stock-based compensation expense of \$2.3 million. Cash from net working capital decreased \$13.5 million, which was comprised of an increase in accounts receivable of \$13.7 million due to higher sales and volumes, an increase in accounts payable of \$7.1 million due to increased manufacturing production and timing of payments, an increase in other accruals of \$3.6 million consisting primarily of an increase in deposits of \$1.1 million from customer prepayments, and an increase in accrued payroll of \$2.0 million from increased headcount and bonus accrual. There was also an increase in prepaid expenses and other assets of \$6.1 million due to an increase in purchases of furnace construction and replacement parts for both the Illinois and Malaysia facilities, and an increase in inventory of \$4.4 million, of which \$1.7 million was attributed to an increase in the stock of raw material.

Cash used in operating activities was \$3.3 million for the year ended December 31, 2009. During such period, we generated a net loss of \$9.6 million, which included non-cash charges of \$6.2 million, including depreciation expense of \$5.3 million and stock-based compensation expense of \$937,000. During such period, cash from net working capital increased by \$106,000 which was composed of an increase in accounts receivable

of \$2.4 million due to higher sales in the fourth quarter, an increase of accrued other liabilities of \$463,000 primarily due to the amount owed on land purchased in Malaysia, a decrease in inventory of \$1.3 million due to sales product mix requirements, a decrease in spare parts of \$1.4 million due to the increased usage of furnace material inventory, a decrease in accounts payable of \$445,000 due to timing of ordering and payments and a decrease in accrued payroll of \$162,000 attributable to the decrease in performance based bonus expenses offset by the increase in headcount.

### **Cash flows used in investing activities**

Net cash provided by (used in) investing activities was (\$32.7) million, (\$74.7) million and \$1.7 million for the years ended December 31, 2011, 2010 and 2009, respectively. In 2011, we used approximately \$43.7 million on expansion activities, including building and equipment for our crystal growth facility in Batavia, Illinois, and continued equipment installation at our post crystal growth facility in Penang, Malaysia. We also spent approximately \$4.3 million on upgrading machinery and equipment to increase capacity in other areas. This was partially offset by sales of investments of \$25.0 million used to fund operations, capital spending and to repurchase some of our capital stock. We purchased additional investments of \$9.4 million using investment earnings proceeds. In 2010, we used approximately \$47.6 million on expansion, including building and equipment for our new crystal growth facility in Batavia, Illinois, and on building and equipping of our new post crystal growth facility in Malaysia. We used proceeds from our common stock offering completed on June 21, 2010 of approximately \$55.4 million to purchase investment securities. This was partially offset by sales of investments of \$30.0 million which were used to fund operations and capital spending. In 2009, we used approximately \$3.8 million to purchase components to construct additional crystal growth furnaces, approximately \$645,000 to expand and upgrade our Bensenville, Illinois facility and \$354,000 for other upgrades in our fabrication, slicing, and polishing operations. We also used \$681,000 to purchase land in Malaysia to continue to expand our capacity. We purchased additional investments of \$693,000 using investment earnings proceeds. This was offset by proceeds from sales of investments of \$7.9 million.

We are continuing to equip our crystal growth facility in Illinois and post crystal growth facility in Malaysia, however, they are now near completion. We anticipate starting construction on our next crystal growth facility in the U.S. in 2012. It is difficult to predict the timing of capital expenditures on these projects, but we anticipate spending an additional \$30 to \$40 million on capital expenditures in 2012, the exact amount of which is dependent on when we begin construction of our new crystal growth facility.

### **Cash flows from financing activities**

Net cash provided by (used in) financing activities was (\$4.0) million, \$62.8 million and (\$2.2) million for the years ended December 31, 2011, 2010 and 2009, respectively. Net cash used in financing activities for 2011 reflects stock repurchases of \$6.5 million, partially offset by excess tax benefits related to stock based compensation of \$1.4 million and proceeds from the exercise of options of \$742,000. Net cash provided by financing activities for 2010 reflects \$61.7 million in net proceeds from the common stock offering completed June 21, 2010, as well as proceeds from the exercise of stock options of \$1.6 million partially offset by an increase in restricted cash of \$525,000. Net cash used in financing activities for 2009 reflects stock repurchases of \$2.6 million, partially offset by the proceeds from the exercise of stock options of \$420,000.

### **Future liquidity requirements**

We believe that our existing cash, cash equivalents, investments and anticipated cash flows from operating activities will be sufficient to meet our anticipated cash needs for at least the next twelve months. Our cash needs include cash required to fund our operations, and the capital needed to fund our planned expansions in the U.S. and Asia. If the assumptions underlying our business plan regarding future revenues and expenses change, or if unexpected opportunities or needs arise, we may seek to raise additional cash by selling equity or convertible debt securities. If we raise additional funds through the issuance of equity or convertible debt securities, the

percentage ownership of our stockholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we obtain debt financing, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, and the terms of the debt securities issued could impose significant restrictions on our operations. If we are unable to obtain financing on terms favorable to us, we may be unable to successfully execute our business plan.

### Contractual obligations

The contractual obligations presented in the table below represent our estimates of future payments under fixed contractual obligations and commitments at December 31, 2011. Changes in our business needs as well as actions by third parties and other factors may cause these estimates to change. Because these estimates are complex and necessarily subjective, our actual payments in future periods are likely to vary from those presented in the table. The following table sets forth information relating to our contractual obligations at December 31, 2011:

		Payments due in			
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
		(in millions)			
Operating lease obligations . . . . .	\$ 3.5	\$1.2	\$ 2.3	\$—	\$—
Purchase order obligations . . . . .	6.4	6.4	—	—	—
Building construction obligations . . . . .	0.2	0.2	—	—	—
Total contractual obligations . . . . .	\$10.1	\$7.8	\$ 2.3	\$—	\$—

### OFF-BALANCE SHEET ARRANGEMENTS

During 2011, 2011 and 2010, we did not engage in any off-balance sheet arrangements. We do not have any interest in entities referred to as variable interest entities, which includes special purpose entities and other structured finance entities.

### ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Market risk is the risk of loss related to changes in market prices, including interest rates, of financial instruments that may adversely impact our financial position, results of operations or cash flows.

*Foreign currency exchange risk.* As a result of our global operations, we are exposed to changes in foreign currency exchange rates which may adversely affect our results and financial position. Primary exposures are related to the U.S. Dollar versus the Malaysian Ringgit. To date, substantially all of our international sales have been transacted in U.S. dollars. While we continue to monitor this exchange risk, we are not currently entered into any foreign currency hedging transactions.

*Interest rate risk.* We do not have any long-term borrowings. Our investments consist of cash, cash equivalents, commercial paper, corporate bonds, and U.S. treasury securities. The primary objective of our investment activities is to preserve principal while maximizing income without significantly increasing risk. We do not enter into investments for speculative purposes. Our investments are exposed to market risk due to a fluctuation in interest rates, which may affect our interest income and the fair market value of our investments. Due to the short-term nature of our investment portfolio, we do not believe an immediate 10% increase or decrease in interest rates would have a material effect on the fair market value of our portfolio, and therefore, we do not expect our operating results or cash flows to be materially affected by a sudden change in market interest rates.

*Inflation.* Our operations have not been, and we do not expect them to be, materially affected by inflation. However, historically, the prices we charge our customers are market driven, and therefore, we may not be able to increase our prices to offset any increase in our material or labor costs. Our inability or failure to do so could harm our business, financial condition and results of operations.

## **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

The preparation of financial statements in accordance with accounting principles generally accepted in the U.S. requires us to make estimates, assumptions and judgments that affect the amounts reported in our financial statements and the accompanying notes. We base our estimates on historical experience and various other assumptions that we believe to be reasonable. Although these estimates are based on our present best knowledge of the future impact on the company of current events and actions, actual results may differ from these estimates, assumptions and judgments.

We consider to be critical those accounting policies that require our most subjective or complex judgments, which often result from a need to make estimates about the effect of matters that are inherently uncertain, and that are among the most important of our accounting policies in the portrayal of our financial condition and results of operations. We believe the following to be our critical accounting policies, including the more significant estimates and assumptions used in preparation of our financial statements.

*Foreign currency translation and transactions.* Rubicon Worldwide LLC's assets and liabilities are translated into U.S. dollars at exchange rates existing at the respective balance sheet dates and capital accounts at historical exchange rates. The results of operations are translated into U.S. dollars at the average exchange rates during the respective period. Translation adjustments resulting from fluctuations in exchange rates for Rubicon Worldwide LLC are recorded as a separate component of accumulated other comprehensive income (loss) within stockholders' equity.

We have determined that the functional currency of Rubicon Sapphire Technology (Malaysia) SDN BHD is the U.S. dollar. Rubicon Sapphire Technology (Malaysia) SDN BHD's assets and liabilities are translated into U.S. dollars using the remeasurement method. Non-monetary assets are translated at historical exchange rates and monetary assets are translated at exchange rates existing at the respective balance sheet dates. Translation adjustments for Rubicon Sapphire Technology (Malaysia) SDN BHD are included in determining net income (loss) for the period. The results of operations are translated into U.S. dollars at the average exchange rates during the respective period. We record these gains and losses in other income (expense).

Foreign currency transaction gains and losses are generated from the effects of exchange rate changes on transactions denominated in a currency other than our functional currency, which is the U.S. dollar. Gains and losses on foreign currency transactions are generally required to be recognized in the determination of net income (loss) for the period. We record these gains and losses in other income (expense).

*Revenue recognition.* We recognize revenue from sales of products when:

- *Persuasive evidence of an arrangement exists.* We require evidence of a purchase order with the customer specifying the terms and specifications of the product to be delivered, typically in the form of a signed quotation or purchase order from the customer.
- *Title has passed and the product has been delivered.* Title passage and product delivery generally occur when the product is delivered to a common carrier.
- *The price is fixed or determinable.* All terms are fixed in the signed quotation or purchase order received from the customer. The purchase orders do not contain rights of cancellation, return, exchanges or refunds.

- *Collection of the resulting receivable is reasonably assured.* Our standard arrangement with customers includes payment terms. Customers are subject to a credit review process that evaluates each customer's financial position and its ability to pay. We determine collectability by considering the length of time the customer has been in business and our history of collections with that customer. If it is determined that collection is not probable, no product is shipped and no revenue is recognized unless cash is received in advance.

All of our revenue is denominated in U.S. dollars.

*Inventory.* We value our inventory at the lower of cost or market. Market is determined based on net realizable value. Costs for raw materials, work in process and finished goods are based on actual costs on a first-in, first-out basis. We establish inventory reserves when conditions exist that suggest inventory may be in excess of anticipated demand or is obsolete based on customer required specifications. We evaluate the ability to realize the value of our inventory based on a combination of factors, including forecasted sales, estimated current and future market value and changes in customers' product specifications. Our method of estimating excess and obsolete inventory has remained consistent for all periods presented. However, if our recognition of excess or obsolete inventory is, or if our estimates of our inventory's potential utility become, less favorable than currently expected, additional inventory reserves may be required. We determine our normal operating capacity and record as expense costs attributable to lower utilization of equipment and staff. During the beginning of 2010 and for all of 2009, we determined we were not operating at capacity and recorded as expense costs associated with lower utilization of equipment and staff of \$462,000 and \$5.6 million, respectively. With the lower demand, we believe that it is likely that adjustments for lower utilization of equipment and staff will occur in the first half of 2012.

We value our other inventory supplies at cost, based on the purchase prices on a first-in, first out-basis. Other inventory supplies include consumable items used in the manufacturing process as well as repair and maintenance items for our machinery and equipment.

*Investments.* We invest available cash primarily in investment grade commercial paper, corporate notes and government securities. Investments classified as available-for-sale securities are carried at fair market value with unrealized gains and losses recorded in accumulated other comprehensive income (loss). Investments in trading securities are reported at fair value, with both realized and unrealized gains and losses recorded in other income (expense), in the consolidated statements of operations. Investments in which we have the ability and intent, if necessary, to liquidate in order to support our current operations are classified as short-term. Our long-term investments at December 31, 2011 consist of a \$2.0 million investment in Peregrine Semiconductor, Corp. (a customer) Series D-1 Preferred shares.

We review our available-for-sale securities investments at the end of each quarter for other-than-temporary declines in fair value based on the specific identification method. We consider various factors in determining whether an impairment is other-than-temporary, including the severity and duration of the impairment, changes in underlying credit ratings, forecasted recovery, our ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value and the probability that the scheduled cash payments will continue to be made. When we conclude that an other-than-temporary impairment has resulted, the difference between the fair value and carrying value is written off and recorded as a charge on the consolidated statement of operations. As of December 31, 2011, no impairment was recorded.

