MEMSIC Inc
Form 10-K
March 25, 2011

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

# FORM 10-K

(Mark one)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended: December 31, 2010

OR

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

Commission file number: 001-33813

## MEMSIC, INC.

(Exact name of registrant as specified in its charter)

| DELAWARE | 04-3457049 |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |

One Tech Drive, Suite 325
Andover, MA 01810
Telephone: (978)738-0900
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

| Title of each class | Name of each exchange on which registered |
|---|---|
| Common Stock, $0.00001 par value | The Nasdaq Stock Market, LLC (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 x

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

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

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

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 x 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 x

As of June 30, 2010 (the last business day of the registrant's most recently completed second fiscal quarter), the aggregate market value of voting stock held by non-affiliates of the registrant was approximately $27,902,292.

On March 23, 2011, 23,813,613 shares of our common stock were outstanding.

Documents Incorporated by Reference

Portions of the definitive Proxy Statement for our 2011 Annual Meeting of Shareholders to be filed with the Securities and Exchange Commission on or before April 30, 2011 are incorporated by reference in Part III of this Annual Report on Form 10-K.

MEMSIC, INC.

ANNUAL REPORT ON FORM 10-K

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2010

INDEX

PART I

Item 1. Business

We provide advanced semiconductor sensor and system solutions based on integrated micro electro-mechanical systems, or MEMS, technology and mixed signal circuit design. Historically, our revenues have derived primarily from the sale of sensor products, principally accelerometers. During 2010, we continued to make progress in our business plan to transform ourselves into a multiple-product company serving diverse markets.

Sensor products.

Our sensors are used for motion, direction and pressure sensing applications. We combine proprietary thermal-based MEMS technology and advanced analog mixed signal processing circuitry design into a single chip using a standard complementary metal-oxide semiconductor, or CMOS, process. We believe that this approach allows us to provide sensor solutions at a lower cost, with higher performance and greater functionality than our competitors. In addition, our technology platform allows us to easily integrate additional functions or create new sensors to expand into magnetic, touch and flow sensors and related applications. We expect that as MEMS technology advances, it will enable electronic systems to become smaller, faster, more energy-efficient and less expensive, and that the market for MEMS sensors will continue to expand as functions and products enabled by MEMS sensor solutions achieve broader penetration in the mobile phone, consumer, automotive, aerospace, medical and industrial markets.

Our accelerometer products are used to measure tilt, shock, vibration and acceleration, and have a wide range of applications such as mobile phones, automotive safety systems and video projectors. Any product that requires the control or measurement of motion is a potential application for accelerometers. For example, in mobile phones, accelerometers enable a variety of value-added functions such as image orientation, gaming control and text scrolling.

In automotive applications, accelerometers are being deployed in airbag, electronic stability control, rollover protection, and navigation systems. Our largest customer is Autoliv, Inc., a leading European automotive safety systems supplier, which uses our accelerometers in its rollover protection and vehicle stability control systems. In consumer applications, accelerometers are used in global positioning systems, video gaming systems and interactive toys. Industrial and medical applications include inclination sensing, earthquake detection and cardiac pacemakers.

We were a pioneer in providing accelerometers to China's fast-growing mobile phone market. We are also among the leading providers of accelerometers for image projectors, supplying to several Japanese original equipment manufacturers ("OEMs"). Our continuous development of lower-cost sensor products is helping us penetrate cost-sensitive applications such as toys and games.

We are also capitalizing on our proprietary MEMS technology to develop new types of sensors that will broaden our market opportunities. For example, in 2008 we introduced a new line of MEMS-based magnetic sensors that provide enhanced digital compass capabilities for mobile applications such as cell phones and personal navigation devices. The adoption of GPS-enabled mobile phones is accelerating worldwide, and we have benefited from this trend through increased sales to a major manufacturer of GPS-enabled mobile phones. Similarly, in 2010, we introduced our new MEMS-based gas-flow meter for use in industrial applications, primarily in the China market.

System solution products.

