GSI TECHNOLOGY INC
Form 10-K
June 10, 2016
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended March 31, 2016

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 001-33387

GSI Technology, Inc.

(Exact name of registrant as specified in its charter)

Delaware	77-0398779
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

1213 Elko Drive

Sunnyvale, California 94089

(Address of principal executive offices, zip code)

(408) 331-8800

(Registrant's telephone number, including area code)

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

Title of Each Class	Name of Each Exchange on which Registered
Common Stock, $0.001 par value	The Nasdaq Stock Market LLC

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

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file 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 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 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 Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

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

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant, based upon the closing sale price of the common stock on September 30, 2015, as reported on the Nasdaq Global Market, was approximately $63.7 million. Shares of the registrant's common stock held by each officer and director and each person who owns 10% or more of the outstanding common stock of the registrant have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes. As of May 31, 2016, there were 21,208,548 shares of the registrant's common stock issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its 2016 annual meeting of stockholders are incorporated by reference into Part III hereof.

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GSI TECHNOLOGY, INC.

2016 FORM 10-K ANNUAL REPORT

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Forward-looking Statements

In addition to historical information, this Annual Report on Form 10-K includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These forward-looking statements involve risks and uncertainties. Forward-looking statements are identified by words such as "anticipates," "believes," "expects," "intends," "may," "will," and other similar expressions. In addition, any statements which refer to expectations, projections, or other characterizations of future events or circumstances are forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements as a result of a number of factors, including those set forth in this report under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors," those described elsewhere in this report, and those described in our other reports filed with the Securities and Exchange Commission ("SEC"). We caution you not to place undue reliance on these forward-looking statements, which speak only as of the date of this report, and we undertake no obligation to update these forward-looking statements after the filing of this report. You are urged to review carefully and consider our various disclosures in this report and in our other reports publicly disclosed or filed with the SEC that attempt to advise you of the risks and factors that may affect our business.

PART I

Item 1. Business

Overview

For many years we have developed and marketed high performance memory products, including "Very Fast" static random access memory, or SRAM, and low latency dynamic random access memory, or LLDRAM, that are incorporated primarily in high-performance networking and telecommunications equipment, such as routers, switches, wide area network infrastructure equipment, wireless base stations and network access equipment. We sell these products to leading original equipment manufacturer, or OEM, customers including Alcatel-Lucent, Cisco Systems and Huawei Technologies. In addition, we serve the ongoing needs of the military, industrial, test and measurement equipment, automotive and medical markets for high-performance SRAMs. Based on the performance characteristics of our products and the breadth of our product portfolio, we consider ourselves to be a leading provider of Very Fast SRAMs. We utilize a fabless business model, which allows us both to focus our resources on research and development, product design and marketing, and to gain access to advanced process technologies with only modest capital investment and fixed costs.

Subsequent to our acquisition of MikaMonu Group Ltd. (“MikaMonu”), discussed below, we have expanded our strategy to include the development of in-place associative computing solutions for applications in evolving new markets such as “big data” (including machine learning and deep convolutional neural networks (“CNNs”)), computer vision, and cyber security.

We were incorporated in California in 1995 under the name Giga Semiconductor, Inc. We changed our name to GSI Technology in December 2003 and reincorporated in Delaware in June 2004 under the name GSI Technology, Inc. Our principal executive offices are located at 1213 Elko Drive, Sunnyvale, California, 94089, and our telephone number is (408) 331-8800.

Recent Developments

Recent Acquisition

On November 23, 2015, we acquired all of the outstanding capital stock of privately held MikaMonu, a development-stage, Israel-based company that specializes in in-place associative computing for markets including

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big data, computer vision and cyber security. MikaMonu, located in Tel Aviv, held 12 United States patents and a number of pending patent applications.

With the vast amount of data currently being generated, and the increasing demand for faster processing of that data, memory bus speeds are not keeping up with processor speeds. MikaMonu's in-place associative computing technology addresses this issue by changing the concept of computing from serial data processing – where data is moved back and forth from the processor to the memory – to parallel data processing, computation and search directly in the main processing array. This new computing model has the potential to greatly expedite computation and response times in "big data" applications. Fast response times are also needed in the computer vision and cyber security markets. For example, in the automotive market, advanced driver assistance systems (ADAS) require a tremendous amount of image processing to be accomplished in real-time. MikaMonu's massively parallel computing technology is well suited to address these needs. We believe that our state-of-the-art circuit design expertise will enable the development of high quality associative processors incorporating MikaMonu's patented, in-place associative computing technology and algorithms, potentially creating a new category of computing products with substantial target markets and a large new customer base in those markets. Realization of the potential synergies of the acquisition, however, will require a substantial development effort over more than a year, with initial products not expected to be introduced until late calendar 2017.

The acquisition has been accounted for as a purchase under authoritative guidance for business combinations. The purchase price of the acquisition has been preliminarily allocated to the intangible assets acquired, with the excess of the purchase price over the fair value of assets acquired recorded as goodwill. The results of operations of MikaMonu and the estimated fair value of the assets acquired were included in our consolidated financial statements beginning November 23, 2015.

Under the terms of the acquisition agreement, we paid the former MikaMonu shareholders initial cash consideration of approximately $4.4 million at the closing on November 23, 2015. We will make cash payments of up to $484,000 to the three former MikaMonu shareholders in May 2017 upon the release of cash held in escrow for potential indemnification claims. Additionally, we will make cash retention payments of up to an additional $2.5 million to the three former MikaMonu shareholders in installments over a four-year period, conditioned on the continued employment of Dr. Avidan Akerib, MikaMonu's co-founder and chief technologist. We will also make "earnout" payments to the former MikaMonu shareholders in cash or shares of our common stock, at our discretion, during a period of up to ten years following the closing if certain product development milestones and revenue targets for products based on the MikaMonu technology are achieved. Earnout amounts of $750,000 will be payable if certain product development milestones are achieved by December 31, 2017. Additional earnout amounts of $2,750,000 and $4,000,000 will be payable if certain revenue milestones are achieved by January 1, 2021 and January 1, 2022, respectively; and additional payments, up to a maximum of $30 million, equal to 5% of net revenues from the sale of qualifying products in excess of certain thresholds, will be made quarterly through December 31, 2025.

Settlement of Protracted Litigation with Cypress Semiconductor Corporation

On May 6, 2015, we entered into a settlement agreement with Cypress Semiconductor Corporation to resolve a lawsuit filed by Cypress in the United States District Court for the Northern District of California alleging that certain of our products infringe patents held by Cypress and a separate lawsuit pending in the same court in which we had alleged that Cypress violated federal and state antitrust laws. Reference is made to "Item 3. Legal Proceedings" for information regarding this protracted litigation that began in 2011. Under the settlement agreement:

· Each of the parties agreed to dismiss its lawsuit in consideration of the dismissal of the lawsuit brought by the other party; and

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· Each party released all claims against the other with respect to issues raised in the two lawsuits.