In October 2008, we entered into an agreement that provided us with the right, but not the obligation, to sell all our auction-rate securities to UBS, AG for par value during the period from June 30, 2010 to July 2, 2012 (the "ARS Put Options"). The ARS Put Options provided us with the opportunity to recover the estimated unrealized loss on our ARS investments. We recorded the fair value of the ARS Put Options upon receipt. We exercised these put options on June 30, 2010 with a settlement date of July 1, 2010. At December 31, 2011 we have no auction rate securities or put options in our investment portfolio. We valued the auction-rate securities and ARS Put Options using a discounted cash flow model that weighs various factors including interest rates and expected



holding period. Unrealized gains and losses related to the ARS Put Options were recognized in earnings. Our investment policy no longer allows auction-rate securities as an approved investment.

*Allowance for doubtful accounts.* We estimate the allowance for doubtful accounts based on an assessment of the collectability of specific customer accounts. The determination of risk for collection is assessed on a customer-by-customer basis considering our historical experience and future orders with the customer, changes in payment patterns, and recent information we have about the current status of our accounts receivable balances. If we determine that a specific customer is a risk for collection, we provide a specific allowance for credit losses to reduce the net recognized receivable to the amount we reasonably believe will be collected. If a receivable is deemed uncollectible, and the account balance differs from the allowance provided, the specific amount is written off to bad debt expense. We believe that based on the customers to whom we sell and the nature of our agreements with them, our estimates are reasonable. Our method of estimating collectability has remained consistent for all periods presented and with past collections experience.

*Stock-based compensation.* We expense stock options based upon the fair market value on the date of grant. We use the Black-Scholes option pricing model to determine the fair value of stock options. The determination of the fair value of stock-based payment awards on the date of grant using an option-pricing model will be affected by assumptions regarding a number of complex and subjective variables. These variables include our expected stock volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rates, forfeitures and expected dividends.

The expected term represents the weighted-average period that our stock options are expected to be outstanding and is based upon the vesting term of our options, a review of a peer group of companies, and expected exercise behavior. Until November 2007, we were operating as a private company, and as a result, we were unable to use our actual price volatility data. Therefore, we estimate the volatility of our common stock based on volatility of similar entities over the expected term of our stock options. We base the risk-free interest rate that we use in the option pricing model on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options. We do not anticipate paying any cash dividends in the foreseeable future and, therefore, use an expected dividend yield of zero in the option pricing model. We are required to estimate forfeitures at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. The current forfeiture rate of 24.53% was based on our past history of pre-vesting forfeitures and the forfeiture rate has remained constant.

We allocate stock based compensation costs using a straight-line method which amortizes the fair value of each option on a straight-line basis over the service period. Based on the variables affecting the valuation of our common stock and the method used for allocating compensation costs, we recognized \$2.5 million in stock-based compensation expense during the year ended December 31, 2011.

All option grants made during 2011 and 2010 were granted at an exercise price per share equal to the closing market price of our common stock on the day before the date of the grant. Therefore, there is no intrinsic value because the exercise price per share of each option was equal to the fair value of the common stock on the date of grant.

Based on the fair market value of the common stock at December 31, 2011, there was no aggregate intrinsic value for options outstanding and exercisable. At December 31, 2010, the intrinsic value for the options outstanding was \$14.8 million and the intrinsic value for the options exercisable was \$5.5 million. For more information on stock-based compensation, see Note 7 – Stock Incentive Plans to our Consolidated Financial Statements.

*Income tax valuation allowance.* Evaluating the need for and amount of a valuation allowance for deferred tax assets often requires significant judgment and extensive analysis of all the positive and negative evidence available to determine whether all or some portion of the deferred tax assets will not be realized. A valuation

allowance must be established for deferred tax assets when it is more likely than not (a probability level of more than 50 percent) that they will not be realized. In general, “realization” refers to the incremental benefit achieved through the reduction in future taxes payable or an increase in future taxes refundable from the deferred tax assets, assuming that the underlying deductible differences and carryforwards are the last items to enter into the determination of future taxable income. In determining our valuation allowance, we consider the source of taxable income including taxable income in prior carryback years, future reversals of existing temporary differences, the required use of tax planning strategies, and future taxable income exclusive of reversing temporary differences and carryforwards. During the year ended December 31, 2011, management concluded that based on the current level of sustainable profitability that generates taxable income, that it is more likely than not that our deferred tax assets will be realizable. With the release of the valuation allowance, federal and certain state and non-U.S. income taxes attributable to the fiscal year’s pre-tax income were provided for in the period. The reversal of the valuation allowance favorably impacted our effective tax rate.

*Accounting for uncertainty in income taxes* We recognize the tax benefit from an uncertain tax position only if it is more likely than not the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized upon settlement. For the year ended December 31, 2011, we recorded a liability of \$363,000 for uncertain tax positions. We recognize interest and/or penalties related to income tax matters in income tax expense. For the year ended December 31, 2011 we accrued \$11,000 for potential penalties related to income taxes. There were no interest or penalties related to income taxes that have been accrued or recognized as of and for the years ended December 31, 2010 and 2009.

## **RECENT ACCOUNTING PRONOUNCEMENTS**

In June 2011, the FASB issued ASU No. 2011-05, “*Comprehensive Income (ASC Topic 220): Presentation of Comprehensive Income*,” (“ASU 2011-05”) which amends current comprehensive income guidance. This guidance is effective retrospectively for the interim and annual periods beginning on or after December 15, 2011 (early adoption is permitted), requires presentation of total comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. ASU 2011-05 eliminates the option to present components of other comprehensive income as part of the statement of changes in stockholders’ equity. The pronouncement does not change the current option for presenting components of other comprehensive income, gross, or net of the effect of income taxes, provided that such tax effects are presented in the statement in which other comprehensive income is presented or disclosed in the notes to the financial statements. Additionally, the pronouncement does not affect the calculation or reporting of earnings per share. The pronouncement also does not change the items which must be reported in other comprehensive income, how such items are measured, or when such items must be reclassified to net income. The FASB issued ASU 2011-12, *Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05*, to indefinitely defer the effective date of the requirement to reclassification adjustments from other comprehensive income (OCI) to net income by component under ASU 2011-05, *Presentation of Comprehensive Income*, to allow time for reconsideration of these provisions. The deferral in ASU 2011-12 does not affect the effective date of the other presentation requirements in ASU 2011-05. The amendments in ASU 2011-05 are effective for fiscal years and for interim periods within those fiscal years, beginning after December 15, 2011 (that is, the fiscal year beginning January 1, 2012 for calendar-year entities) for public entities. For nonpublic entities, the amendments are effective for fiscal years ending after December 15, 2012 (that is, the fiscal year beginning January 1, 2012 for calendar-year entities) and for interim and annual periods thereafter. The amended guidance must be applied retrospectively and early adoption is permitted. The adoption of ASU 2011-05 is not expected to have a material impact on our financial condition or results of operation.

## **ITEM 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

Our consolidated financial statements, together with the related notes and the report of independent registered public accounting firm, are set forth on the pages indicated in Item 15 in this Annual Report on Form 10-K.

## **ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURES.**

None.

## **ITEM 9A. CONTROLS AND PROCEDURES**

### **Management's Evaluation of Disclosure Controls and Procedures.**

An evaluation was performed under the supervision and with the participation of our management, including our chief executive officer and chief financial officer (together, our "certifying officers"), of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the end of the year covered by this report. Disclosure controls and procedures are controls and other procedures designed to ensure that information required to be disclosed by us in our periodic reports filed with the SEC is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and instructions for Form 10-K, and that the information is accumulated and communicated to our management, including the chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure. Based on their evaluation, our certifying officers concluded that these disclosure controls and procedures were effective as of December 31, 2011.

### **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 Exchange Act Rules 13a-15(f) and 15d-15(f). Our internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements for external purposes in accordance with generally accepted accounting principles. Based on its evaluation, management concluded that our internal controls over financial reporting were effective as of December 31, 2011. As required under this Item 9A, the management's report titled "Management's Assessment of Control Over Financial Reporting" is set forth in "Item 8 – Consolidated Financial Statements and Supplementary Data" and is incorporated herein by reference.

### **Attestation Report of the Registered Public Accounting Firm**

As required under this Item 9A, the auditor's attestation report titled "Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting" is set forth in "Item 8 – Consolidated Financial Statements and Supplementary Data" and is incorporated herein by reference.

### **Changes in Internal Controls over Financial Reporting**

There have been no changes in our internal controls over financial reporting that occurred during the quarter ended December 31, 2011 that our certifying officers concluded materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

## **ITEM 9B. OTHER INFORMATION**

None.

### PART III

#### ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The Information required by Items 401, 405, 407(d)(4) and 407(d)(5) of Regulation S-K will be included under the captions “Election of Directors,” “Executive Officers,” “Section 16(a) Beneficial Ownership Reporting Compliance” and “Audit Committee” in our proxy statement for our 2012 annual meeting of stockholders and is incorporated by reference herein. If such proxy statement is not filed with the SEC within 120 days after the end of the fiscal year covered by this Form 10-K, an amendment to this Form 10-K shall be filed not later than the end of such 120-day period.

We have adopted a Code of Ethics that applies to all of our employees, officers and directors. A copy of the Code of Ethics is available on our website at [www.rubicon-es2.com](http://www.rubicon-es2.com), and any waiver from the Code of Ethics will be timely disclosed on the Company’s website as will any amendments to the Code of Ethics.

#### ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 402 of Regulation S-K will be included under the captions “Executive Compensation” and “Director Compensation” in our proxy statement for our 2012 annual meeting of stockholders and is incorporated by reference herein. The information required by Item 407(e)(4) and 407(e)(5) of Regulation S-K will be included under the captions “Compensation Committee Interlocks and Insider Participation” and “Compensation Committee Report” in our proxy statement for our 2012 annual meeting of stockholders and is incorporated by reference herein. If such proxy statement is not filed with the SEC within 120 days after the end of the fiscal year covered by this Form 10-K, an amendment to this Form 10-K shall be filed not later than the end of such 120-day period.

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

##### Securities Authorized for Issuance under Equity Compensation Plans

The following table represents securities authorized for issuance under our 2001 Equity Plan and our 2007 Stock Incentive Plan as of December 31, 2011.

##### Equity Compensation Plan Information

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuances Under the Equity Compensation Plans (Excluding Securities Reflected in Column(a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders(1) .....	<u>2,093,108</u>	<u>\$13.45</u>	<u>2,259,999</u>

(1) Approved before our initial public offering.

The information required by Item 403 of Regulation S-K will be included under the caption “Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters” in our proxy statement for our 2012 annual meeting of stockholders and is incorporated by reference herein. If such proxy statement is not filed with the SEC within 120 days after the end of the fiscal year covered by this Form 10-K, an amendment to this Form 10-K shall be filed not later than the end of such 120-day period.

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

The information required by Item 404 of Regulation S-K will be included under the caption “Certain Relationships and Related Person Transactions” in our proxy statement for our 2012 annual meeting of stockholders and is incorporated by reference herein. The information required by Item 407(a) of Regulation S-K will be included under the caption “Director Independence” in our proxy statement for our 2012 annual meeting of stockholders and is incorporated by reference herein. If such proxy statement is not filed with the SEC within 120 days after the end of the fiscal year covered by this Form 10-K, an amendment to this Form 10-K shall be filed not later than the end of such 120-day period.

### **ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information required by this Item will be included under the caption “Ratification of Selection of Independent Registered Public Accounting Firm” in our proxy statement for our 2012 annual meeting of stockholders and is incorporated by reference herein. If such proxy statement is not filed with the SEC within 120 days after the end of the fiscal year covered by this Form 10-K, an amendment to this Form 10-K shall be filed not later than the end of such 120-day period.

## PART IV

### ITEM 15. EXHIBITS AND CONSOLIDATED FINANCIAL STATEMENT SCHEDULES

(a) Financial statements. The following consolidated financial statements are filed as part of this Annual Report on Form 10-K.

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(b) Exhibits. The exhibits filed or incorporated by reference as a part of this report are listed in the Index to Exhibits which appears following the signature page to this Annual Report on Form 10-K and are incorporated by reference.

(c) Financial statement schedules not listed above have been omitted because they are inapplicable, are not required under applicable provisions of Regulation S-X, or the information that would otherwise be included in such schedules is contained in the registrant's financial statements or accompanying notes.

## 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 on March 15, 2012.

Rubicon Technology, Inc.

By /s/ Raja M. Parvez

Raja M. Parvez  
President and Chief Executive Officer

KNOWN BY ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Raja M. Parvez and William F. Weissman, jointly and severally, his or her attorney-in-fact, with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his or her substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on March 15, 2012.