In January 2010 we acquired from Crossbow Technology, Inc., a leading supplier of wireless sensor technology and inertial MEMS sensors for navigation and control, the non-military portion of Crossbow's inertial navigation systems business and its wireless sensor network Mote and eKo environmental monitoring business, along with related intellectual property and fixed assets. In addition, 21 Crossbow employees, including engineering, sales and marketing

personnel, joined our new operations in San Jose, California. With this acquisition, we significantly strengthened our capability to develop integrated sensing systems that incorporate sensors with on-board computing, wireless communications and systems and application software solutions. We also broadened our customer base to include industrial and aerospace markets that we believe may offer higher margins and more stability than the mobile and consumer markets. We also believe that our strong presence in China provides us with an opportunity to introduce these newly acquired wireless sensor network and inertial systems products in the fast-growing Chinese market.

Our system solution products consist of wireless sensors that connect the physical environment with enterprise management and information systems to provide advanced monitoring, automation and control solutions for a range of industries, as well as inertial systems that provide end-users and systems integrators with MEMS-based solutions for measurement of static and dynamic motion in a wide variety of challenging environments, including avionics, remotely operated vehicles, agricultural and construction vehicles, automotive test and wind power turbines.

We have also continued to invest in the development of next-generation, multi-sensor and MCU integrated system products at both the integrated circuit level for the consumer and mobile market and at the module level for the high-end industrial, automotive, and general aviation markets. Our next-generation product lines will combine our core competency in cost competitive MEMS sensor IC design and manufacturing with the core competency in multi-sensor system integration that we acquired from Crossbow. In August 2010, we introduced our first next-generation family of high-performance MEMS inertial systems, which offer the superior reliability of our advanced MEMS technology for use in integrated navigation systems and in stabilization and control applications.

Our operations.

We conduct research and development at our headquarters in Andover, Massachusetts and at facilities in San Jose, California, Chicago, Illinois and Wuxi, Jiangsu Province, China. Our research and development teams work closely with each other in our product and technology research and development activities. This enables us to access experienced and creative design talent in the United States, while benefiting from competitive engineering and manufacturing costs in China. In addition, our presence in China places us in close proximity to the supply chain for the large Chinese markets for mobile phones and consumer electronics.

Our two subsidiaries in Wuxi, Jiangsu Province, China, are primarily responsible for our manufacturing operations, including product development, manufacturing and quality assurance engineering, as well as application engineering, and sales and marketing to support the Asia market.

We manufacture our sensor products utilizing a “semi-fabless” model by outsourcing the production of CMOS wafers and completing the post-CMOS MEMS process in-house. By outsourcing the standard CMOS manufacturing process, we are able to leverage mature semiconductor infrastructure and standard wafer fabrication processes and, in turn, more efficiently manage our capital expenditures. Moreover, we believe that retaining the key MEMS manufacturing process in-house enables us to protect and retain control over our key proprietary technology more effectively and to create a higher barrier to entry.

The system solution products that we acquired from Crossbow Technology were initially manufactured for us by Crossbow under a manufacturing agreement that we entered into in connection with the acquisition. We are in the process of migrating the manufacture of these products to China, with the objective of outsourcing most of the assembly process to third-party contract assembly vendors and performing final testing and programming functions in-house at our facility in Wuxi.

We maintain sales offices in Andover, Massachusetts and San Jose, California, in Shenzhen and Shanghai, China, in Taipei, Taiwan, and in Yokohama, Japan. We sell our products using our direct sales force, as well as through systems integrators, resellers, distributors and sales representatives worldwide.

Our Competitive Strengths

Our key competitive strengths include the following:

Proprietary technology enabling superior reliability, functionality and pricing. We have proprietary rights to produce MEMS accelerometers based on a unique thermal technology which has higher shock tolerance, lower failure rate and

lower cost relative to alternative mechanical solutions. Our accelerometers can be manufactured on a standard CMOS process with on-chip mixed signal processing, which enables us to enhance reliability and reduces our production cost. This standardized process enables us to easily integrate additional functions or create new sensors for MEMS applications beyond accelerometers and expand into the magnetic, touch and flow sensor markets.