The parties agreed that the settlement agreement was entered into to resolve disputed claims, and that each party denies any liability to the other party.

Industry Background

SRAM, LLDRAM and Bandwidth Engine Market Overview

Virtually all types of high-performance electronic systems incorporate some form of volatile memory. An SRAM is a memory device that retains data as long as power is supplied, without requiring any further user intervention. In contrast, dynamic random access memory, or DRAM, is a memory device that requires user intervention in the form of refresh operations to retain data while power is supplied, due to the capacitive nature of its memory cell. However, a DRAM memory cell is much smaller than an SRAM memory cell, so several times more DRAM bits than SRAM bits can be implemented in any given unit area of silicon. The fundamentally different characteristics of SRAM and DRAM memory cells have resulted in the emergence of markedly different architectures for SRAM-based and DRAM-based memory products, and the two types of memory serve different applications. Classically, SRAM-based products have served high performance requirements while DRAM-based products have been used in cost-optimized applications. Today, SRAM- and DRAM-based products serve both performance and cost-based applications. As the volatile memory market fragments into a variety of specialized products, more meaningful distinctions between volatile memory products can be made.

There is an increasingly broad variety of volatile memory products on the market, characterized by a number of attributes, such as speed, memory capacity, or density, I/O interface and power consumption. There are several different industry measures of speed:

· latency, which is the delay between the request for data and the delivery of such data for use and is measured in nanoseconds, or ns, or when used to describe performance of synchronous memory products may be described in terms of numbers of clock cycles required between the load of an address and the delivery of valid data;
· random access time, which is the minimum amount of time required between accesses to random locations within the memory array, typically measured in nanoseconds, or ns;
· bandwidth, which is the rate at which data can be streamed to or from a device and is often measured in megabits or gigabits per second (Mb/s or Gb/s);
· clock frequency, which is the cycle rate of a clock within a synchronous device and is often measured in megahertz or gigahertz (MHz or GHz); and
· transaction rate, which is the rate at which new commands can be executed by the memory device, and is often measured in millions or billions of transactions per second (MT/s or BT/s).

Historically, SRAMs have been utilized wherever other lower price-per-bit memory technologies have been inadequate. SRAMs demonstrate lower latency and faster random access times relative to DRAMs and other types of memory technologies, but at a higher price-per-bit. Historically, the volatile memory market has had three price-performance points, DRAM at the low end, Fast SRAM at the high end, and slow SRAM in the middle. Over the past two decades, alternative memory technologies have been introduced to address certain applications that formerly used slow SRAMs. For example, new types of DRAM have displaced slow SRAM in applications such as cell phones. However, in the networking memory market a technology vacuum formed between Fast SRAMs on one end and commodity DRAMs at the other, with no high bandwidth, high transaction rate, moderate capacity,

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moderate latency, and moderate cost volatile memory product to fill the void. In the past decade, low latency DRAMs, or LLDRAMs, have been developed to fill that void. Like the slow SRAMs that came before them, LLDRAMs have a much higher price-per-bit than commodity DRAMs (in order to deliver higher transaction rates) but demonstrate slower random access times and longer latencies than Fast SRAMs.

All of these SRAM and DRAM technologies utilize traditional parallel I/O interfaces that require a significant number of pins. Recently we have partnered with another company to provide a new serial I/O (SerDes) memory device called “Bandwidth Engine” which is fabricated using embedded DRAM technology. The Bandwidth Engine has capacity comparable to LLDRAMs but offers far greater transaction rate and data bandwidth capability (greater even than Fast SRAMs) through its serial interface. It can also execute a variety of read-modify-write operations previously unavailable in any other memory device. The networking market is just beginning to take advantage of the unique and powerful capabilities of Bandwidth Engine technology.

The need for increasingly greater capacity, data bandwidth and transaction rates from the various memory technologies continues unabated as the networking market begins to make preparations for Terabit networking in the latter half of the current decade. We believe that Fast SRAM, LLDRAM and Bandwidth Engine products, optimized for networking applications, will play an increasingly essential role in enabling continued improvements in network performance.

As a result of the displacement of low performance SRAMs, the total market size for SRAMs is diminishing. However, due to their inherent higher latency characteristics, DRAMs cannot match the random access speed of high-performance SRAMs. Gartner Dataquest divides the SRAM market into segments based on speed. The highest performance segment is comprised of SRAMs that operate at speeds of less than 10 nanoseconds, which we refer to as "Very Fast SRAMs." Very Fast SRAMs are predominantly utilized in high-performance networking and telecommunications equipment.

Increasing Need for Networking Memory Products

Growth in data, voice and video traffic has driven the need for both greater networking bandwidth and more complex routing and switching equipment, resulting in the continued expansion of the networking and telecommunications infrastructure. The continued growth in the level of Internet usage has led to the proliferation of a wide variety of equipment throughout the networking and telecommunications infrastructure, including routers, switches, wireless local area network infrastructure equipment, wireless base stations and network access equipment, and a continuing demand for new equipment with faster and higher performance. Moving data in and out of high performance volatile memory is the core task of every piece of networking equipment. The access patterns or workload of most memory arrays used in networking equipment are significantly different from those of memory devices typically used in the computer market, such as the DRAMs used for main storage in PCs. As a result, distinct classes of memory products optimized for the demands of the networking market have been emerging over the last fifteen years. The sharply rising demand for increasing worldwide network performance is expected to drive a continuing need for ever more specialized memory products. High-performance networking and telecommunications equipment requires a variety of memory types; both SRAM-based and DRAM-based. Some of the required memory arrays are embedded in specialized processors or ASICs but many tasks require more bits than can be accommodated on a processor or ASIC, and must be provided in some form of external volatile memory. SRAM-based and DRAM-based networking memory products address this requirement. For example, in a typical router or switch, multiple networking-optimized memory devices are required to temporarily store, or buffer, data traffic and to provide rapid lookup of information in data tables. As networking equipment must increasingly support advanced traffic content such as Voice over Internet Protocol, or VoIP, video streaming and bi-directional video, demand for even higher performance networking memory is expected to continue to increase.