<u>Signature</u>	<u>Title</u>
<u>/s/ Raja M. Parvez</u> Raja M. Parvez	Director, President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ William F. Weissman</u> William F. Weissman	Chief Financial Officer (Principal Financial and Accounting Officer)
<u>/s/ Don N. Aquilano</u> Don N. Aquilano	Chairman of the Board of Directors
<u>/s/ Donald R. Caldwell</u> Donald R. Caldwell	Director
<u>/s/ Michael E. Mikolajczyk</u> Michael E. Mikolajczyk	Director
<u>/s/ Raymond J. Spencer</u> Raymond J. Spencer	Director

## EXHIBIT INDEX

The Exhibits listed below are filed or incorporated by reference as part of this Annual Report on Form 10-K.

<b>Exhibit No.</b>	<b>Description</b>	<b>Incorporation by Reference</b>
3.1	Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Exhibit 3.1 to Amendment No. 2, filed on November 1, 2007, to the registrant's Registration Statement on Form S-1 (File No. 333-145880)
3.2	Amendment No. 1 to Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Appendix A to the registrant's Definitive Proxy Statement on Schedule 14A, filed on April 29, 2011 (File No. 1-33834)
3.3	Amended and Restated Bylaws of Rubicon Technology, Inc.	Filed as Exhibit 3.2 to Amendment No. 2, filed on November 1, 2007, to the registrant's Registration Statement on Form S-1 (File No. 333-145880)
4.1	Specimen Common Stock Certificate	Filed as Exhibit 4.1 to Amendment No. 3, filed on November 13, 2007, to the registrant's Registration Statement on Form S-1 (File No. 333-145880)
4.2	Fourth Amended and Restated Registration Rights Agreement, dated as of November 30, 2005	Filed as Exhibit 4.2 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
4.3	Warrant to Purchase Shares of Series B preferred stock between Rubicon Technology, Inc. and GATX Ventures, Inc., dated July 10, 2002 (1)	Filed as Exhibit 4.8 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
4.4	Warrant to Purchase Shares of Series B preferred stock between Rubicon Technology, Inc. and GATX Ventures, Inc., dated July 10, 2002 (2)	Filed as Exhibit 4.9 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
4.5	Form of Investor Warrant to Purchase Shares of Series E preferred stock	Filed as Exhibit 4.14 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1*	Rubicon Technology, Inc. 2001 Equity Plan, dated as of August 2, 2001	Filed as Exhibit 10.1 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1(a)*	Amendment No. 1 to the Rubicon Technology, Inc. 2001 Equity Plan, dated as of November 6, 2001	Filed as Exhibit 10.1(a) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1(b)*	Amendment No. 2 to the Rubicon Technology, Inc. 2001 Equity Plan, dated as of May 21, 2002	Filed as Exhibit 10.1(b) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1(c)*	Amendment No. 3 to the Rubicon Technology, Inc. 2001 Equity Plan, dated as of May 28, 2004	Filed as Exhibit 10.1(c) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)



<b>Exhibit No.</b>	<b>Description</b>	<b>Incorporation by Reference</b>
10.1(d)*	Amendment No. 4 to the Rubicon Technology, Inc. 2001 Equity Plan, dated as of December 6, 2004	Filed as Exhibit 10.1(d) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1(e)*	Amendment No. 5 to the Rubicon Technology, Inc. 2001 Equity Plan, dated as of June 28, 2005	Filed as Exhibit 10.1(e) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1(f)*	Amendment No. 6 to the Rubicon Technology, Inc. 2001 Equity Plan, dated as of November 30, 2005	Filed as Exhibit 10.1(f) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1(g)*	Amendment No. 7 to the Rubicon Technology, Inc. 2001 Equity Plan, dated as of July 26, 2006	Filed as Exhibit 10.1(g) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.1(h)*	Rubicon Technology, Inc. 2001 Equity Plan Form of Notice of Stock Option Grant and Stock Option Agreement	Filed as Exhibit 10.1(h) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.2*	Rubicon Technology, Inc. 2007 Stock Incentive Plan, as amended and restated on March 23, 2011	Filed as Appendix B to the registrant's Definitive Proxy Statement on Schedule 14A, filed on April 29, 2011 (File No. 1-33834)
10.3*	Rubicon Technology, Inc. Management Incentive Bonus Plan, dated as of February 28, 2007	Filed as Exhibit 10.4 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.4*	Amendment No. 1 to Rubicon Technology, Inc. Management Incentive Bonus Plan, dated as of August 29, 2007	Filed as Exhibit 10.4(a) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.5*	Executive Employment Agreement, dated as of November 17, 2005, by and between Rubicon Technology, Inc. and Raja M. Parvez	Filed as Exhibit 10.5 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.5(a)*	Amendment, dated as of July 25, 2007, to Executive Employment Agreement by and between Rubicon Technology, Inc. and Raja M. Parvez	Filed as Exhibit 10.5(a) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.5(b)*	Executive Employment Agreement, dated as of dated January 29, 2009, by and between Rubicon Technology, Inc. and Raja M. Parvez Executive Employment Agreement	Filed as Exhibit 10.5(b) to the registrant's Current Report on Form 8-K filed on December 3, 2009 (File No. 1-33834)
10.6*	Severance Agreement, dated as of September 8, 2005, by and between Rubicon Technology, Inc. and Hap R. Hewes	Filed as Exhibit 10.7 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.7*	Executive Employment Agreement, dated as of July 30, 2007, by and between Rubicon Technology, Inc. and William F. Weissman	Filed as Exhibit 10.8 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.8*	First Amendment to Executive Employment Agreement, dated as of January 29, 2009, by and between Rubicon Technology, Inc. and William F. Weissman	Filed as Exhibit 10.8(a) to the registrant's Current Report on Form 8-K filed on December 3, 2009 (File No. 1-33834)

<b>Exhibit No.</b>	<b>Description</b>	<b>Incorporation by Reference</b>
10.9	Form of Post-IPO Change of Control Severance Agreement	Filed as Exhibit 10.10 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.10	Form of Indemnification Agreement	Filed as Exhibit 10.11 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.11	Commercial Lease, dated as of December 23, 2004, by and between Rubicon Technology, Inc. and Bartmanns, Perales & Dolter, LLC	Filed as Exhibit 10.12 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.11(a)	Amendment to Commercial Lease, dated as of May 6, 2005, by and between Rubicon Technology, Inc. and Bartmanns, Perales & Dolter, LLC	Filed as Exhibit 10.12(a) to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.13	Industrial Building Lease, dated as of July 18, 2007, by and between Rubicon Technology, Inc. and Phillip J. Latoria, Jr.	Filed as Exhibit 10.14 to the registrant's Registration Statement on Form S-1, filed on October 11, 2007 (File No. 333-145880)
10.14	Non-Competition Agreement, dated as of April 6, 2005, by and between Rubicon Technology, Inc. and Hap Hewes	Filed as Exhibit 10.15 to Amendment No. 1, filed on October 11, 2007, to the registrant's Registration Statement on Form S-1 (File No. 333-145880)
10.15	Agreement for Purchase and Sale of Real Estate, dated February 16, 2010, by and between Rubicon Technology, Inc. and Douglas Business Center, LLC	Filed as Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q on May 5, 2010 (File No. 1-33834)
10.16+	Second Amendment to Supply Agreement, by and between Peregrine Semiconductor Corp. and Rubicon Technology, Inc., effective as of November 25, 2008	Filed as Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q on November 8, 2010 (File No. 1-33834)
21.1	Subsidiaries of the Company	
23.1	Consent of Independent Registered Public Accounting Firm	
24.1	Power of Attorney (incorporated by reference to the signature page of this Annual Report on Form 10-K)	
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2003	
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2003	
32.1	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2003	

<b>Exhibit No.</b>	<b>Description</b>	<b>Incorporation by Reference</b>
101	The following financial information from the Company's Annual Report on Form 10-K for the year ended December 31, 2011 is formatted in eXtensible Business Reporting Language: (i) consolidated balance sheets as of December 31, 2011 and 2010; (ii) consolidated statements of operations for each of the three years in the period ended December 31, 2011; (iii) consolidated statements of stockholders' equity for each of the three years in the period ended December 31, 2011; (iv) consolidated statements of cash flows for each of the three years in the period ended December 31, 2011; and (iv) notes to the consolidated financial statements.	

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\* Management contract or compensatory plan or arrangement of the Company.

+ Confidential treatment has been requested and granted for certain provisions of this Exhibit pursuant to Rule 24b-2 promulgated under the Exchange Act.

**Rubicon Technology, Inc.**  
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## MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The financial statements were prepared by management, which is responsible for their integrity and objectivity and for establishing and maintaining adequate internal controls over financial reporting.

The Company's internal control over financial reporting is 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. The 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 consolidated 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 consolidated financial statements.

There are inherent limitations in the effectiveness of any internal control, including the possibility of human error and the circumvention or overriding of controls. Accordingly, even effective internal controls can provide only reasonable assurance with respect to the financial statement preparation. Further, because of changes in conditions, the effectiveness of internal controls may vary over time.

Management assessed the design and 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 *Internal Control—Integrated Framework* by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on management's assessment using those criteria, as of December 31, 2011, management concluded that the Company's internal controls over financial reporting were effective.

Grant Thornton LLP, independent registered public accounting firm, has audited the consolidated financial statements of the Company for the fiscal years ended December 31, 2011, 2010 and 2009 and the Company's internal control over financial reporting as of December 31, 2011. Their reports are presented on the following pages.

Rubicon Technology, Inc.  
March 15, 2012

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

### Board of Directors and Stockholders Rubicon Technology, Inc.

We have audited Rubicon Technology, Inc.'s (a Delaware Corporation) and subsidiaries (the Company) 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 maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control—Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2011 and our report dated March 15, 2012, expressed an unqualified opinion.

/s/ GRANT THORNTON LLP

Chicago, Illinois  
March 15, 2012

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

### **Board of Directors and Stockholders Rubicon Technology, Inc.**

We have audited the accompanying consolidated balance sheets of Rubicon Technology, Inc. (a Delaware Corporation) and subsidiaries (the Company) as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2011. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of 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.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated March 15, 2012 expressed an unqualified opinion.

/s/ GRANT THORNTON LLP

Chicago, Illinois  
March 15, 2012

**Rubicon Technology, Inc.**  
**Consolidated balance sheets**

	As of December 31,	
	2011	2010
	(in thousands, other than share data)	
<b>Assets</b>		
Cash and cash equivalents	\$ 4,290	\$ 16,073
Restricted cash	189	533
Short-term investments	50,528	66,131
Accounts receivable, net	30,655	18,046
Accounts receivable—related parties	1,989	630
Inventories	22,823	11,135
Other inventory supplies	17,613	7,821
Prepaid expenses and other current assets	4,491	803
Deferred tax assets	3,078	—
Total current assets	135,656	121,172
Property and equipment, net	120,931	82,511
Investments	2,000	2,000
Other assets	1,365	1,059
Total assets	<u>\$259,952</u>	<u>\$ 206,742</u>
<b>Liabilities and stockholders' equity</b>		
Accounts payable	\$ 12,831	\$ 9,255
Accrued payroll	1,578	2,538
Accrued and other current liabilities	1,570	1,345
Corporate income and franchise taxes	612	407
Advance payments	9	1,103
Total current liabilities	16,600	14,648
Deferred tax liability	15,121	—
Total liabilities	31,721	14,648
Commitments and contingencies (Note 9)		
Stockholders' equity		
Preferred stock, \$0.001 par value, 5,000,000 undesignated shares authorized, no shares issued or outstanding	—	—
Common stock, \$0.001 par value, 45,000,000 and 85,000,000 shares authorized; 24,289,723 and 24,210,644 shares issued; 22,514,879 and 22,960,669 shares outstanding	24	23
Additional paid-in capital	332,119	327,515
Treasury stock, at cost, 1,774,844 and 1,249,975 shares	(12,148)	(5,661)
Accumulated other comprehensive loss	(50)	(10)
Accumulated deficit	(91,714)	(129,773)
Total stockholders' equity	228,231	192,094
Total liabilities and stockholders' equity	<u>\$259,952</u>	<u>\$ 206,742</u>