Comprehensive system solutions offering. Our solutions involve the development of a fully-integrated sensor system on a chip, together with the reference designs, algorithms, source code and, in some cases, the application content to facilitate rapid commercial introduction. For example, our line of magnetic sensors incorporates our Intelligent Heading Correction algorithms, which automatically calibrate the device and, compensate for the extraneous magnetic interference, providing high accuracy and promoting ease of use. Our Crossbow acquisition has enhanced our capabilities in designing and developing integrated “smart sensing” solutions. Integrated solutions such as this enable our customers to shorten their product development cycle and allow for rapid adoption of our products in new applications.

Leading market position and established customer relationships. We were a pioneer in providing accelerometers to China's large mobile phone market. We are also among the leading sensor providers in a diverse range of other applications such as keystone screen adjustment sensors for image projectors, supplying to several Japanese OEMs. In addition, our accelerometers are incorporated in vehicle stability control systems for the automotive market, where Autoliv, Inc. is a major customer. We have developed close working relationships with our customers and regularly work together with them on new applications development.

Efficient semi-fabless manufacturing model creating higher entry barrier. Our semi-fabless model reduces capital expenditures while retaining manufacturing control over key MEMS-based process steps. We outsource the production of standard CMOS wafers, which we consider to be a commodity, to our foundry service provider, and perform in-house the proprietary post-CMOS MEMS process of building MEMS on top of the standard CMOS wafer. We believe that by performing proprietary manufacturing processes in-house, we create a higher barrier to entry.

Strong technology-driven management team. Our management team has extensive experience in the MEMS and integrated circuit design industry. Our founder and CEO, Dr. Yang Zhao, has been dedicated to the research and development of MEMS sensors since the early 1990's while he was a doctoral student at Princeton University, and is named as an inventor on ten patents we own and five of our pending patent applications in the United States. Furthermore, our management team has successfully guided us through our rapid business expansion while maintaining focus on the development and expansion of our core technological capabilities.

Our Strategy

Key elements of our strategy for growth include the following:

Increase penetration of existing markets and customers. We are actively seeking design wins by building on our strong existing relationships with major OEM customers in the automotive and industrial markets in China, Taiwan, Japan, Europe and the United States. Our major OEM accounts have in the past generally focused on a particular OEM system or application, and we intend to take advantage of our strong relationships in these accounts to seek new design-in opportunities in a wider range of OEM systems and applications that capitalize on the more diverse range of technologies and sensor solutions that we can now offer.

Diversify into new sensor and integrated"smart sensing"system products. We have a strong foundation and the capabilities to diversify into new sensor products, including magnetic, temperature, pressure, flow sensors and gyroscopes. Emerging applications for sensors frequently lack incumbent competitors, providing an opportunity for a first-mover to define the dominant application technology. We also believe that there is an opportunity in integrated sensor products, which combine multiple sensing devices onto one chip and "smart sensing" systems that integrate sensors with on-board processors, and other elements such as wireless communications and software to provide a complete sensing solution.

Maintain cost leadership. We intend to maintain our cost advantage by developing new innovative proprietary technologies, focusing on designing products on readily available foundry processes, and leveraging our low-cost manufacturing capabilities in China. For example, an important goal in integrating the businesses we acquired from Crossbow has been to drive down the manufacturing cost of the acquired products by transitioning manufacturing to our facility in China.

Leverage cross-continental research and development model to strengthen technology platform. We have research and development teams in Andover, Chicago, San Jose and Wuxi that work closely with each other in our product and technology research and development activities. Our U.S. team is responsible for original research and development activities while our China team focuses on implementing the technology developed by our U.S. team. We believe that this cross-continental research and development model keeps us at the forefront of MEMS sensor research while

maintaining a competitive cost base.