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Demanding Requirements for Success in the Networking Memory Market

The pressure on networking and telecommunications OEMs to bring higher performance equipment to market rapidly to support not only more traffic but also more advanced traffic content is compounded by the requirement that this new equipment occupy no more space than the equipment it replaces, which results in increased circuit density requirements and the need for lower power operations. In response to these pressures, OEMs have increasingly relied on providers that are capable of rapidly developing and introducing advanced, higher density, low power networking memory. The variety of memory applications within the networking and telecommunications markets has also driven a need for more specialized products available in relatively low volumes. These specialized products include high-speed synchronous memory products implemented in both SRAM and DRAM memory technologies with a range of density, latency and bandwidth capabilities. In general, OEMs prefer to work with a supplier who can address the full range of their high-performance networking memory product requirements and, just as importantly, can offer the technical and logistic support necessary to sustain and accelerate their efforts.

We believe the key success factors for a networking memory vendor are the ability to offer a broad catalog of high-performance, high-quality and high-reliability networking memory products, to continuously introduce new products with higher speeds, lower power and greater densities, to maintain timely availability of prior generations of products for several years after their introductions, and to provide effective logistic and technical support throughout their OEM customers' product development and manufacturing life cycles.

The GSI Solution

We endeavor to address the overall needs of our OEM customers, not only satisfying their immediate requirements for our latest generation, highest performance networking memory, but also providing them with the ongoing long-term support necessary during the entire lives of the systems in which our products are utilized. Accordingly, the key elements of our solution include:

Innovative Product Performance Leadership

High Speed. Through the use of advanced architectures, design methodologies and silicon process technologies, we have developed a wide variety of high-performance networking memory products. Our SRAM product line has evolved from BurstRAMs with an average transaction rate of about 0.125 BT/s to our SigmaQuad™-IVe SRAMs with transaction rates up to 2.66 BT/s and data bandwidths of up to 192 Gb/s, greater than any other SRAM commercially available today. Our current Low Latency DRAMs deliver transaction rates of up to 0.533 BT/s and data bandwidths of up to 38 Gb/s. Our Bandwidth Engine products provide transaction rates exceeding 4 BT/s and data bandwidths of up to 400 Gb/s. Our SRAM products can produce data at latencies of 4 to 5 ns while LLDRAM and Bandwidth Engine latencies are approximately 15 ns. By providing higher performance networking memory, we enable our networking and telecommunications customers to continually design and develop higher performance products that support increasingly complex traffic content.

Low Power Consumption. Many of our products require significantly less power than comparable products offered by our principal competitors. Because these products utilize less power and generate less heat, the reliability of the networking or telecommunications equipment in which they are employed increases. Furthermore, the low power utilization of our products helps enable OEMs to add capabilities to their systems, which otherwise might not have been possible due to overall system power constraints.

Process Technology Leadership. We maintain our own process engineering capability and resources, which are located in close physical proximity to our SRAM wafer manufacturing partner, Taiwan Semiconductor Manufacturing Company, or TSMC. This enhances our ability to work closely with TSMC to develop modifications of the advanced

process technologies used in the manufacturing of our Fast SRAMs in order to maximize product

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performance, optimize yields, lower manufacturing costs and improve quality. Our most advanced 144 and 288 Mb synchronous Very Fast SRAMs are manufactured using 40 nanometer process technology. Our LLDRAMs are being produced using 63 nanometer DRAM process technology at Powerchip Technology Corporation, or Powerchip, in Taiwan.

Product Innovation. We believe that we have established a position as a technology leader in the design and development of Very Fast SRAMs. We were the first supplier to introduce 72-bit-wide SRAMs as single monolithic ICs. In 2010, we were the first supplier to introduce a Fast Synchronous SRAM capable of one billion transactions per second – SigmaQuad-IIIe – whose 1.45 BT/s capability was more than double any other SRAM commercially available at the time. In early 2015, we further solidified our position as a technology leader by being the first vendor to introduce and ship 288 megabit monolithic SRAMs. In addition, we are the only vendor to offer a full line of Very Fast Synchronous SRAMs that operate and interface at 1.8 to 3.3 volts, giving our OEM customers the ability to use the same product in systems that operate at any voltage within that range. Moreover, we are the only vendor to offer a Very Fast Synchronous SRAM product that operates at 1.8 volts and uses approximately one-half to two-thirds the power of our competitors' 2.5 volt products.

Broad and Readily Available Product Portfolio

Extensive Product Catalog. The Very Fast SRAM market is highly fragmented in terms of product features and specifications. This is especially true of the networking segment of the fast SRAM market and is becoming true of the LLDRAM segment as well. To meet our OEM customers' diverse needs, we have what we believe is the broadest catalog of Very Fast SRAM products currently available, and our LLDRAM and Bandwidth Engine product lines further expand our position in the networking market. Our product line includes a wide range of devices with varying densities, features, clock speeds, and voltages, as well as several operating temperature ranges and numerous package options in both 5/6 RoHS (leaded) and 6/6 RoHS (lead-free) versions, which are compliant with the European Union's Restriction on the Use of Hazardous Substances Directive 2002/95/EC.

Advanced Feature Sets. Our products offer features that address a broad range of our networking and telecommunications OEMs' system requirements. Among these features is a JTAG test port, named for the IEEE Joint Test Action Group, which enables post-assembly verification of the connection between our product and an OEM customer's system board, thereby allowing an OEM customer of ours to develop, test and ship their products more rapidly. Additionally, we offer our FLXDrive™ feature, which allows system designers to optimize the signal integrity for any given requirement. We also provide OEMs the ability to employ certain of our products in various modes of operation by using our products' mode control pins, thus increasing the flexibility of those products and their ready availability from our inventory.

Superior Lifetime Availability of Products. Unlike the market for consumer electronics, the markets in which we compete, particularly the networking and telecommunications markets, generally are characterized by system designs that remain in production for extended periods of time, and maintenance of those systems in the field for even longer periods is critical to their success. Our foundry-based manufacturing strategy, our process technology selections, our master-die design strategy and the design of our packaging, burn-in and test work-flows all contribute to allow us to meet and exceed our guarantee of providing a product life of at least seven years for any new product family we bring to market. These techniques also allow us to keep our delivery lead-times relatively short even for specialized, infrequently ordered members of those product families. We believe our approach is better suited to address the needs of our target markets than attempts to apply mass market manufacturing strategies to networking memory products.

Multiple Temperature Grades. We offer both commercial and industrial temperature grades for all of our products. This ability to perform at specification throughout the industrial temperature range of -40°C to +85°C is critical for memory products used in a broad variety of networking and telecommunications applications, where the

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operating environments may be harsh. We now also offer a portfolio of off-the-shelf military temperature SRAM products and can also offer military customers additional and extended temperature grades upon request.

Master Die Methodology

Our master die methodology enables multiple product families, and variations thereof, to be manufactured from a single mask set. As a result, based upon the way available die from a wafer are metalized, wire bonded, packaged and tested, from 25 mask sets we have created over 15,000 different products. Using these mask sets, we produce wafers that can be further processed upon customer orders into the final specified product thereby significantly shortening the overall manufacturing time. For example, from a 72 megabit mask set, we can produce three families of 72 megabit SRAM products. Our unique methodology results in the following benefits:

Rapid Order Fulfillment. We maintain a common pool of wafers that incorporate all available master die. Because we can typically create several different products from a single master die, we can respond to unforecasted customer orders more quickly than our competitors.