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



**Rubicon Technology, Inc.**  
**Consolidated statements of operations**

	Year ended December 31,		
	2011	2010	2009
	(in thousands, other than share and per share data)		
Revenue .....	\$ 134,000	\$ 77,362	\$ 19,808
Cost of goods sold .....	64,365	36,205	23,427
Gross profit (loss) .....	69,635	41,157	(3,619)
Operating expenses:			
General and administrative .....	11,336	9,883	4,811
Sales and marketing .....	1,658	1,267	1,137
Research and development .....	1,806	1,079	801
Loss on disposal of assets .....	84	234	—
Income (loss) from operations .....	54,751	28,694	(10,368)
Other income (expense):			
Interest income .....	252	358	693
Interest expense .....	—	—	(2)
Realized loss on foreign currency translation .....	(370)	(20)	—
Realized gain on investments .....	—	8	47
Total other (expense) income .....	(118)	346	738
Income (loss) before income taxes .....	54,633	29,040	(9,630)
Income tax (expense) benefit .....	(16,574)	71	—
Net income (loss) .....	\$ 38,059	\$ 29,111	\$ (9,630)
Net income (loss) per common share			
Basic .....	\$ 1.67	\$ 1.34	\$ (0.48)
Diluted .....	\$ 1.61	\$ 1.28	\$ (0.48)
Weighted average common shares outstanding used in computing net income (loss) per common share			
Basic .....	22,852,205	21,726,090	20,117,543
Diluted .....	23,596,162	22,790,896	20,117,543

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

**Rubicon Technology, Inc.**

**Consolidated statements of stockholders' equity**

	Stockholders' equity							
	Common stock		Treasury Stock		Additional paid-in capital	Accum Other Comp Inc.	Accum deficit	Total stockholders' equity
	Shares	Amount	Shares	Amount				
	(in thousands other than share data)							
Balance at December 31, 2008 .....	21,279,692	\$ 21	(730,733)	\$ (3,084)	\$260,581	\$ 129	\$(149,254)	\$108,393
Exercise of stock options .....	150,621	—	—	—	420	—	—	420
Stock-based compensation .....	—	—	—	—	937	—	—	937
Unrealized loss on investments .....	—	—	—	—	—	(126)	—	(126)
Foreign currency translation adjustments .....	—	—	—	—	—	(13)	—	(13)
Net exercise of stock warrants .....	43,885	—	—	—	—	—	—	—
Stock issued to board of directors .....	8,360	—	—	—	36	—	—	36
Purchase of treasury stock, at cost .....	—	—	(519,242)	(2,577)	—	—	—	(2,577)
Net loss .....	—	—	—	—	—	—	(9,630)	(9,630)
Comprehensive loss .....	—	—	—	—	—	—	—	(9,769)
Balance at December 31, 2009 .....	21,482,558	21	(1,249,975)	(5,661)	261,974	(10)	(158,884)	97,440
Exercise of stock options .....	532,986	—	—	—	1,640	—	—	1,640
Stock-based compensation .....	—	—	—	—	2,252	—	—	2,252
Proceeds from secondary public offering net of issuance costs of \$4,130 .....	2,195,100	2	—	—	61,649	—	—	61,651
Unrealized loss on investments .....	—	—	—	—	—	(9)	—	(9)
Foreign currency translation adjustments .....	—	—	—	—	—	9	—	9
Net income .....	—	—	—	—	—	—	29,111	29,111
Comprehensive income .....	—	—	—	—	—	—	—	29,111
Balance at December 31, 2010 .....	24,210,644	23	(1,249,975)	(5,661)	327,515	(10)	(129,773)	192,094
Exercise of stock options .....	71,355	1	—	—	741	—	—	742
Stock-based compensation .....	—	—	—	—	2,297	—	—	2,297
Excess tax benefit of stock based compensation .....	—	—	—	—	1,404	—	—	1,404
Stock issued to board of directors .....	7,724	—	—	—	162	—	—	162
Purchase of treasury stock, at cost .....	—	—	(524,869)	(6,487)	—	—	—	(6,487)
Foreign currency translation adjustments .....	—	—	—	—	—	2	—	2
Unrealized loss on investments .....	—	—	—	—	—	(42)	—	(42)
Net income .....	—	—	—	—	—	—	38,059	38,059
Comprehensive income .....	—	—	—	—	—	—	—	38,019
Balance at December 31, 2011 .....	24,289,723	\$ 24	(1,774,844)	\$(12,148)	\$332,119	\$ (50)	\$ (91,714)	\$228,231

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

**Rubicon Technology, Inc.**  
**Consolidated statements of cash flows**

	<b>Year ended December 31,</b>		
	<b>2011</b>	<b>2010</b>	<b>2009</b>
	<b>(in thousands)</b>		
<b>Cash flows from operating activities</b>			
Net income (loss) .....	\$ 38,059	\$ 29,111	\$(9,630)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities			
Depreciation and amortization .....	9,724	6,066	5,342
Net loss on disposal of equipment .....	84	234	—
Stock-based compensation .....	2,297	2,252	937
Stock issued to board of directors .....	162	—	—
Realized gain on investments .....	—	(8)	(47)
Deferred taxes .....	13,447	—	—
Excess tax benefits from stock-based compensation .....	(1,404)	—	—
Changes in operating assets and liabilities:			
Accounts receivable .....	(13,968)	(13,709)	(2,425)
Inventories .....	(11,948)	(4,464)	1,285
Other inventory supplies .....	(9,929)	(5,646)	1,436
Prepaid expenses and other assets .....	(3,993)	(548)	38
Accounts payable .....	3,683	7,129	(445)
Accrued payroll .....	(951)	2,020	(162)
Corporate income and franchise taxes .....	212	236	(84)
Advance payments .....	(1,094)	1,076	—
Accrued and other current liabilities .....	231	310	463
Net cash provided by (used in) operating activities .....	24,612	24,059	(3,292)
<b>Cash flows from investing activities</b>			
Purchases of property and equipment .....	(48,228)	(49,429)	(5,530)
Proceeds from disposal of assets .....	—	143	—
Purchase of investments .....	(9,439)	(55,416)	(693)
Proceeds from sale of investments .....	25,000	30,000	7,922
Net cash (used in) provided by investing activities .....	(32,667)	(74,702)	1,699
<b>Cash flows from financing activities</b>			
Proceeds from issuance of common stock, net of issuance costs of \$4,130 .....	—	61,720	—
Proceeds from exercise of options .....	742	1,640	420
Restricted cash .....	344	(525)	(3)
Purchase of treasury stock .....	(6,487)	—	(2,577)
Excess tax benefits from stock-based compensation .....	1,404	—	—
Net cash (used in) provided by financing activities .....	(3,997)	62,835	(2,160)
Net effect of currency translation .....	269	21	(16)
Net (decrease) increase in cash and cash equivalents .....	(11,783)	12,213	(3,769)
Cash and cash equivalents, beginning of year .....	16,073	3,860	7,629
Cash and cash equivalents, end of year .....	\$ 4,290	\$ 16,073	\$ 3,860
<b>Supplemental disclosure of cash flow information</b>			
Cash paid for income taxes .....	\$ 6,050	\$ —	\$ —
<b>Supplemental disclosure of non cash items of cash flow information</b>			
Unrealized loss on investments .....	(42)	(9)	(126)
Deferred offering costs included in accounts payable .....	—	—	61
Stock-based compensation incurred for accrued director's fees .....	—	—	36

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

**Rubicon Technology, Inc.**  
**Notes to Consolidated Financial Statements**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Description of business**

Rubicon Technology, Inc., a Delaware corporation (the “Company”), is an electronic materials provider that develops, manufactures and sells monocrystalline sapphire and other innovative crystalline products for LEDs, RFICs, blue laser diodes, optoelectronics and other optical applications. The Company sells its products on a global basis to customers in Asia, North America and Europe. The Company maintains its operating facilities in the Chicago metropolitan area and in Penang, Malaysia.

**Principles of consolidation**

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Rubicon Worldwide LLC and Rubicon Sapphire Technology (Malaysia) SDN BHD. All intercompany transactions and balances have been eliminated in consolidation.

A summary of the Company’s significant accounting policies applied in the preparation of the accompanying consolidated financial statements follows.

**Cash and cash equivalents**

The Company considers all unrestricted highly liquid investments immediately available to be cash equivalents. Cash equivalents primarily consist of time deposits with banks, unsettled trades and brokerage money market accounts.

**Restricted cash**

At December 31, 2011 and 2010, in connection with certain credit agreements, the Company is required to maintain \$5,000 of restricted certificates of deposit. At December 31, 2011 and 2010, the Company held \$1, 700 and \$2, 500, respectively, of employee funds as part of a flexible spending program. At December 31, 2011 and 2010, the Company held \$132,200 and \$526,000, respectively, as a fixed deposit pledged to a bank as a security for a bank guarantee facility granted to the Company. At December 31, 2011, the Company also held \$50,000 in escrow funds to be used for the future purchase of land in Batavia, Illinois.

**Foreign currency translation and transactions**

Rubicon Worldwide LLC’s assets and liabilities are translated into U.S. dollars at exchange rates existing at the respective balance sheet dates and capital accounts at historical exchange rates. The results of operations are translated into U.S. dollars at the average exchange rates during the respective period. Translation adjustments resulting from fluctuations in exchange rates for Rubicon Worldwide LLC are recorded as a separate component of accumulated other comprehensive income (loss) within stockholders’ equity.

The Company has determined that the functional currency of Rubicon Sapphire Technology (Malaysia) SDN BHD is the U.S. dollar. Rubicon Sapphire Technology (Malaysia) SDN BHD’s assets and liabilities are translated into U.S. dollars using the remeasurement method. Non-monetary assets are translated at historical exchange rates and monetary assets are translated at exchange rates existing at the respective balance sheet dates. Translation adjustments for Rubicon Sapphire Technology (Malaysia) SDN BHD are included in determining net income (loss) for the period. The results of operations are translated into U.S. dollars at the average exchange rates during the respective period. The Company records these gains and losses in other income (expense).

## **Rubicon Technology, Inc.**

### **Notes to Consolidated Financial Statements—(Continued)**

Foreign currency transaction gains and losses are generated from the effects of exchange rate changes on transactions denominated in a currency other than the functional currency of the Company, which is the U.S. dollar. Gains and losses on foreign currency transactions are generally required to be recognized in the determination of net income (loss) for the period. The Company records these gains and losses in other income (expense).

#### **Investments**

The Company invests available cash primarily in investment grade commercial paper, corporate notes and government securities. Investments classified as available-for-sale securities are carried at fair market value with unrealized gains and losses recorded in accumulated other comprehensive income (loss). Investments in trading securities are reported at fair value, with both realized and unrealized gains and losses recorded in other income (expense), in the consolidated statements of operations. Investments in which the Company has the ability and intent, if necessary, to liquidate in order to support its current operations, are classified as short-term.

The Company reviews its available-for-sale securities investments at the end of each quarter for other-than-temporary declines in fair value based on the specific identification method. The Company considers various factors in determining whether an impairment is other-than-temporary, including the severity and duration of the impairment, changes in underlying credit ratings, forecasted recovery, its ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value and the probability that the scheduled cash payments will continue to be made. When the Company concludes that an other-than-temporary impairment has resulted, the difference between the fair value and carrying value is written off and recorded as a charge on the consolidated statements of operations. As of December 31, 2011 and 2010, no impairment was recorded.

The Company's long-term investment is accounted for as a cost method investment and is adjusted as needed based on a review of the investment's financial position.

#### **Auction-rate securities put options ("ARS Put Options")**

In October 2008, the Company entered into an agreement that provided the Company with the right, but not the obligation, to sell all of its auction-rate securities to UBS, AG for par value during the period from June 30, 2010 to July 2, 2012. The ARS Put Options provided the Company with the opportunity to recover the estimated unrealized loss on its ARS investments. The Company recorded the fair value of the ARS Put Options upon receipt. The Company valued ARS Put Options at fair value using a discounted cash flow model. Unrealized gains and losses related to the ARS Put Options were recognized in earnings. The Company exercised these put options on June 30, 2010. At December 31, 2011, the Company had no auction rate security put options or auction rate securities in investments. The Company's investments policy no longer allows auction rate securities as an approved investment. See Note 3—Investments for additional information regarding the ARS Put Options.

#### **Treasury Stock**

The Company records treasury stock purchases under the cost method whereby the entire cost of the acquired stock is recorded as treasury stock.

#### **Accounts receivable**

The majority of the Company's accounts receivable is due from manufacturers serving the LED industry. Credit is extended based on an evaluation of the customer's financial condition. Accounts receivable are due based on contract terms and at stated amounts due from customers, net of an allowance for doubtful accounts.

## Rubicon Technology, Inc.

### Notes to Consolidated Financial Statements—(Continued)

Accounts outstanding longer than the contractual payment terms are considered past due. The Company determines its allowance by considering a number of factors, including the length of time past due, the customer's current ability to pay and the condition of the general economy and industry as a whole. The Company writes off accounts receivable when they become uncollectible, and payments subsequently received on such receivables are recorded as a reduction to bad debt expense.