Engage in selective acquisitions to build new MEMS capabilities. We intend to continue to evaluate and potentially make acquisitions of technologies and businesses that are complementary to our product portfolio, such as our January 2010 acquisition of business lines from Crossbow and our 2008 acquisition of industrial gas-flow meter technology from MEMStron. We believe that there is a large market potential for integrated system-on-chip sensor products which incorporate multiple types of sensors. While we develop our technologies in-house, we are also actively seeking opportunities to acquire or license key technologies from third parties as well. We believe our strong core technology platform and our newly enhanced smart sensing systems design capabilities will also provide us an advantage in integrating the acquired technologies to create a broader range of sensor solutions products in the market.

Corporate Information

We are a Delaware corporation incorporated in February 1999. Our principal executive offices are located at One Tech Drive, Suite 325, Andover, Massachusetts 01810. Our telephone number is (978) 738-0900 and our website is www.memsic.com. Information contained on our website is not part of this Annual Report on Form 10-K.

Conventions that Apply in this Annual Report on Form 10-K

Unless otherwise indicated, references in this Annual Report on Form 10-K to:

- "U.S. dollars," "$," and "dollars" are to the legal currency of the United States;
- "China" or the "PRC" are to the People's Republic of China, excluding, for the purpose of this Annual Report on Form 10-K only, Hong Kong, Macau and Taiwan; and
- "RMB" and "Renminbi" are to the legal currency of the People's Republic of China.
- "Yen" and "Japanese Jen" are to the legal currency of Japan

Unless the context indicates otherwise, "we," "us," "our company," "the Company," "our," and "MEMSIC" refer to MEMSIC, and its subsidiary.

This Annual Report on Form 10-K contains translations of certain RMB and Yen amounts into U.S. dollar amounts at specified rates. Unless otherwise stated, the translations from RMB and Yen to U.S. dollars were made at the buying rates in effect on December 31, 2010 in The City of New York for cable transfers of RMB and Yen as certified for customs purposes by the Federal Reserve Bank of New York, which was RMB6.60 to $1.00 and Yen81.67 to $1.00, respectively. We make no representation that the RMB, Yen or U.S. dollar amounts referred to in this Annual Report on Form 10-K could have been or could be converted into U.S. dollars or RMB or Yen, as the case may be, at any particular rate or at all. See "Risk Factors—Risks Related to Doing Business in China—Fluctuations in the value of RMB could negatively impact our result of operations" and "—Restrictions on currency exchange may limit our ability to receive and use our revenue effectively" for discussions of the effects of fluctuating exchange rates and currency control on the value of our common stock. On December 31, 2010, the buying rate of RMB was RMB6.60 to $1.00 and the buying rate of Yen was Yen81.67 to $1.00.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including the sections entitled “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains forward-looking statements. These statements may relate to, but are not limited to, expectations of future operating results or financial performance, capital expenditures, introduction of new products, regulatory compliance, plans for growth and future operations, as well as assumptions relating to the foregoing. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. These risks and other factors include, but are not limited to, those listed under “Risk Factors.” In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “could,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “intend,” “potential,” “continue” or the negative of these terms or other comparable terminology. These statements are only predictions. Actual events or results may differ materially.

We believe that it is important to communicate our future expectations to our investors. However, there may be events in the future that we are not able to accurately predict or control and that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Except as required by applicable law, including the securities laws of the United States and the rules and regulations of the SEC, we do not plan to publicly update or revise any forward-looking statements contained in this Annual Report on Form 10-K after we file this Annual Report on Form 10-K, whether as a result of any new information, future events or otherwise. Before you invest in our common stock, you should be aware that the occurrence of any of the events described in the “Risk Factors” section and elsewhere in this Annual Report on Form 10-K could harm our business, prospects, operating results and financial condition. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

Item 1A. Risk Factors

Risks Relating to Our Business and Industry

Uncertain prospects for the global economy could adversely affect our business, results of operations and financial condition