Reduced Cost. Our master die methodology allows us to reduce our costs through the purchase of fewer mask sets by allowing faster and less expensive internal product qualifications, by enabling more cost-efficient use of engineering resources and by reducing the incidence of obsolete inventory.

Customer Responsiveness

Customer-driven Solutions. We work closely with leading networking and telecommunications OEMs, as well as their chip-set suppliers, to better anticipate their requirements and to rapidly develop and implement solutions that allow them to meet their specific product performance objectives. Customer demand drives our business. For example, to address near term needs, we offer critical specification variations, such as special operating ranges or wire bond options on currently available products, while we also design new families of products to meet their emerging long term needs. As a consequence, our portfolio not only includes the widest selection of catalog parts available, it also includes an extensive list of custom, customer-specific products. This degree of responsiveness enables us to provide our OEM customers with the exact products required for their applications.

Preemptive Service. Our extensive open libraries of design support tools as well as our ability to deliver the specific device required for system prototyping with very short notice enables networking and telecommunication OEMs to design and introduce differentiated products quickly as well as to reduce their development costs. Our open model libraries give designers access 24 hours a day, seven days a week to electrical and behavioral simulation models. Behavioral models are offered in both Verilog and very high speed integrated circuits hardware description language ("VHDL") format to better fit different customers' simulation environments, further streamlining the customers' development process. We currently offer our FPGA controller IP free of charge for use with our Type II+ and Type IIIe SigmaQuad and SigmaDDR Fast SRAM devices to help enable our customers to design FPGA-based systems quickly and efficiently, and reach the market with their products faster, and are also developing new FPGA controller IP for use with our next generation Type IVe SigmaQuad and SigmaDDR SRAMs, as well as for our next generation LLDRAMs. Controller IP is also available for our Bandwidth Engine products. Our open model libraries and support tools, coupled with the FPGA controller IP, can save our customers months of design effort and leverage the extensive evaluation and timing already performed by our engineers to enhance their products' performance, reduce development costs and shorten time-to-market. We refer to this customer support as "Preemptive Service."

Quality and Reliability. Networking and telecommunications equipment typically have long product lives, and the cost to repair or replace this equipment due to product failure at any time is prohibitively expensive. The

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high-quality and reliability of memory products incorporated in our OEM customers' products is, thus, critical. Every product family we offer is subjected to extensive long term reliability testing before receiving qualification certification, and every device shipped is first subjected to burn-in and then to final tests in which the device is operated beyond its specified operating voltage and temperature ranges.

The GSI Strategy

Our objective is to profitably increase our market share in the high performance memory market. Our strategy includes the following key elements:

Continue to Focus on the Networking and Telecommunications Markets. We intend to continue to focus on designing and developing high transaction rate, low latency, high bandwidth and feature-rich memory products targeted primarily at the networking and telecommunications markets. Increasing network complexity due to higher traffic volume and more advanced traffic content continues to drive OEMs' demand for high-performance networking memory. We believe our active high-performance memory product development and manufacturing expertise coupled with established strategic partnerships will continue to enable us to provide networking and telecommunications OEMs with the early access to next generation Very Fast SRAMs, Low Latency DRAMS, and Bandwidth Engine products that offer superior performance, advanced feature sets and continued high reliability, which they need to design and develop new products that support increasingly complex traffic content and to bring networking and telecommunications equipment to market quickly.

Strengthen and Expand Customer Relationships. We are focused on maintaining close relationships with industry leaders to facilitate rapid adoption of our products and to enhance our position as a leading provider of high-performance memory. We work with both our customers and with their non-memory IC suppliers that require high-performance memory support. We will continue to work with both groups at the pre-design and design stage of their projects in order to anticipate their future high-performance memory needs and to identify and respond to their immediate requests for currently available products and variants on currently available products. We plan to enhance our relationships with these leading OEMs and IC vendors and to develop similar relationships with additional OEMs and IC vendors.

Continue to Invest in Research and Development to Extend Our Technology Leadership. We believe we have established a position as a technology leader in the design and development of Very Fast SRAMs. Our Very Fast SRAM products most often provide the highest speed available at a given density for a given device configuration. We intend to maintain and advance our technology leadership through continual enhancement of our existing Very Fast SRAM products, particularly our SigmaQuad/SigmaDDR family of low latency, high-bandwidth synchronous SRAMs, while we continue to broaden our product line with the introduction of other new high performance memory technologies targeted to address the evolving needs of the high performance memory market.

Collaborate with Wafer Foundries to Leverage Leading-edge Process Technologies. We will continue to rely upon advanced complementary metal oxide semiconductor, or CMOS, technologies, the most commonly used process technologies for manufacturing semiconductor devices, from TSMC for SRAM-based products and from Powerchip for DRAM-based products. We provide our technology partners with the sort of in-depth feedback for yield and performance improvement that can best come from very large array structures like those found in our products. Our most advanced products currently in production were designed using 40 nanometer process technology on 300 millimeter wafers.

Exploit Opportunities to Expand the Market for Our Memory Products. While we develop our high-performance memory products specifically for the networking and telecommunications markets, they are often applicable across a wide range of industries and applications. We have experienced growth in product sales for

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military, industrial, test and measurement, and medical markets and intend to continue penetrating these and other new markets with similar needs for high-performance memory technologies.

Develop Products for New Markets. Following our recent acquisition of MikaMonu, we are devoting substantial efforts to the development of in-place associative computing solutions utilizing patented technology obtained in the acquisition. Products based on this cutting edge technology will address evolving new markets such as “big data” (including machine learning and deep convolutional neural networks (CNNs”)), computer vision and cyber security. We intend to supplement our internal development activities by seeking additional opportunities to acquire other businesses, product lines or technologies, or enter into strategic partnerships, that would complement our current product lines, expand the breadth of our markets, enhance our technical capabilities, or otherwise provide growth opportunities.

Products

We design, develop and market a broad range of high-performance memory products primarily for the networking and telecommunications markets. We specialize in high performance memory products featuring very high transaction rates, high density, low latency, high bandwidth, fast clock access times and low power consumption. We commit to offering our products for longer periods of time than our competitors, typically seven years or more following their initial introduction. Accordingly, we continue to offer products in a variety of package types that have been discontinued by other suppliers.