The following table shows the activity of the allowance for doubtful accounts:

	Year ended December 31,	
	2011	2010
	(in thousands)	
Beginning balance .....	\$ 194	\$ 59
Charges to costs and expenses .....	1,873	142
Accounts charged off, less recoveries .....	(1,689)	(7)
Ending balance .....	<u>\$ 378</u>	<u>\$194</u>

### Inventories

Inventories are valued at the lower of cost or market. Cost is determined using the first-in, first-out method, and includes materials, labor and overhead. The Company reduces the carrying value of its inventories for differences between the cost and the estimated net realizable value, taking into account usage, expected demand, technological obsolescence and other information. Inventories are composed of the following:

	As of December 31,	
	2011	2010
	(in thousands)	
Raw materials .....	\$ 7,835	\$ 5,196
Work in progress .....	9,776	3,135
Finished goods .....	5,212	2,804
	<u>\$22,823</u>	<u>\$11,135</u>

### Property and equipment

Property and equipment consisted of the following:

	As of December 31,	
	2011	2010
	(in thousands)	
Land and land improvements .....	\$ 2,540	\$ 2,500
Buildings .....	26,915	22,897
Machinery, equipment and tooling .....	98,276	56,956
Leasehold improvements .....	7,712	7,712
Furniture and fixtures .....	834	824
Information systems .....	954	869
Construction in progress .....	17,530	15,353
Total cost .....	154,761	107,111
Accumulated depreciation and amortization .....	(33,830)	(24,600)
Property and equipment, net .....	<u>\$120,931</u>	<u>\$ 82,511</u>

## **Rubicon Technology, Inc.**

### **Notes to Consolidated Financial Statements—(Continued)**

Property and equipment are carried at cost and depreciated over their estimated useful lives using the straight-line method. The cost of maintenance and repairs is charged to expense as incurred. Significant renewals and improvements are capitalized. Depreciation and amortization expense associated with property and equipment was \$9.7 million, \$6.1 million and \$5.4 million for the years ended December 31, 2011, 2010 and 2009, respectively.

Construction in progress includes costs associated with the construction of furnaces and deposits made on equipment purchases.

The estimated useful lives are as follows:

<u>Asset description</u>	<u>Life</u>
Buildings	39 years
Machinery, equipment and tooling	3-10 years
Leasehold improvements	Lesser of life of lease or economic life
Furniture and fixtures	7 years
Information systems	3 years

#### **Impairment of long-lived assets**

When circumstances, such as adverse market conditions, indicate that the carrying value of a long-lived asset may be impaired, the Company performs an analysis to review the recoverability of the asset's carrying value. The Company makes estimates of the undiscounted cash flows (excluding interest charges) from the expected future operations of the asset. These estimates consider factors such as expected future operating income, operating trends and prospects, as well as the effects of demand, competition and other factors. If the analysis indicates that the carrying value is not recoverable from future cash flows, an impairment loss is recognized to the extent that the carrying value exceeds the estimated fair value. Any impairment losses are recorded as operating expenses, which reduce net income.

During 2009, the Company's machinery and equipment were underutilized due to a decline in sales. The Company did not perform a recoverability test of the assets to determine if further assessment for potential impairment was required as the sales decline was considered temporary due to the worldwide economic recession and was not considered a triggering event that would indicate that the carrying value may not be recoverable. In the fourth quarter 2009, the crystal growth and fabrication operations returned to full utilization and the remaining operations returned to full utilization in 2010. There were no impairment losses on long lived assets for the years ended December 31, 2011, 2010 and 2009.

#### **Other assets**

The Company's other assets include overhaul costs that are accounted for using the deferral method in accordance with ASC 908-360, "*Airlines: Property, Plant and Equipment*". These overhaul costs are recorded at cost to the balance sheet as other assets and are amortized over terms in accordance with their respectful useful lives.

#### **Warranty cost**

The Company's sales terms include a warranty that its products will meet certain specifications and is based on terms that are generally accepted in the marketplace. The Company records a current liability for the expected cost of warranty-related claims at the time of sale. The warranty reserve is included in accrued and other current liabilities on the consolidated balance sheets.

## Rubicon Technology, Inc.

### Notes to Consolidated Financial Statements—(Continued)

The following table presents changes in the Company's product warranty liability:

	Year ended December 31,	
	2011	2010
	(in thousands)	
Balance, beginning of period	\$ 98	\$ 20
Charged to cost of sales	241	128
Actual product warranty expenditures	(86)	(50)
Balance, end of period	<u>\$253</u>	<u>\$ 98</u>

#### Fair value of financial instruments

The Company's financial instruments consist primarily of cash and cash equivalents, short-term investments, accounts receivable, and accounts payable. The carrying values of these assets and liabilities approximate their fair values due to the short-term nature of these instruments at December 31, 2011 and 2010. Fair value of put options on auction rate securities is discussed in Note 3.

#### Concentration of credit risks and other risks and uncertainties

Financial instruments that could potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivable. At December 31, 2011 and 2010, the Company had \$2.8 million and \$5.5 million, respectively, on deposit at a financial institution in excess of amounts insured by the Federal Deposit Insurance Corporation. The Company performs periodic evaluation of this institution for relative credit standing. The Company has not experienced any losses in such accounts and management believes it is not exposed to any significant risk of loss on these balances.

The Company currently depends on a small number of suppliers for certain raw materials, components, services and equipment, including key materials such as aluminum oxide and certain furnace components. If the supply of these components were to be disrupted or terminated, or if these suppliers were unable to supply the quantities of raw materials required, the Company may have difficulty in finding, or may be unable to find, alternative sources for these items. As a result, the Company may be unable to meet the demand for its products, which could have a material adverse impact on the Company.

Concentration of credit risk related to revenue and accounts receivable is discussed in Note 5.

#### Revenue recognition

The Company recognizes revenue from product sales when earned. Revenue is recognized when, and if, evidence of an arrangement is obtained and the other criteria to support revenue recognition are met, including:

- *Persuasive evidence of an arrangement exists.* The Company requires evidence of a purchase order with the customer specifying the terms and specifications of the product to be delivered, typically in the form of a signed quotation or purchase order from the customer.
- *Title has passed and the product has been delivered.* Title passage and product delivery generally occur when the product is delivered to a common carrier.
- *The price is fixed or determinable.* All terms are fixed in the signed quotation or purchase order received from the customer. The purchase orders do not contain rights of cancellation, return, exchange or refund.



## **Rubicon Technology, Inc.**

### **Notes to Consolidated Financial Statements—(Continued)**

- *Collection of the resulting receivable is reasonably assured.* The Company's standard arrangement with customers includes payment terms. Customers are subject to a credit review process that evaluates each customer's financial position and its ability to pay. Collectability is determined by considering the length of time the customer has been in business and history of collections. If it is determined that collection is not probable, no product is shipped and no revenue is recognized unless cash is received in advance.

The Company does not provide maintenance or other services and does not have sales that involve multiple elements or deliverables.

#### **Shipping and handling costs**

The Company records costs incurred in connection with shipping and handling products as cost of goods sold. Amounts billed to customers in connection with these costs are included in revenue and are not material for any of the periods presented in the accompanying financial statements.

#### **Sales tax**

The Company collects and remits sales taxes on products sold to customers and reports such amounts under the net method in its consolidated statements of operations and records a liability until remitted to the respective tax authority.

#### **Stock-based compensation**

The Company requires all share-based payments to employees, including grants of employee stock options to be measured at fair value and expensed in the consolidated statements of operations over the service period (generally the vesting period) of the grant. Expense is recognized in the consolidated statements of operations for these share-based payments.

#### **Research and development**

Research and development costs are expensed as incurred. Research and development expense was \$1.8 million, \$1.1 million and \$801,000 for the years ended December 31, 2011, 2010 and 2009, respectively.

#### **Accounting for uncertainty in income taxes**

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized upon settlement. The Company recognizes interest and/or penalties related to income tax matters in income tax expense. For the year ended December 31, 2011, the Company accrued \$11,000 for potential penalties related to income taxes. There were no interest or penalties related to income taxes that have been accrued or recognized as of and for the years ended December 31, 2010 and 2009.

The Company is subject to taxation in the U.S., Japan and in a state jurisdiction. The Company is exempt from Malaysian income tax for a ten year period beginning in 2009. Due to the existence of net operating loss carryforwards, all tax years except December 31, 2007, are open to examination by tax authorities.

## Rubicon Technology, Inc.

### Notes to Consolidated Financial Statements—(Continued)

#### Income taxes

Deferred tax assets and liabilities are provided for temporary differences between financial reporting and income tax bases of assets and liabilities, and are measured using the enacted tax rates and laws expected to be in effect when the differences will reverse. Deferred income taxes also arise from the future benefits of net operating loss carryforwards. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized. Full valuation allowances on net deferred tax assets are maintained until an appropriate level of profitability that generates taxable income is deemed sustainable or until a tax strategy is developed that would enable the Company to conclude that it is more likely than not that a portion of the deferred tax assets will be realizable. During the twelve months ended December 31, 2011, the Company concluded that based on the current level of sustainable profitability that generates taxable income, that it is more likely than not that the Company's deferred tax assets will be realizable. With the release of the valuation allowance, the Company began recording federal and certain state and non-U.S. income taxes attributable to the fiscal year's pre-tax income.

#### 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 and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### Other comprehensive income (loss)

Comprehensive income (loss) is defined as the change in equity of a business enterprise from transactions and other events from non-owner sources. Comprehensive income (loss) includes net earnings (loss) and other non-owner changes in equity that bypass the statement of operations and are reported in a separate component of equity. For the years ended December 31, 2011, 2010 and 2009, other comprehensive income (loss) includes the unrealized loss on investments and foreign currency translation adjustments. A summary of the comprehensive income (loss) for the three-year period ending December 31, 2011 follows:

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
Beginning Balance .....	\$(10)	\$(10)	\$ 129
Unrealized loss on investments .....	(42)	(9)	(126)
Unrealized gain (loss) on currency translation .....	2	9	(13)
Ending Balance .....	<u>\$(50)</u>	<u>\$(10)</u>	<u>\$ (10)</u>

#### Net income (loss) per common share

Basic net income (loss) per share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the period. Diluted net income (loss) per common share is computed by dividing net income (loss) by the weighted-average number of diluted common shares outstanding during the period. Diluted shares outstanding are calculated by adding to the weighted shares outstanding any common stock equivalents, outstanding stock options and warrants based on the treasury stock method.

Diluted net loss per common share is the same as basic net loss per common share for the year ended December 31, 2009, because the effects of potentially dilutive securities are anti-dilutive.

## Rubicon Technology, Inc.

### Notes to Consolidated Financial Statements—(Continued)

The number of anti-dilutive shares excluded from the calculation of diluted net loss per share is as follows as of December 31:

	<u>2009</u>
Warrants .....	242,132
Stock options .....	958,254
	<u>1,200,386</u>

#### Recent accounting pronouncements

In June 2011, the FASB issued ASU No. 2011-05, “*Comprehensive Income (ASC Topic 220): Presentation of Comprehensive Income*,” (“ASU 2011-05”) which amends current comprehensive income guidance. This guidance is effective retrospectively for the interim and annual periods beginning on or after December 15, 2011 (early adoption is permitted), requires presentation of total comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. ASU 2011-05 eliminates the option to present components of other comprehensive income as part of the statement of changes in stockholders’ equity. The pronouncement does not change the current option for presenting components of other comprehensive income, gross, or net of the effect of income taxes, provided that such tax effects are presented in the statement in which other comprehensive income is presented or disclosed in the notes to the financial statements. Additionally, the pronouncement does not affect the calculation or reporting of earnings per share. The pronouncement also does not change the items which must be reported in other comprehensive income, how such items are measured, or when such items must be reclassified to net income. The FASB also issued ASU 2011-12, *Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05*, to indefinitely defer the effective date of the requirement to reclassification adjustments from other comprehensive income (OCI) to net income by component under ASU 2011-05, *Presentation of Comprehensive Income*, to allow time for reconsideration of these provisions. The deferral in ASU 2011-12 does not affect the effective date of the other presentation requirements in ASU 2011-05. The amendments in ASU 2011-05 are effective for fiscal years and for interim periods within those fiscal years, beginning after December 15, 2011 (that is, the fiscal year beginning January 1, 2012 for calendar-year entities) for public entities. For nonpublic entities, the amendments are effective for fiscal years ending after December 15, 2012 (that is, the fiscal year beginning January 1, 2012 for calendar-year entities) and for interim and annual periods thereafter. The amended guidance must be applied retrospectively and early adoption is permitted. The adoption of ASU 2011-05 is not expected to have a material impact on the Company’s financial condition or results of operation.