Global economies recently experienced a recession that affected all sectors of the economy. There is no certainty that recent improvements in economic conditions will continue, or that economic conditions will not deteriorate again in the future. These uncertainties affect businesses such as ours in a number of ways, making it difficult to accurately forecast and plan our future business activities. Weak economic conditions may lead consumers and businesses to postpone spending, which may cause our customers to cancel, decrease or delay their existing and future orders with us. Financial difficulties experienced by our suppliers or distributors could result in product delays, increased accounts receivable defaults and inventory challenges. If uncertain economic conditions continue or further deteriorate, our business and results of operations could be materially and adversely affected, as a result of, among other things:

- reduced demand for our products, particularly in industries such as the automotive industry that have been severely affected by the global recession;
- increased risk of order cancellations or delays;
- increased pressure on the prices for our products, such as we recently experienced in the handset market in China;
- greater difficulty in collecting accounts receivable; and
- risks to our liquidity, including the possibility that we might not have access to our cash and investments when needed.

We are unable to predict the prospects for recovery from the recent global downturn and the longer the duration of these uncertainties, the greater the risks we face in operating our business.

Our quarterly and annual operating results have fluctuated and may continue to fluctuate and are difficult to predict and if we do not meet financial expectations of securities analysts or investors, the price of our common stock will likely decline.

Our quarterly and annual operating results have fluctuated and may continue to fluctuate as a result of a number of factors, many of which are beyond our control. Comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. Additionally, factors such as the acquisition of our new sensor solutions business from Crossbow in January 2010, which has a different operating model than our historical sensor business, and the continued intense competitive pressure on prices for our sensor products used in mobile phone applications, make predicting our future performance based on the results of prior periods particularly difficult. For example, after a period of low growth from 2007 to 2009, our net sales in 2010 grew by 36.2%, from $28.4 million in 2009 to $38.7 million, but our profitability suffered and we incurred a loss from operations of $8.6 million and a net loss of $7.4 million in 2010, compared with break-even net income of $24,000 in 2009. Our quarterly and annual net sales and profit margin may be significantly different from our historical amounts, and in future periods may fall below expectations. Our gross margins have declined significantly since 2007, and could continue to decline. These and other risks described in this "Risk Factors" section, including the following factors, could cause our quarterly and annual operating results to fluctuate from period to period:

- the loss of one or more of our key customers;
- the cancellation or deferral of customer orders in anticipation of our new products or product enhancements, or due to a reduction in our customers' end demand;
- changes in the price we charge for our products or our pricing strategies, which may be impacted by economic conditions or the pricing strategies of our competitors;
- the cyclicality of the semiconductor industry and seasonality in sales of products into which our products are incorporated;
- seasonal fluctuations of some of our product application markets as well as geographical markets; and
- the length of the product development cycle for our new products.

In addition, we plan our operating expenses, including research and development expenses, hiring of additional personnel and investments in inventory, in part on our expectations of future revenue, and our expenses are relatively fixed in the short term. We have recently implemented cost reduction measures to reduce our operating expenses. However, if revenue for a particular quarter is lower than we expect, we may be unable to proportionately reduce our operating expenses for that quarter, which would harm our operating results for that quarter. If our operating results in future quarters fall below the expectations of securities analysts or investors, the market price of our common stock will likely decline.

The average selling prices of products in some of our markets have historically decreased rapidly and will likely continue to do so in the future, which could harm our revenue and gross margins.

In the semiconductor industry, the average selling price of a product typically declines significantly over the life of the product. In the past, we have reduced the average selling prices of our products in anticipation of future competitive pricing pressures, new product introductions by us or our competitors and other factors. We expect that we will have to similarly reduce our products' average selling prices over the life of any particular product in the future. Reductions in our average selling prices to one customer could also impact our average selling prices to other customers. A decline in average selling prices can harm our gross margins. For example, our gross margins continued to decline from 47.9% in 2008 and 45.6% in 2009 to 39.6% in 2010, primarily as a result of decreasing unit prices in response to competitive pressures in the mobile handset market. Our financial results will suffer if we are unable to offset reductions in our average selling prices by increasing our sales volumes, reducing our costs, adding new features to

our existing products that enable us to increase the selling price, increasing our revenues from higher-margin products such as our new sensor solution products or developing new or enhanced products on a timely basis with higher selling prices or gross margins.