We currently offer more than 30 families of SRAMs, two families of LLDRAMs, and one family of Bandwidth Engine products. These basic product configurations are the basis for over 15,000 individual products that incorporate a variety of performance specifications and optional features. Our products can be found in a wide range of networking and telecommunications equipment, including core routers, multi-service access routers, universal gateways, enterprise edge routers, service provider edge routers, optical edge routers, fast Ethernet switches and wireless base stations. We also sell our products to OEMs that manufacture products for military applications such as radar and guidance systems, for professional audio applications such as sound mixing systems, for test and measurement applications such as high-speed testers, for automotive applications such as smart cruise control, and for medical applications such as ultrasound and CAT scan equipment.

We have also begun developing and marketing in-place associative computing solutions, leveraging the patented technology obtained in our acquisition of MikaMonu and our 20-plus years of high-performance SRAM development experience. Our new associative computing solutions will address evolving new markets, such as “big data” (including machine learning and deep convolutional neural networks (“CNNs”)), computer vision and cyber security.

Synchronous SRAM Products

Synchronous SRAMs are controlled by timing signals, referred to as clocks, which make them easier to use than older style asynchronous SRAMs with similar latency characteristics in applications requiring high bandwidth data transfers. Synchronous SRAMs that employ double data rate interface protocols can transfer data at much higher bandwidth than both single data rate and asynchronous SRAMs. We currently supply synchronous SRAMs that can cycle at operating frequencies as high as 1,333 MHz.

BurstRAM™ and NBT™ SRAMs. We currently offer BurstRAMs and No Bus Turnaround, or NBT, SRAMs that implement a single data rate bus protocol. BurstRAMs were originally developed for microprocessor cache applications and have become the most widely used synchronous SRAMs on the market. They are used in applications where large amounts of data are read or written in single sessions, or bursts. NBT SRAMs are a variation on the BurstRAM theme and were developed to address the needs of moderate performance networking

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applications. NBT SRAMs feature a single data rate bus protocol designed to minimize or eliminate wasted data transfer time slots on the bus when BurstRAMs switch from read to write operations. Both families of products can perform burst data transfers or single cycle transfers at the discretion of the user.

Our BurstRAMs and NBT SRAMs are offered in both pipeline and flow-through modes. Flow-through SRAMs allow the shortest latency. Pipelined SRAMs break the access into discrete clock-controlled steps, allowing new access commands to be accepted while an access is already in progress. Therefore, while flow-through SRAMs offer lower latency, pipelined SRAMs offer greater data bandwidth. Our BurstRAM and NBT SRAM products incorporate a number of features that reduce our OEM customers' cost of ownership and increase their design flexibility, including a JTAG test port and our FLXDrive feature, which allows system designers to optimize signal integrity for a given application.

We currently offer BurstRAMs and NBT SRAMs with storage densities of up to 144 megabits with clock frequency of up to 333 MHz and clock access times as fast as 2 nanoseconds that operate at 3.3, 2.5 or 1.8 volts.

SigmaQuad and SigmaDDR Products. High-performance double data rate and quad data rate synchronous SRAMs have become the de facto standard for the networking and telecommunications industry. We offer a full line of quad data rate separate I/O SRAMs, known as our SigmaQuad family, as well as a companion line of double data rate common I/O SRAMs, known as our SigmaDDR family. SigmaQuad SRAMs feature two uni-directional (one input and one output) double data rate data ports (two data ports times double data rate transfers equals quad data rate), controlled via a single address and control port. SigmaDDR SRAMs feature a single bi-directional double data rate data port. We currently offer our SigmaQuad and SigmaDDR devices in multiple bus protocol versions and data burst lengths, and with various power supply and interface voltages, all under the names SigmaQuad, SigmaQuad-II and SigmaQuad-IIIe, and (coming soon) SigmaQuad-IVe, and their SigmaDDR equivalents. An additional variant in this family of SRAMs is the SigmaSIO DDR, which is designed to address some segments of the market currently served by dual-port SRAMs.

We currently offer SigmaQuad/SigmaDDR products in five storage densities, 18 megabits, 36 megabits, 72 megabits, 144 megabits and 288 megabits. These SRAMs are capable of speeds up to 1,333 MHz and operate on main power supply voltages that range from 2.5 volts to 1.2 volts and interface voltages that range from 1.8 volts to 1.2 volts.

Low Latency DRAM Products

Our low latency DRAM family fills an under-served market segment between commodity DRAMs and Fast SRAMs. Offering moderate density, moderate speed and moderate cost, LLDRAM technology gives system designers a middle choice when commodity DRAM performance is insufficient but Fast SRAM performance is unnecessary. LLDRAMs offer one-third the latency of commodity DRAMs and four times the density of Fast SRAMs, giving networking equipment designers another tool for solving difficult data management problems.

Our current LLDRAM portfolio includes both 288 megabit and 576 megabit devices that are capable of speeds of up to 533 MHz, and that operate on a 1.8 volt power supply and support both 1.8 volt and 1.5 volt interfaces. They are available in five distinct configurations including common I/O and separate I/O types and data bus widths of x36, x18 and x9. These devices serve as an alternate source for users of a popular, functionally equivalent device from a competing vendor. We plan to expand our LLDRAM portfolio later in fiscal 2017 with the introduction of 1.25 Gigabit devices capable of speeds of up to 800 MHz, that operate on a 1.5 volt power supply and support 1.2 volt and 1.0 volt interfaces, and that will be available in common I/O configurations with data bus widths of x36 and x18.

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Bandwidth Engine Products

The serial I/O interface and high transaction rate and data bandwidth capability of our Bandwidth Engine products, along with their ability to perform atomic read-modify-write operations, provide a level of performance well-suited for the next generation of high-speed networking systems.

The Bandwidth Engine products are 576 megabit devices that support SerDes speeds of up to 15 Gb/s per transceiver. They are capable of performing in excess of 4 billion transactions per second, can achieve sustained data bandwidth of up to 400 Gb/s (200 Gb/s input, 200 Gb/s output) and can support four different SerDes lane configurations.

Customers

Our primary sales and marketing strategy is to achieve design wins with leading OEMs in the networking and telecommunications markets and the other markets we serve. The following is a representative list of our OEM customers that directly or indirectly purchased more than $600,000 of our products in the fiscal year ended March 31, 2016:

Alcatel-Lucent	Cisco Systems	General Dynamics
Huawei Technologies	IBM	Lockheed
Raytheon	Rockwell	ZTE

Many of our OEM customers use contract manufacturers to assemble their equipment. Accordingly, a significant percentage of our net revenues is derived from sales to these contract manufacturers and to consignment warehouses who purchase products from us for use by contract manufacturers. In addition, we sell our products to OEM customers indirectly through domestic and international distributors.

In the case of sales of our products to distributors and consignment warehouses, the decision to purchase our products is typically made by the OEM customers. In the case of contract manufacturers, OEM customers typically provide a list of approved products to the contract manufacturer, which then has discretion whether or not to purchase our products from that list.