#### Reclassifications

Certain prior period amounts on the balance sheet have been reclassified to conform to the current period presentation.

## 2. SEGMENT INFORMATION

The Company has determined that it operates in only one segment as it only reports profit and loss information on an aggregate basis to its chief operating decision maker.

## Rubicon Technology, Inc.

### Notes to Consolidated Financial Statements—(Continued)

Revenue is attributed by geographic region based on ship-to location of the Company's customers. The following table summarizes revenue by geographic region:

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
Korea .....	\$ 51,461	\$25,605	\$ 2,723
Taiwan .....	50,006	31,914	8,779
United States .....	12,253	6,520	4,840
Japan .....	11,362	10,745	2,652
Other .....	8,918	2,578	814
Revenue .....	<u>\$134,000</u>	<u>\$77,362</u>	<u>\$19,808</u>

The following table summarizes sales by product type:

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
Core .....	\$ 61,734	\$54,198	\$13,144
As-Cut .....	31	38	1,612
As-Ground .....	—	141	518
Polished .....	65,468	19,245	2,200
Optical .....	6,751	3,680	2,132
Other .....	16	60	202
Revenue .....	<u>\$134,000</u>	<u>\$77,362</u>	<u>\$19,808</u>

The following table summarizes assets by geographic region:

	As of December 31,	
	2011	2010
	(in thousands)	
United States .....	\$223,430	\$186,511
Malaysia .....	36,492	20,213
Japan .....	30	18
Total Assets .....	<u>\$259,952</u>	<u>\$206,742</u>

### 3. INVESTMENTS

The Company invests available cash primarily in investment grade commercial paper, corporate notes and government securities. The Company's short-term investments balance of \$50.5 million as of December 31, 2011 is comprised of U.S. Treasury securities of \$4.5 million, corporate notes and bonds of \$37.0 million and commercial paper of \$9.0 million. The Company's investments are classified as available-for-sale securities and are carried at fair market value with unrealized gains and losses recorded in accumulated other comprehensive income (loss).

**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

Until July 1, 2010, the Company held auction-rate securities as part of its investment portfolio. The auction-rate securities were trading securities recorded at fair value and unrealized gains and losses were reported as part of gain on investments in the consolidated statements of operations. In February 2008, the Company began experiencing failed auctions of its entire auction-rate securities portfolio, resulting in its inability to sell these securities in the short term. The Company held put options associated with an agreement with UBS, AG related to the auction-rate securities purchased through them. The Company exercised these put options on June 30, 2010 with a settlement date of July 1, 2010. The ARS Put Options provided the Company with the opportunity to recover the estimated unrealized loss on its ARS investments. The Company recorded the fair value of the ARS Put Options upon receipt and valued the put options at their estimated fair value using a discounted cash flow model that weighs various factors, including interest rates and expected holding period. Unrealized gains and losses related to the ARS Put Options were recognized in earnings. During the year ended December 31, 2010, the Company recorded a gain of \$63,000 representing the changes in fair value of the auction-rate securities. The Company also recorded during the year ended December 31, 2010, a loss of \$55,000 representing the changes in fair value of the put options. During the year ended December 31, 2009, the Company recorded a loss of \$460,000, representing the changes in fair value of the put options. The Company also recorded a gain of \$506,000, representing the change in fair value of the auction-rate securities, for the year ended December 31, 2009. Both the gain and loss from recording the change in fair value of the put options and auction-rate securities were recorded in gain on investments in the consolidated statements of operations. The Company's investment policy no longer allows auction rate securities as an approved investment.

The Company's long-term investment at December 31, 2011 consists of a \$2.0 million investment in Peregrine Semiconductor, Corp. (a customer) Series D-1 Preferred shares and is accounted for as a cost method investment. The value is adjusted for impairment based on review of Peregrine's financial position. No impairment was noted as of December 31, 2011.

The following table presents the amortized cost, and gross unrealized gains and losses on all securities at December 31, 2011:

	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Fair Value</u>
	(in thousands)			
Short-term Investments:				
U.S. Treasury securities and agency (taxable) . . . . .	\$ 4,500	\$—	\$—	\$ 4,500
Corporate Notes/Bonds (taxable) . . . . .	37,085	—	37	37,048
Commercial Paper (taxable) . . . . .	8,992	—	12	8,980
Total short-term investments . . . . .	<u>\$50,577</u>	<u>\$—</u>	<u>\$ 49</u>	<u>\$50,528</u>
Long-term Investments:				
Peregrine Semiconductor, Corp. Series D-1 Preferred shares . . . . .	<u>\$ 2,000</u>	<u>\$—</u>	<u>\$—</u>	<u>\$ 2,000</u>

**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

The following table presents the amortized cost, and gross unrealized gains and losses on all securities at December 31, 2010:

	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Fair Value</u>
	(in thousands)			
Short-term Investments:				
U.S. Treasury securities and agency (taxable) . . . . .	\$ 9,499	\$—	\$ 3	\$ 9,496
Corporate Notes/Bonds (taxable) . . . . .	38,080	1	—	38,081
Commercial Paper (taxable) . . . . .	18,559	—	5	18,554
Total short-term investments . . . . .	<u>\$66,138</u>	<u>\$ 1</u>	<u>\$ 8</u>	<u>\$66,131</u>
Long-term Investments:				
Peregrine Semiconductor, Corp. Series D-1 Preferred shares . . . . .	<u>\$ 2,000</u>	<u>\$—</u>	<u>\$—</u>	<u>\$ 2,000</u>

The Company values its investments at fair value, defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value which are the following:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company's fixed income available-for-sale securities consist of high quality, investment grade commercial paper, corporate notes and government securities. The Company values these securities based on pricing from pricing vendors, who may use quoted prices in active markets for identical assets (Level 1 inputs) or inputs other than quoted prices that are observable either directly or indirectly (Level 2 inputs) in determining fair value. The valuation techniques used to measure the fair value of the Company's financial instruments having Level 2 inputs were derived from non-binding market consensus prices that are corroborated by observable market data, quoted market prices for similar instruments, or pricing models, such as discounted cash flow techniques.

## Rubicon Technology, Inc.

### Notes to Consolidated Financial Statements—(Continued)

The following table summarizes the Company's financial assets measured at fair value on a recurring basis as of December 31, 2011:

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Cash Equivalents:				
Money market funds .....	\$839	\$ —	\$—	\$ 839
Investments:				
Available-for-sales securities—current: .....				
U.S. Treasury securities and agency .....	—	4,500	—	4,500
Corporate notes/bonds .....	—	37,048	—	37,048
Commercial paper .....	—	8,980	—	8,980
Total .....	<u>\$839</u>	<u>\$50,528</u>	<u>\$—</u>	<u>\$51,367</u>

The following table summarizes the Company's financial assets measured at fair value on a recurring basis as of December 31, 2010:

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Cash Equivalents:				
Money market funds .....	\$10,042	\$ —	\$—	\$10,042
Investments:				
Available-for-sales securities—current: .....				
U.S. Treasury securities and agency .....	—	9,496	—	9,496
Corporate notes/bonds .....	—	38,081	—	38,081
Commercial paper .....	—	18,554	—	18,554
Total .....	<u>\$10,042</u>	<u>\$66,131</u>	<u>\$—</u>	<u>\$76,173</u>

In addition to the debt securities noted above, the Company had approximately \$3.5 million and \$6.0 million of time deposits included in cash and cash equivalents as of December 31, 2011 and 2010, respectively.

#### 4. RELATED PARTY TRANSACTIONS

In November 2008, the Company purchased 1,345,444 shares of Peregrine Series D-1 Preferred shares for a total of \$2.0 million, which represents less than 1% of shares outstanding. The terms and stock price of the purchase were the same as for the other investors who participated. Peregrine is a customer of the Company. For years ended December 31, 2011, 2010 and 2009, revenue from Peregrine was \$5.2 million, \$2.3 million and \$1.7 million. As of December 31, 2011 and 2010, accounts receivable from Peregrine were \$2.0 million and \$630,000.

#### 5. SIGNIFICANT CUSTOMERS

For the year ended December 31, 2011, the Company had three customers that accounted for approximately 38%, 19% and 12% of its revenue. For the year ended December 31, 2010, the Company had three customers that accounted for approximately 17%, 15% and 14% of its revenue. For the year ended December 31, 2009, the Company had three customers that accounted for approximately 20%, 17% and 11% of its revenue.

Customers individually representing more than 10% of trade receivables accounted for approximately 89% and 62% of accounts receivable as of December 31, 2011 and 2010, respectively. The Company grants credit to customers based on an evaluation of their financial condition. Losses from credit sales are provided for in the financial statements.

## **Rubicon Technology, Inc.**

### **Notes to Consolidated Financial Statements—(Continued)**

#### **6. STOCKHOLDERS' EQUITY**

##### **Common Stock**

On June 22, 2011, the shareholders of the Company approved a reduction of the shares of common stock authorized with a par value of \$0.001 by 40,000,000, from 85,000,000 to 45,000,000. As of December 31, 2011 the Company had reserved 2,093,108 shares of common stock for issuance upon the exercise of outstanding common stock options. Also, 2,260,008 shares of the Company's common stock were reserved for future grants of stock options (or other similar equity instruments) under the Company's 2007 Stock Incentive Plan (the "2007 Plan") as of December 31, 2011. In addition, 281,561 shares of the Company's common stock were reserved for future exercise of outstanding warrants as of December 31, 2011.

On June 21, 2010, the Company completed a public offering of common stock in which a total of 3,029,100 shares were sold at a price of \$30.00 per share. The Company sold 2,195,100 shares of common stock, including 395,100 shares pursuant to the full exercise of the underwriter's over-allotment option, and certain stockholders of the Company sold 834,000 shares of common stock. The Company raised a total of \$65.9 million in gross proceeds from the offering, or approximately \$61.7 million in net proceeds after deducting the underwriting discount and commissions of \$3.5 million and estimated other offering costs of approximately \$712,000. The Company did not receive any of the proceeds from the sale of common stock by the selling stockholders.

##### **Warrants**

At December 31, 2011 and 2010, the Company had outstanding 267,826 warrants to purchase common stock at an exercise price of \$3.65 per share. The warrants were issued in conjunction with the issuance of convertible promissory notes issued by the Company to investors from August 2005 through October 2005. During 2009, 47,863 of these warrants were exercised on a "net exercise" basis, resulting in the issuance of 38,091 shares of common stock. The warrants are immediately exercisable and expire 10 years from the date of issuance.

At December 31, 2011 and 2010 the Company had outstanding 13,735 warrants to purchase common stock at an exercise price of \$7.28 per share. The warrants were issued in 2002 in conjunction with the procurement of loans. The warrants are immediately exercisable and expire 10 years from the date of issuance.

During 2009, 7,281 of the warrants issued in conjunction with a 2006 loan guarantee were exercised on a "net exercise" basis, resulting in the issuance of 5,794 shares of common stock.

##### **Treasury Stock**

On August 4, 2011, the Company authorized a stock repurchase program to purchase up to \$25.0 million of its common stock over a period of two years. The stock repurchase program authorizes the Company to repurchase its shares of common stock in the open market at times and prices considered appropriate by the Company depending upon prevailing market conditions and other corporate considerations. The treasury shares are accounted for using the cost method whereby the entire cost of the acquired stock is recorded as treasury stock. For the twelve months ended December 31, 2011, the Company repurchased 524,869 shares at an average price of \$12.36 for \$6.5 million.

In November 2008, the Company authorized a stock repurchase program to purchase up to \$15.0 million of common stock over a period of two years. The stock repurchase program authorized the Company to repurchase shares of its common stock in the open market at times and prices considered appropriate by the Company



**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

depending upon prevailing market conditions and other corporate considerations. The treasury shares are accounted for using the cost method whereby the entire cost of the acquired stock is recorded as treasury stock. During 2010, no shares were repurchased and the plan expired on its terms on December 31, 2010.

**7. STOCK INCENTIVE PLANS**

The Company sponsored a stock option plan, the 2001 Equity Plan (the “2001 Plan”), which allowed for the granting of incentive and nonqualified stock options for the purchase of common stock. The maximum number of shares which could be awarded or sold under the 2001 Plan was 1,449,667 shares. Each option entitles the holder to purchase one share of common stock at the specified option exercise price. The exercise price of each incentive stock option granted must not be less than the fair market value on the grant date. At the discretion of management and with the approval of the Board of Directors, the Company granted options under the 2001 Plan. Management and the Board of Directors determined vesting periods and expiration dates at the time of the grant. On August 2, 2011, the plan expired.