Acquisitions or investments that we make to expand our business may expose us to new risks and we may not realize the anticipated benefits of these acquisitions or investments.

As part of our growth strategy, we will continue to evaluate opportunities to acquire or invest in other businesses, intellectual property or technologies that would complement our current business, expand the breadth of markets we can address or enhance our technical capabilities. Acquisitions or investments that we may potentially make in the future entail a number of risks that could materially and adversely affect our business, operating and financial results, including:

- problems integrating the acquired operations, technologies or products into our existing business and products;
- diversion of management’s time and attention from our core business;
- adverse effects on existing business relationships with customers;
- need for financial resources above our planned investment levels;
- failures in realizing anticipated synergies;

- difficulties in retaining business relationships with suppliers and customers of the acquired company;
- risks associated with entering markets in which we lack experience;
- potential loss of key employees of the acquired company;
- potential write-offs of acquired assets; and
- potential expenses related to the amortization of intangible assets.

Our failure to address these risks may have a material adverse effect on our financial condition and results of operations. Any such acquisition or investment may require a significant amount of capital investment, which would decrease the amount of cash available for working capital or capital expenditures. In addition, if we issue new equity securities to pay for acquisitions, our stockholders may experience dilution. If we borrow funds to finance acquisitions, such debt instruments may contain restrictive covenants that can, among other things, restrict us from distributing dividends.

Our Crossbow acquisition in particular exposes us to new risks that we have not previously faced.

The product lines we acquired from Crossbow are more highly integrated than our existing products, involve different technologies, more complex manufacturing, assembly and test processes and require more technical support than those required by our current product lines. The sales process and customer base for the Crossbow products also differs substantially from those of our current products. Our manufacture and sale of the inertial navigation systems for use in general aviation that we acquired from Crossbow are subject to extensive regulatory requirements, including requirements that we obtain and maintain certifications from the United States Federal Aviation Administration, or FAA. Malfunctions in these inertial navigation systems could expose users to the risk of injury or death, and a product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly to defend. Prior to 2010, we had no previous experience in designing, manufacturing, selling and supporting products of this type, and there can be no assurance that we will be successful in these endeavors. We are substantially reliant for the operation of this business on former Crossbow management, engineering, sales and marketing personnel who have become our employees. Until we are able to transition to our own manufacturing processes in China, a process that we started in 2010 and expect to complete in 2011, we will be dependent on Crossbow to manufacture these products for us under a contract we entered into with Crossbow as part of the acquisition. If we are unable to obtain necessary FAA certification of our manufacturing facility and processes in China, or experience other unforeseen difficulties in transitioning the manufacture of the acquired products to our own facility in China, we may be unable to achieve the product cost improvements that we anticipate for these acquired businesses. The integration of the lines of business, technologies, personnel and operations we acquired from Crossbow could result in significant diversion of our management's attention and could also require the incurrence of substantial costs, which could adversely affect our profitability in the near term. Our failure to effectively address these risks, or to successfully integrate the businesses we acquired from Crossbow, or other businesses we may acquire, could have a material adverse effect on our business, our reputation and our results of operations. Additionally, we recorded goodwill of $4.9 million in connection with the Crossbow acquisition. If the cash flows generated by the businesses we acquired from Crossbow fall significantly short of our expectations, or other events occur that require us to reassess the fair value of this goodwill, we could be required to record an impairment charge, which could have a material adverse effect on our results of operations.

We may not be able to compete effectively and increase or maintain revenue and market share.