Direct sales to contract manufacturers and consignment warehouses accounted for 37.6%, 33.1% and 37.5% of our net revenues for fiscal 2016, 2015 and 2014, respectively. Sales to foreign and domestic distributors accounted for 50.4%, 58.7% and 50.0% of our net revenues for fiscal 2016, 2015 and 2014, respectively.

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The following direct customers accounted for 10% or more of our net revenues in one or more of the following periods:

	Fiscal Year Ended March 31,		
	2016	2015	2014
Contract manufacturers and consignment warehouses:			
SMART Modular Technologies	- %	5.2 %	14.4 %
Flextronics Technology	13.7	8.1	11.9
Sanmina	16.4	12.6	8.5
Distributors:			
Avnet Logistics	28.2	35.2	30.3
Nexcomm	13.3	12.3	10.2

Alcatel-Lucent was our largest customer in fiscal 2016 and 2015. Alcatel-Lucent purchases products directly from us and through contract manufacturers and distributors. Based on information provided to us by Alcatel-Lucent's contract manufacturers and our distributors, purchases by Alcatel-Lucent represented approximately 32%, 25% and 19% of our net revenues in fiscal 2016, 2015 and 2014, respectively. Cisco Systems, historically our largest OEM customer, purchases our products primarily through its consignment warehouses, and also purchases some products through its contract manufacturers and directly from us. Based on information provided to us by Cisco Systems' consignment warehouses and contract manufacturers, purchases by Cisco Systems represented approximately 9%, 13% and 19% of our net revenues in fiscal 2016, 2015 and 2014, respectively. To our knowledge, none of our other OEM customers accounted for more than 10% of our net revenues in any of these periods.

Sales, Marketing and Technical Support

We sell our products primarily through our worldwide network of independent sales representatives and distributors. As of March 31, 2016, we employed 18 sales and marketing personnel, and were supported by over 200 independent sales representatives. We believe that our relationship with our U.S. distributor, Avnet, puts us in a strong position to address the Very Fast SRAM and LLDRAM memory markets in the United States. We currently have regional sales offices located in Canada, China, Hong Kong, Israel and the United States. We believe this international coverage allows us to better serve our distributors and OEM customers by providing them with coordinated support. We believe that our customers' purchasing decisions are based primarily on product performance, availability, features, quality, reliability, price, manufacturing flexibility and service. Many of our OEM customers have had long-term relationships with us based on our success in meeting these criteria.

Our sales are generally made pursuant to purchase orders received between one and six months prior to the scheduled delivery date. Because industry practice allows customers to reschedule or cancel orders on relatively short notice, these orders are not firm and hence we believe that backlog is not a good indicator of our future sales. We typically provide a warranty of up to 36 months on our products. Liability for a stated warranty period is usually limited to replacement of defective products.

Our marketing efforts are, first and foremost, focused on ensuring that the products we develop meet or exceed our customers' needs. Historically, those efforts have been focused on defining our high-performance SRAM and

LLDRAM product roadmaps by working closely with key customers to understand their roadmaps and to ensure that the products we develop meet their requirements (primary aspects of which include functionality, performance, electrical interfaces, power, and schedule). More recently, our marketing efforts have been expanded to include defining the new in-place associative computing products that we are developing. Our marketing group

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also provides technical, strategic and tactical sales support to our direct sales personnel, sales representatives and distributors. This support includes in-depth product presentations, datasheets, application notes, simulation models, sales tools, marketing communications, marketing research, trademark administration and other support functions. We also engage in various activities to increase brand awareness.

We emphasize customer service and technical support in an effort to provide our OEM customers with the knowledge and resources necessary to successfully use our products in their designs. Our customer service organization includes a technical team of applications engineers, technical marketing personnel and, when required, product design engineers. We provide customer support throughout the qualification and sales process and continue providing follow-up service after the sale of our products and on an ongoing basis. In addition, we provide our OEM customers with comprehensive datasheets, application notes and reference designs and access to our FPGA controller IP for use in their product development.

Manufacturing

We outsource our wafer fabrication, assembly and wafer sort testing, which enables us to focus on our design strengths, minimize fixed costs and capital expenditures and gain access to advanced manufacturing technologies. Our engineers work closely with our outsource partners to increase yields, reduce manufacturing costs, and help assure the quality of our products.

Currently, all of our wafers are manufactured by TSMC and Powerchip under individually negotiated purchase orders. We do not currently have a long-term supply contract with either of these foundries, and, therefore, neither of them is obligated to manufacture products for us for any specified period, in any specified quantity or at any specified price, except as may be provided in a particular purchase order. Our future success depends in part on our ability to secure sufficient capacity at TSMC, Powerchip or other independent foundries to supply us with the wafers we require.

Our newest, leading edge SRAM and Bandwidth Engine products are manufactured using 40 nanometer process technology at TSMC. The majority of our current SRAM products are manufactured using 0.13 micron, 90 nanometer and 65 nanometer process technologies on 300 millimeter wafers at TSMC. Our LLDRAM production at Powerchip uses 72 nanometer and 63 nanometer process technologies. On-going development programs are underway to extend, expand and/or cost reduce most our product families.

Our master die methodology enables multiple product families, and variations thereof, to be manufactured from a single mask set. As a result, based upon the way available die from a wafer are metalized, wire bonded, packaged and tested, we can create a number of different products. The manufacturing process consists of two phases, the first of which takes approximately eight to twelve weeks and results in wafers that have the potential to yield multiple products within a given product family. After the completion of this phase, the wafers are stored pending customer orders. Once we receive orders for a particular product, we perform the second phase, consisting of final wafer processing, assembly, burn-in and test, which takes approximately four to eight weeks to complete. This two-step manufacturing process enables us to significantly shorten our product lead times, providing flexibility for customization and to increase the availability of our products.

All of our manufactured wafers are tested for electrical compliance and most are packaged at Advanced Semiconductor Engineering, or ASE, which is located in Taiwan. Our test procedures require that all of our products be subjected to accelerated burn-in and extensive functional electrical testing which is performed at our Taiwan and U.S. test facilities.

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Research and Development

Research and development expenses were $12.1 million in fiscal 2016, $11.9 million in fiscal 2015 and $13.1 million in fiscal 2014. Our research and development staff includes engineering professionals with extensive experience in the areas of high-speed circuit design, including SRAM design, DRAM design and systems level networking and telecommunications equipment design. The design process for our products is complex. As a result, we have made substantial investments in computer-aided design and engineering resources to manage our design process. Our current development focus is on our new in-place associative computing products and further enhancements to our SigmaQuad SRAM family and our family of LLDRAM products.