In August 2007, the Company adopted the 2007 Plan, which allows for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards and bonus shares. On June 22, 2011, the stockholders of the Company approved an amendment to the 2007 Plan to increase the maximum number of shares that may be awarded or sold under the 2007 Plan by 2,100,000 from 2,307,692 to 4,407,692 shares. The Board of Directors has appointed a committee to administer the plan. The plan committee determines the type of award to be granted, the fair market value, the number of shares covered by the award, and the time when the award vests and may be exercised.

The following table summarizes the activity of the stock incentive and equity plans:

	Shares available for grant	Number of options outstanding	Weighted- average option exercise price	Number of restricted stock and board shares issued
Outstanding at December 31, 2008 . . . . .	2,072,170	1,160,847	\$ 8.00	26,503
Granted . . . . .	(1,274,827)	1,266,467	9.71	8,360
Exercised . . . . .	—	(150,621)	2.79	—
Canceled/forfeited . . . . .	76,926	(82,407)	4.34	—
Outstanding at December 31, 2009 . . . . .	874,269	2,194,286	9.48	34,863
Granted . . . . .	(238,826)	238,826	27.54	—
Exercised . . . . .	—	(594,308)	5.86	—
Canceled/forfeited . . . . .	8,407	(8,407)	16.63	—
Outstanding at December 31, 2010 . . . . .	643,850	1,830,397	12.98	34,863
Authorized . . . . .	2,100,000	—	—	—
Granted . . . . .	(389,774)	382,050	16.02	7,724
Exercised . . . . .	—	(73,428)	10.78	—
Expired . . . . .	(139,988)	—	—	—
Canceled/forfeited . . . . .	45,911	(45,911)	20.15	—
Outstanding at December 31, 2011 . . . . .	<u>2,259,999</u>	<u>2,093,108</u>	<u>\$13.45</u>	<u>42,587</u>

**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

The following table sets forth option grants made during 2011, 2010 and 2009 with intrinsic value calculated based on grant date fair value.

<u>Date of Grant</u>	<u>Number of options granted</u>	<u>Exercise price</u>	<u>Intrinsic value per share</u>
February 2009 .....	759,967	\$ 4.01	—
April - May 2009 .....	18,500	7.75 - 8.06	—
July - September 2009 .....	27,000	10.02 - 12.16	—
October 2009 .....	11,000	14.57 - 16.93	—
December 2009 .....	450,000	19.21	—
February 2010 .....	7,500	15.00	—
March - April 2010 .....	50,671	19.49 - 20.20	—
June - August 2010 .....	145,655	24.95 - 32.67	—
October 2010 .....	35,000	22.69	—
January 2011 .....	26,000	18.80 - 21.64	—
March - April 2011 .....	73,500	25.61 - 27.63	—
May 2011 .....	51,650	22.92	—
July 2011 .....	12,500	16.86	—
October 2011 .....	75,400	10.81 - 10.93	—
December 2011 .....	143,000	10.19	—

At December 31, 2011, the exercise prices of outstanding options were as follows:

<u>Exercise Price</u>	<u>Number of options outstanding</u>	<u>Average remaining contractual life (years)</u>	<u>Number of options exercisable</u>
\$ 0.78 - \$4.94 .....	581,343	5.95	257,541
7.75 - 8.45 .....	270,739	5.68	261,489
10.02 - 14.00 .....	370,692	9.57	139,442
14.57 - 18.80 .....	78,104	8.31	54,729
19.21 - 22.92 .....	575,250	8.74	29,175
24.95 - 32.67 .....	216,980	8.61	37,555
	<u>2,093,108</u>	7.93	<u>779,931</u>

The weighted average fair value of the options vested in the years ended 2011, 2010 and 2009 was \$3.9 million, \$2.9 million and \$2.0 million, respectively.

**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

The following table summarizes the activity of non-vested options as follows:

	<u>Non-vested options</u>	<u>Weighted- Average Option Exercise price</u>
Non-vested at December 31, 2008 .....	581,131	\$ 9.18
Granted .....	1,266,467	9.71
Vested .....	(269,753)	7.25
Cancelled .....	<u>(77,205)</u>	<u>4.32</u>
Non-vested at December 31, 2009 .....	1,500,640	10.22
Granted .....	238,826	27.54
Vested .....	(391,788)	7.29
Cancelled .....	<u>(8,292)</u>	<u>16.70</u>
Non-vested at December 31, 2010 .....	1,339,386	14.12
Granted .....	382,050	16.02
Vested .....	(366,484)	10.72
Cancelled .....	<u>(41,775)</u>	<u>20.39</u>
Non-vested at December 31, 2011 .....	<u><u>1,313,177</u></u>	<u><u>\$13.58</u></u>

The Company's aggregate intrinsic value is calculated as the difference between the exercise price of the underlying stock options and the fair value of the Company's common stock. Based on the fair market value of the common stock at December 31, 2011, there was no aggregate intrinsic value for options outstanding and exercisable. At December 31, 2010, the intrinsic value for the options outstanding was \$14.8 million and the intrinsic value for the options exercisable was \$5.5 million. The Company uses the Black-Scholes option pricing model to value stock options. The Company uses historical stock prices of companies which it considers as a peer group as the basis for its volatility assumptions. The assumed risk-free rates were based on U.S. Treasury rates in effect at the time of grant with a term consistent with the expected option lives. The expected term is based upon the vesting term of the Company's options, a review of a peer group of companies, and expected exercise behavior. The forfeiture rate is based on past history of forfeited options. The expense is being allocated using the straight-line method. For the years ended December 31, 2011, 2010 and 2009, the Company recorded \$2.3 million, \$2.1 million and \$823,000, respectively of stock option compensation expense. As of December 31, 2011, the Company has \$5.1 million of total unrecognized compensation cost related to nonvested awards granted under the Company's stock-based plans that it expects to recognize over a weighted-average period of 2.72 years.

The Company continues to account for options issued prior to January 1, 2006 under the intrinsic value method.

The weighted average fair value per share of options granted for the fiscal year ended December 31, 2011 was \$16.02 and the fair value of each option grant was estimated at the date of grant using the Black-Scholes option-pricing model using an expected term of 5.0 years, risk-free interest rate of .85%—2.24%, expected volatility of 51% and no dividend yield. The Company used an expected forfeiture rate of 24.53% in 2011.

The weighted average fair value per share of options granted for the fiscal year ended December 31, 2010 was \$27.54 and the fair value of each option grant was estimated at the date of grant using the Black-Scholes option-pricing model using an expected term of 5.4 years, risk-free interest rate of 1.26%—2.60%, expected volatility of 60% and no dividend yield. The Company used an expected forfeiture rate of 27.54% in 2010.

**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

The weighted average fair value per share of options granted for the fiscal year ended December 31, 2009 was \$9.71 and the fair value of each option grant was estimated at the date of grant using the Black-Scholes option-pricing model using an expected term of 5.2 years, risk-free interest rate of 0.37%—1.41%, expected volatility of 50% and no dividend yield. The Company used an expected forfeiture rate of 30% in 2009.

An analysis of restricted stock issued is as follows:

Non-vested restricted stock as of December 31, 2009 .....	8,453
Vested .....	<u>(6,691)</u>
Non-vested restricted stock as of December 31, 2010 .....	1,762
Granted .....	7,724
Vested .....	<u>(7,555)</u>
Non-vested restricted stock as of December 31, 2011 .....	<u>1,931</u>

For the years ended December 31, 2011, 2010 and 2009, the Company recorded \$165,000, \$153,000 and \$114,000, respectively, of stock compensation expense related to restricted stock.

In 2009, the Board of Directors awarded stock options to purchase 300,000 shares of common stock to key executives at an exercise price of \$19.21, the closing price of the shares on the date of the grant. Vesting of the options is subject to achievement of specified annual revenue and net earnings targets by December 31, 2012. The Company is recording stock compensation expense related to these options based on the probability of achieving the targets. At December 31, 2011, the Company considered one of the milestones of these targets to be improbable, and therefore did not record any expense.

**8. INCOME TAXES**

Components of income before income taxes and the income tax provision are as follows:

Income (loss) before income taxes

	Year ended December 31,		
	2011	2010	2009
	(in thousands)		
U.S. ....	\$51,618	\$28,799	\$(9,595)
Foreign .....	3,015	241	(35)
Total .....	<u>\$54,633</u>	<u>\$29,040</u>	<u>\$(9,630)</u>

**Rubicon Technology, Inc.**  
**Notes to Consolidated Financial Statements—(Continued)**

Income taxes

	Year ended December 31,		
	2011	2010	2009
	(in thousands)		
<i>Current</i>			
U.S. ....	\$ 177	\$ (79)	\$ —
State ....	2,777	—	—
Foreign ....	173	8	—
Total current income tax expense (benefit) ....	3,127	(71)	—
<i>Deferred</i>			
U.S. ....	13,223	—	—
State ....	224	—	—
Foreign ....	—	—	—
Total deferred income tax expense ....	13,447	—	—
Total income tax expense (benefit) ....	\$16,574	\$ (71)	\$ —

The reconciliation of income tax computed at the federal statutory rate to income before taxes is as follows:

	Year ended December 31,		
	2011	2010	2009
U.S. Federal statutory rate ....	35.0%	34.0%	(34.0)%
State taxes net of federal benefit ....	5.2	5.3	(4.8)
Permanent differences ....	(0.6)	0.3	0.1
Foreign rate differential and transactional tax ....	(1.4)	3.2	—
Valuation allowance ....	(5.9)	(41.4)	39.5
Other ....	(2.0)	(1.6)	(0.8)
	30.3%	(0.2)%	— %

Deferred income taxes reflect the net tax effects of the temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

Significant components of the Company's net deferred income taxes are as follows at December 31:

	<u>2011</u>	<u>2010</u>
	<u>(in thousands)</u>	
Deferred tax assets:		
Allowance for doubtful accounts . . . . .	\$ 156	\$ 75
Inventory reserves . . . . .	400	359
Accrued liabilities . . . . .	260	113
Warrant interest expense . . . . .	283	267
Charitable contributions . . . . .	10	—
Stock compensation expense . . . . .	2,083	1,183
State net operating loss—net of tax . . . . .	984	—
Net operating loss carryforward . . . . .	—	9,366
Tax credits . . . . .	206	104
Total deferred tax assets . . . . .	4,382	11,467
Less valuation allowance . . . . .	—	(3,244)
Net deferred tax assets . . . . .	4,382	8,223
Deferred tax liability:		
Depreciation . . . . .	(16,310)	(8,103)
Restricted stock compensation expense . . . . .	—	(1)
Prepaid expenses . . . . .	(115)	(119)
Net deferred tax liability . . . . .	<u>\$(12,043)</u>	<u>\$ —</u>

The Company's deferred income tax assets and liabilities were reported on the consolidated balance sheets as follows.

	<u>2011</u>	<u>2010</u>
	<u>(in thousands)</u>	
Current deferred income tax assets . . . . .	\$ 3,078	\$—
Long term deferred income tax liabilities . . . . .	(15,121)	—
Net deferred tax liability . . . . .	<u>\$(12,043)</u>	<u>\$—</u>

A valuation allowance to reduce the deferred tax assets is reported if, based on the weight of the evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. During the twelve months ended December 31, 2011, the Company concluded that based on the current level of sustainable profitability that generates taxable income, that it is more likely than not that the Company's deferred tax assets will be realizable. The Company on June 30, 2011, recognized a tax benefit of \$3.3 million to record current and long-term deferred tax assets and with the release of the valuation allowance began recording federal and certain state and non-U.S. income taxes attributable to the fiscal year's pre-tax income. At December 31, 2011, the Company had separate federal and Illinois net operating loss carryforwards of \$22.0 million and \$42.0 million, respectively which begin to expire in 2026 and 2019, respectively. The Illinois State Legislature has suspended the use of net operating loss carryforwards for taxable years ending after December 31, 2010 and before December 31, 2014.

The Company has completed an analysis of the utilization of net operating losses subject to limits based upon certain ownership changes. The results of this analysis indicated an ownership change limiting the utilization of net operating losses and tax credits. However, the unused prior year limitations allowed the

## Rubicon Technology, Inc.

### Notes to Consolidated Financial Statements—(Continued)

Company to fully utilize the net operating losses (“NOL”) and tax credits in the current year. Additionally, the Company has not recorded a deferred tax asset NOL attributable to stock option exercises in the amount of \$22.0 million for federal purposes and \$26.0 million for state purposes because the Company cannot record these excess tax benefit stock option deductions until the benefit has been realized by actually reducing taxes payable.