We may not be able to compete successfully against current or future competitors. If we do not compete successfully, our market share and revenue may decline. We and our distributors currently sell substantially all of our accelerometer

products to original equipment manufacturers, or OEMs, and original design manufacturers, or ODMs. We face competition primarily from traditional capacitive/piezoresistive-based accelerometer manufacturers, and, more recently, from manufacturers of low cost components such as mechanical switches that can be used as alternatives to our accelerometers in certain applications, such as orientation detection for mobile phones. Our Crossbow acquisition exposes us to competition from additional sources that we historically did not experience. Most of our current competitors have longer operating histories, significantly greater resources, brand recognition and a larger base of customers than we do. In addition, these competitors may have greater credibility with our existing or potential customers. Moreover, many of our competitors have been doing business with customers for a longer period of time and have established relationships, which may provide them with information regarding future market trends and requirements that may not be available to us. Additionally, some of our larger competitors may be able to provide greater incentives to customers through rebates and similar programs. Some of our competitors with multiple product lines may bundle their products to offer a broader product portfolio or integrate accelerometer functionality into other products that we do not sell. These factors may make it difficult for us to gain or maintain market share.

Our ability to grow depends on our ability to secure and maintain relationships with OEM and ODM customers. If we cannot continue to achieve design wins, if our design wins do not result in large volume orders, or if we fail to meet an OEM's development and service demands, our ability to grow will be limited.

Our ability to grow depends on our ability to continue to achieve design wins with OEMs and ODMs to whom we sell either directly or through our distributors. In order to achieve a design win, where our product is incorporated into an OEM's or ODM's product design, we may often need to make modifications to our products or develop new products that involve significant technological challenges. We may also incur significant product development costs by participating in lengthy field trials and extensive qualification programs. We cannot assure you that these efforts would result in a design win.

Furthermore, a design win is not a binding commitment to purchase our products and may not result in large volume orders of our products. Rather, it is a decision by an OEM or ODM to use our products in the design process of that OEM's or ODM's products. OEMs and ODMs can choose at any time to stop using our products in their designs or product development efforts. Moreover, even if our products were chosen to be incorporated into an OEM's or ODM's products, our ability to generate significant revenues from that OEM or ODM will depend on the commercial success of their products. Thus, a design win may not necessarily generate significant revenues if our customers' products are not commercially successful.

In addition, OEMs and ODMs place considerable pressure on us to meet their tight development schedules. These customers also often require extensive and localized customer support. As a result, we may be required to significantly expand our customer support organization. Devoting a substantial amount of our limited resources to one or more of these customer relationships could result in opportunity costs which detract or delay us from completing other important product development projects for our other existing customers, which could in turn impair our relationships with existing customers and negatively impact sales of the products under development.

We do not have long-term purchase commitments from our customers, including OEMs and ODMs, and our ability to accurately forecast demand for and sales of our products is limited, which may result in excess or insufficient inventory and significant uncertainty and volatility with respect to our revenue from period to period.

We do not have long-term purchase commitments from our customers, including OEMs and ODMs. Our customers may cancel or reschedule purchase orders. Our customers' purchase orders may vary significantly from period to period, and it is difficult to forecast future order quantities. The lead time required by our foundry providers for wafer production is typically longer than the lead time that our customers provide to us for delivery of our products to them. Therefore, to ensure availability of our products for our customers, we typically ask our foundry providers to start wafer production based on forecasts provided by our customers in advance of receiving purchase orders. However, these forecasts are not binding purchase commitments, and we do not recognize revenue until our products are shipped to customers. Accordingly, we incur inventory and manufacturing costs in advance of anticipated sales. We cannot assure you that any of our customers will continue to place purchase orders with us in the future at the same level as in prior periods or that the volume of our customers' purchase orders will be consistent with our expectations when we plan our expenditures in advance of receiving purchase orders. Our anticipated demand for our products may not materialize. In addition, manufacturing based on customer forecasts exposes us to risks of high inventory carrying costs and increased product obsolescence, which may increase our costs. If we overestimate demand for our products, or if purchase orders are cancelled or shipments are delayed, we may be left with excess inventory that we cannot sell. Conversely, if we underestimate demand, we may not have sufficient inventory and may lose market share and damage our customer relationships. Obtaining addition