Competition

Our existing competitors include many large domestic and international companies, some of which have substantially greater resources, offer other types of memory and/or non-memory technologies and may have longer standing relationships with OEM customers than we do. Unlike us, some of our principal competitors maintain their own semiconductor fabs, which may, at times, provide them with capacity, cost and technical advantages.

Our principal competitors include Cypress Semiconductor, Integrated Silicon Solution, Micron and REC. While some of our competitors offer a broad array of memory products and offer some of their products at lower prices than we do, we believe that our focus on, and performance leadership in, low latency, high density Very Fast SRAMs provide us with key competitive advantages.

We believe that our ability to compete successfully in the rapidly evolving markets for memory products for the networking and telecommunications markets depends on a number of factors, including:

· product performance, features, quality, reliability and price;
· manufacturing flexibility, product availability and customer service throughout the lifetime of the product;
· the timing and success of new product introductions by us, our customers and our competitors; and
· our ability to anticipate and conform to new industry standards.

We believe we compete favorably with our competitors based on these factors. However, we may not be able to compete successfully in the future with respect to any of these factors. Our failure to compete successfully in these or other areas could harm our business.

The market for networking memory products is competitive and is characterized by technological change, declining average selling prices and product obsolescence. Competition could increase in the future from existing competitors and from other companies that may enter our existing or future markets with solutions that may be less costly or provide higher performance or more desirable features than our products. This increased competition may result in price reductions, reduced profit margins and loss of market share.

In addition, we are vulnerable to advances in technology by competitors, including new SRAM architectures as well as new forms of DRAM and other new memory technologies. Because we have limited experience developing IC products other than Very Fast SRAMs and LLDRAMs, any efforts by us to introduce new products based on new technology, including the in-place associative computing products currently under development, may not be successful and, as a result, our business may suffer.

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Intellectual Property

Our ability to compete successfully depends, in part, upon our ability to protect our proprietary technology and information. We rely on a combination of patents, copyrights, trademarks, trade secret laws, non-disclosure and other contractual arrangements and technical measures to protect our intellectual property. We currently hold 44 United States patents and have in excess of a dozen patent applications pending. We do not consider our existing patents to be materially important to our business, and we cannot assure you that any patents will be issued as a result of our pending applications or that any patents issued will be valuable to our business. We believe that factors such as the technological and creative skills of our personnel and the success of our ongoing product development efforts are more important than our patent portfolio in maintaining our competitive position. We generally enter into confidentiality or license agreements with our employees, distributors, customers and potential customers and limit access to our proprietary information. Our intellectual property rights, if challenged, may not be upheld as valid, may not be adequate to prevent misappropriation of our technology or may not prevent the development of competitive products. Additionally, we may not be able to obtain patents or other intellectual property protection in the future. Furthermore, the laws of certain foreign countries in which our products are or may be developed, manufactured or sold, including various countries in Asia, may not protect our products or intellectual property rights to the same extent as do the laws of the United States and thus make the possibility of piracy of our technology and products more likely in these countries.

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights, which have resulted in significant and often protracted and expensive litigation. We or our foundry from time to time are notified of claims that we may be infringing patents or other intellectual property rights owned by third parties. We have recently been involved in patent infringement litigation. See Item 3. Legal Proceedings. We have been subject to other intellectual property claims in the past and we may be subject to additional claims and litigation in the future. Litigation by or against us relating to allegations of patent infringement or other intellectual property matters could result in significant expense to us and divert the efforts of our technical and management personnel, whether or not such litigation results in a determination favorable to us. In the event of an adverse result in any such litigation, we could be required to pay substantial damages, cease the manufacture, use and sale of infringing products, expend significant resources to develop non-infringing technology, discontinue the use of certain processes or obtain licenses to the infringing technology. Licenses may not be offered or the terms of any offered licenses may not be acceptable to us. If we fail to obtain a license from a third party for technology used by us, we could incur substantial liabilities and be required to suspend the manufacture of products or the use by our foundry of certain processes.

Employees

As of March 31, 2016, we had 142 full-time employees, including 78 engineers, of which 47 are engaged in research and development and 40 have PhD or MS degrees, 18 employees in sales and marketing, ten employees in general and administrative capacities and 68 employees in manufacturing. Of these employees, 56 are based in our Sunnyvale facility and 60 are based in our Taiwan facility. We believe that our future success will depend in large part on our ability to attract and retain highly-skilled, engineering, managerial, sales and marketing personnel. Our employees are not represented by any collective bargaining unit, and we have never experienced a work stoppage. We believe that our employee relations are good.

Investor Information

You can access financial and other information in the Investor Relations section of our website at www.gsitechnology.com. We make available, on our website, free of charge, copies of our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or

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furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the SEC.

The charters of our Audit Committee, our Compensation Committee, and our Nominating and Governance Committee, our code of conduct (including code of ethics provisions that apply to our principal executive officer, principal financial officer, controller, and senior financial officers) and our corporate governance guidelines are also available at our website under "Corporate Governance." These items are also available to any stockholder who requests them by calling (408) 331-8800. The contents of our website are not incorporated by reference in this report.

The SEC maintains an Internet site that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC at www.sec.gov.

Executive Officers

The following table sets forth certain information concerning our executive officers as of June 1, 2016:

Name	Age	Title
Lee-Lean Shu	61	President, Chief Executive Officer and Chairman
Didier Lasserre	51	Vice President, Sales
Douglas Schirle	61	Chief Financial Officer
Bor-Tay Wu	64	Vice President, Taiwan Operations
Ping Wu	59	Vice President, U.S. Operations
Robert Yau	63	Vice President, Engineering, Secretary and Director

Lee-Lean Shu co-founded our company in March 1995 and has served as our President and Chief Executive Officer and as a member of our Board of Directors since inception. Since October 2000, Mr. Shu has also served as Chairman of our Board. From January 1995 to March 1995, Mr. Shu was Director, SRAM Design at Sony Microelectronics Corporation, a semiconductor company and a subsidiary of Sony Corporation, and from July 1990 to January 1995, he was a design manager at Sony Microelectronics Corporation.

Didier Lasserre has served as our Vice President, Sales since July 2002. From November 1997 to July 2002, Mr. Lasserre served as our Director of Sales for the Western United States and Europe. From July 1996 to October 1997, Mr. Lasserre was an account manager at Solectron Corporation, a provider of electronics manufacturing services. From June 1988 to July 1996, Mr. Lasserre was a field sales engineer at Cypress Semiconductor Corporation, a semiconductor company.