The Company prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken, or expected to be taken, in a tax return. The following is a reconciliation of the unrecognized tax benefits taken or expected to be taken in a tax return that have been recorded on the Company’s financial statements for the years ended December 31, 2011.

	<u>2011</u> (in thousands)
Balance at the beginning of the year .....	\$—
Tax positions related to current year .....	159
Tax positions related to prior year .....	<u>204</u>
Balance at end of the year .....	<u>\$363</u>

For the year ended December 31, 2011 the Company accrued \$11,000 for potential penalties related to income taxes. There were no interest or penalties related to income taxes that have been accrued or recognized as of and for the years ended December 31, 2010 and 2009.

The Company files income tax returns in the United States federal jurisdiction and in a state jurisdiction. During 2009, the Company began foreign operations in Malaysia and Japan and is subject to local income taxes in both jurisdictions. The Company is exempt from Malaysian income tax for a ten year period beginning in 2009. The impact of this tax holiday decreased foreign taxes for the years ended December 31, 2011 and 2010 by approximately \$535,000 and \$54,000, respectively. The benefit of the tax holiday on net income per share (diluted) was \$0.02 and \$0.00 for 2011 and 2010, respectively.

The Company’s federal tax return for the periods ended December 31, 2008 and 2007 have been audited by the Internal Revenue Service (IRS) with no changes made to the Company’s taxable losses for those years. The Company’s federal tax return for the period ended December 31, 2010 is currently under audit by the IRS. The Company is not currently subject to any state tax examinations. Due to the existence of net operating loss carryforwards, all tax years except December 31, 2007 are open to examination by tax authorities.

U.S. income and foreign withholding taxes have not been provided on approximately \$3.2 million of cumulative undistributed earnings of foreign subsidiaries. We intend to reinvest these earnings for the foreseeable future. If these amounts were distributed to the U.S., in the form of dividends or otherwise, we would be subject to additional U.S. income taxes, which could be material. Determination of the amount of unrecognized deferred income tax liabilities on these earnings is not practicable because such liability, if any, is dependent on circumstances existing, if and when remittance occurs.

## 9. COMMITMENTS AND CONTINGENCIES

### Operating Leases

The Company leases buildings used for manufacturing and offices. The leases provide for payment of the Company’s proportionate share of operating expenses and real estate taxes.

**Rubicon Technology, Inc.**  
**Notes to Consolidated Financial Statements—(Continued)**

Net rent expense under operating leases in 2011, 2010 and 2009 amounted to \$1.1 million, \$1.2 million and \$1.3 million respectively.

Future minimum payments under all leases are as follows:

<u>Year ending December 31,</u>	<u>Operating leases (in thousands)</u>
2012 .....	\$1,144
2013 .....	1,157
2014 .....	926
2015 .....	224
2016 and thereafter .....	—

**Purchase Commitments**

The Company has entered into agreements to purchase equipment and components to construct furnaces. These agreements will result in the Company purchasing equipment or components for a total cost of approximately \$6.4 million with deliveries occurring through August 2012. The Company has also entered into agreements related to the development of our facilities for a total cost of approximately \$207,000.

**Litigation**

From time to time, the Company experiences routine litigation in the normal course of its business. The management of the Company does not believe any pending litigation will have a material adverse effect on the financial condition or results of operations of the Company.

**10. BENEFIT PLAN**

The Company sponsors a 401(k) savings plan (the “Plan”). Employees are eligible to participate in the Plan upon reaching 21 years of age. Employees make contributions to the Plan through payroll deferrals and employer matching contributions are discretionary. There were no employer matching contributions for the years ended December 31, 2011, 2010 and 2009.

**11. SUBSEQUENT EVENT**

The Company evaluated its December 31, 2011 financial statements for subsequent events and is not aware of any subsequent events which would require recognition or disclosure in the financial statements.



**Rubicon Technology, Inc.**

**Notes to Consolidated Financial Statements—(Continued)**

**12. QUARTERLY FINANCIAL DATA (Unaudited)**

**Quarterly Financial Data (Unaudited)**

Summary quarterly results for the two years ended December 31, 2011 are as follows (in thousands, other than share and per share data):

<u>2011</u>	<u>Three Months Ended</u>				<u>Full Year</u>
	<u>March 31</u>	<u>June 30</u>	<u>September 30</u>	<u>December 31</u>	
Revenue . . . . .	\$ 37,970	\$ 43,028	\$ 33,637	\$ 19,365	\$ 134,000
Gross profit . . . . .	\$ 23,975	\$ 27,200	\$ 16,121	\$ 2,339	\$ 69,635
Income (loss) from operations . . . . .	\$ 20,250	\$ 23,339	\$ 11,885	\$ (723)	\$ 54,751
Income (loss) before income taxes . . .	\$ 20,331	\$ 23,403	\$ 11,775	\$ (876)	\$ 54,633
Net income . . . . .	\$ 19,104	\$ 9,908	\$ 8,186	\$ 861	\$ 38,059
Basic income per common share . . . .	\$ 0.83	\$ 0.43	\$ 0.36	\$ 0.04	\$ 1.67
Diluted income per common share . . .	\$ 0.80	\$ 0.41	\$ 0.35	\$ 0.04	\$ 1.61
Weighted average common shares					
outstanding used in computing net					
income per common share:					
Basic . . . . .	22,993,614	23,031,039	22,822,286	22,561,883	22,852,205
Diluted . . . . .	23,943,644	23,928,408	23,410,525	23,102,072	23,596,162

<u>2010</u>	<u>Three Months Ended</u>				<u>Full Year</u>
	<u>March 31</u>	<u>June 30</u>	<u>September 30</u>	<u>December 31</u>	
Revenue . . . . .	\$ 11,516	\$ 15,787	\$ 20,522	\$ 29,537	\$ 77,362
Gross profit . . . . .	\$ 4,153	\$ 7,225	\$ 11,099	\$ 18,680	\$ 41,157
Income from operations . . . . .	\$ 1,543	\$ 3,944	\$ 8,140	\$ 15,067	\$ 28,694
Income before income taxes . . . . .	\$ 1,615	\$ 3,974	\$ 8,170	\$ 15,281	\$ 29,040
Net income . . . . .	\$ 1,575	\$ 3,888	\$ 8,296	\$ 15,352	\$ 29,111
Basic income per common share . . . .	\$ 0.08	\$ 0.19	\$ 0.36	\$ 0.67	\$ 1.34
Diluted income per common share . . .	\$ 0.07	\$ 0.18	\$ 0.35	\$ 0.64	\$ 1.28
Weighted average common shares					
outstanding used in computing net					
income per common share:					
Basic . . . . .	20,244,347	20,790,208	22,923,900	22,945,906	21,726,090
Diluted . . . . .	21,437,861	21,912,520	23,977,278	23,835,924	22,790,896

**Exhibit 21.1**

**Rubicon Technologies, Inc.  
Subsidiaries of the Company**

<b><u>Name of Subsidiary</u></b>	<b><u>State (or other jurisdiction of incorporation)</u></b>
Rubicon Worldwide LLC	Illinois
Rubicon Sapphire Technology (Malaysia) SDN BHD	Malaysia

**Consent of Independent Registered Public Accounting Firm**

We have issued our reports dated March 15, 2012, with respect to the consolidated financial statements, and internal control over financial reporting included in the Annual Report of Rubicon Technology, Inc. on Form 10-K for the year ended December 31, 2011. We hereby consent to the incorporation by reference of said reports in the Registration Statements of Rubicon Technology, Inc. on Form S-3 (file No. 333-167272, effective June 4, 2010), on Form S-3MEF (File No. 333-167535, effective June 16, 2010), and on Form S-8 (File No. 333-147552, effective November 20, 2007).

/s/ GRANT THORNTON LLP

Chicago, Illinois

March 15, 2012

**Certifications**

**Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Raja M. Parvez, certify that:

1. I have reviewed this Annual Report on Form 10-K of Rubicon Technology, Inc. (the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
  - c) evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of the annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of registrant’s board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 15, 2012

By: /s/ Raja M. Parvez

Raja M. Parvez

President and Chief Executive Officer

**Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, William F. Weissman, certify that:

1. I have reviewed this Annual Report on Form 10-K of Rubicon Technology, Inc. (the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
  - c) evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of the annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of registrant’s board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 15, 2012

By: /s/ William F. Weissman

William F. Weissman  
Chief Financial Officer

**Certification Pursuant to Section 906 of The Sarbanes-Oxley Act of 2002,  
18 U.S.C. Section 1350**

In connection with the Annual Report of Rubicon Technology, Inc. (the "Company") on Form 10-K for the year ended December 31, 2011 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Raja M. Parvez, President and Chief Executive Officer of the Company, and I, William F. Weissman, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 15, 2012

By: /s/ Raja M. Parvez  
Raja M. Parvez  
President and Chief Executive Officer

Date: March 15, 2012

By: /s/ William F. Weissman  
William F. Weissman  
Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to the registrant and will be retained by the registrant and furnished to the Securities and Exchange Commission or its staff upon request.

## Corporate Information

### Directors

**Don Aquilano**

Chairman of the Board  
Rubicon Technology, Inc.  
Managing Director and President  
Allos Ventures, a venture capital firm

**Donald R. Caldwell**

Chairman and Chief Executive Officer  
Cross Atlantic Capital Partners, Inc.,  
a venture capital fund manager

**Michael Mikolajczyk**

Managing Director  
Catalyst Capital Management, LLC,  
a private equity firm

**Raymond J. Spencer**

Chairman, South Australia Economic  
Development Board and former  
chairman, Financial Services Strategic  
Business Unit of Capgemini SA,  
a provider of consulting, technology  
and outsourcing services

**Raja M. Parvez**

President and Chief Executive Officer  
Rubicon Technology, Inc.

**Audit Committee**

Mikolajczyk, Aquilano, Spencer

**Compensation Committee**

Caldwell, Mikolajczyk, Spencer

**Nominating and Governance Committee**

Spencer, Aquilano, Caldwell

**Executive Officers****Raja M. Parvez**

President and Chief Executive Officer

**William F. Weissman**

Chief Financial Officer

**Transfer Agent****American Stock Transfer & Trust Company, LLC**

6201 15th Avenue  
Brooklyn, NY 11219  
1-800-937-5449

**Independent Registered Public Accounting Firm****Grant Thornton LLP**

175 W. Jackson Boulevard  
20th Floor  
Chicago, IL 60604

**To Request an Annual Report or Form 10-K**

Additional copies of this Annual Report or the Company's Form 10-K filed with the Securities and Exchange Commission are available, without charge, upon request by contacting Investor Relations at the address or phone number listed below.

**Common Stock Information**

The Company's common stock is listed on the NASDAQ Global Market. Trading of the Company's common stock began on November 16, 2007 under the symbol RBCN. As of April 29, 2012, there were approximately 28 record holders of the Company's common stock.

**Dividends**

The Company has never declared or paid cash dividends on its common stock. The Company intends to retain future earnings to finance the growth and development of its business, and does not anticipate declaring or paying any cash dividends in the foreseeable future.

**Common Stock Performance**

Fiscal 2010	High	Low
1st Quarter	\$22.50	\$14.50
2nd Quarter	\$34.19	\$20.17
3rd Quarter	\$35.90	\$19.51
4th Quarter	\$26.60	\$18.05

Fiscal 2011	High	Low
1st Quarter	\$27.68	\$17.83
2nd Quarter	\$28.97	\$16.15
3rd Quarter	\$17.57	\$10.66
4th Quarter	\$12.82	\$ 8.23

**Executive Offices**

900 E. Green Street, Unit A  
Bensenville, IL 60106  
Phone: 847-295-7000  
Fax: 847-233-0177

**Annual Meeting**

June 15, 2012 | 8:00 a.m. CDT  
Hyatt Regency O'Hare  
9300 W. Bryn Mawr Avenue  
Rosemont, IL 60018

**Legal Counsel****McGuire Woods LLP**

77 West Wacker Drive  
Suite 4100  
Chicago, IL 60601

**Investor Relations**

Requests for information should be directed to:

Dee Johnson  
Vice President, Investor Relations  
Rubicon Technology  
900 E. Green Street, Unit A  
Bensenville, IL 60106  
Phone: 847-457-3426

**For More Information**

For additional information, please visit our website at [www.rubicon-es2.com](http://www.rubicon-es2.com).



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Bensenville, IL 60106  
847.295.7000  
[www.rubicon-ES2.com](http://www.rubicon-ES2.com)