Douglas Schirle has served as our Chief Financial Officer since August 2000. From June 1999 to August 2000, Mr. Schirle served as our Corporate Controller. From March 1997 to June 1999, Mr. Schirle was the Corporate Controller at Pericom Semiconductor Corporation, a provider of digital and mixed signal integrated circuits. From November 1996 to February 1997, Mr. Schirle was Vice President, Finance for Paradigm Technology, a manufacturer of SRAMs, and from December 1993 to October 1996, he was the Controller for Paradigm Technology. Mr. Schirle was formerly a certified public accountant.

Bor-Tay Wu has served as our Vice President, Taiwan Operations since January 1997. From January 1995 to December 1996, Mr. Wu was a design manager at Atalent, an IC design company in Taiwan.

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Ping Wu has served as our Vice President, U.S. Operations since September 2006. He served in the same capacity from February 2004 to April 2006. From April 2006 to August 2006, Mr. Wu was Vice President of Operations at QPixel Technology, a semiconductor company. From July 1999 to January 2004, Mr. Wu served as our Director of Operations. From July 1997 to June 1999, Mr. Wu served as Vice President of Operations at Scan Vision, a semiconductor manufacturer.

Robert Yau co-founded our company in March 1995 and has served as our Vice President, Engineering and as a member of our Board of Directors since inception. From December 1993 to February 1995, Mr. Yau was design manager for specialty memory devices at Sony Microelectronics Corporation. From 1990 to 1993, Mr. Yau was design manager at MOSEL/VITELIC, a semiconductor company.

Item 1A. Risk Factors

Our future performance is subject to a variety of risks. If any of the following risks actually occur, our business, financial condition and results of operations could suffer and the trading price of our common stock could decline. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business operations. You should also refer to other information contained in this report, including our consolidated financial statements and related notes.

Unpredictable fluctuations in our operating results could cause our stock price to decline.

Our quarterly and annual revenues, expenses and operating results have varied significantly and are likely to vary in the future. For example, in the twelve fiscal quarters ended March 31, 2016, we recorded net revenues of as much as $16.4 million and as little as $12.2 million and quarterly operating income of as much as $241,000 and, in eleven quarters, operating losses, including an operating loss of $3.6 million in the quarter ended March 31, 2014. We therefore believe that period-to-period comparisons of our operating results are not a good indication of our future performance, and you should not rely on them to predict our future performance or the future performance of our stock price. In future periods, we may not have any revenue growth, or our revenues could decline. Furthermore, if our operating expenses exceed our expectations, our financial performance could be adversely affected. Factors that may affect periodic operating results in the future include:

- our ability to anticipate and conform to new industry standards.
- unpredictability of the timing and size of customer orders, since most of our customers purchase our products on a purchase order basis rather than pursuant to a long-term contract;
- changes in our customers' inventory management practices;
- fluctuations in availability and costs associated with materials needed to satisfy customer requirements;
- manufacturing defects, which could cause us to incur significant warranty, support and repair costs, lose potential sales, harm our relationships with customers and result in write-downs;
- changes in our product pricing policies, including those made in response to new product announcements and pricing changes of our competitors;
- fluctuations in our quarterly operating expenses due to substantial litigation-related expenses in some quarters; and

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- our ability to address technology issues as they arise, improve our products' functionality and expand our product offerings.

Our expenses are, to a large extent, fixed, and we expect that these expenses will increase in the future. We will not be able to adjust our spending quickly if our revenues fall short of our expectations. If this were to occur, our operating results would be harmed. If our operating results in future quarters fall below the expectations of market analysts and investors, the price of our common stock could fall.

Our two largest OEM customers account for a significant percentage of our net revenues. If either of these customers, or any of our other major customers, reduces the amount they purchase or stop purchasing our products, our operating results will suffer.

Alcatel-Lucent, currently our largest customer, purchases our products directly from us and through contract manufacturers and distributors. Purchases by Alcatel-Lucent represented approximately 32%, 25% and 19% of our net revenues in fiscal 2016, 2015 and 2014, respectively. Cisco Systems, historically our largest OEM customer, purchases our products through its consignment warehouses and contract manufacturers and directly from us. Purchases by Cisco Systems represented approximately 9%, 13% and 19% of our net revenues in fiscal 2016, 2015 and 2014, respectively. We expect that our operating results in any given period will continue to depend significantly on orders from our key OEM customers, particularly Alcatel-Lucent and Cisco Systems, and our future success is dependent to a large degree on the business success of these OEMs over which we have no control. We do not have long-term contracts with Alcatel-Lucent, Cisco Systems or any of our other major OEM customers, distributors or contract manufacturers that obligate them to purchase our products. We expect that future direct and indirect sales to Alcatel-Lucent, Cisco Systems and our other key OEM customers will continue to fluctuate significantly on a quarterly basis and that such fluctuations may substantially affect our operating results in future periods. If we fail to continue to sell to our key OEM customers, distributors or contract manufacturers in sufficient quantities, our business could be harmed.

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

We have incurred significant losses in prior periods. We incurred losses of $2.2 million and $5.0 million during fiscal 2016 and 2015, respectively. Our operating expenses over the past several years included substantial expenses related to legal proceedings which resulted in operating losses. Although these proceedings were concluded in fiscal 2016, there can be no assurance that our Very Fast SRAMs will continue to receive broad market acceptance, that our new product development initiatives will be successful or that we will be able to achieve sustained revenue growth or return to profitability.

We depend upon the sale of our Very Fast SRAMs for most of our revenues, and a downturn in demand for these products could significantly reduce our revenues and harm our business.

We derive most of our revenues from the sale of Very Fast SRAMs, and we expect that sales of these products will represent the substantial majority of our revenues for the foreseeable future. Our business depends in large part upon continued demand for our products in the markets we currently serve, and adoption of our products in new markets. Market adoption will be dependent upon our ability to increase customer awareness of the benefits of our products and to prove their high-performance and cost-effectiveness. We may not be able to sustain or increase our revenues from sales of our products, particularly if the networking and telecommunications markets were to experience another significant downturn in the future. Any decrease in revenues from sales of our products could harm our business more than it would if we offered a more diversified line of products.

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If we do not successfully develop new products to respond to rapid market changes due to changing technology and evolving industry standards, particularly in the networking and telecommunications markets, our business will be harmed. Our effort to develop new in-place associative computing products involves additional risks.

If we fail to offer technologically advanced products and respond to technological advances and emerging standards, we may not generate sufficient revenues to offset our development costs and other expenses, which will hurt our business. The development of new or enhanced products is a complex and uncertain process that requires the accurate anticipation of technological and market trends. In particular, the networking and telecommunications markets are rapidly evolving and new standards are emerging. We are vulnerable to advances in technology by competitors, including new SRAM architectures, new forms of DRAM and the emergence of new memory technologies that could enable the development of products that feature higher performance or lower cost. We may experience development, marketing and other technological difficulties that may delay or limit our ability to respond to technological changes, evolving industry standards, competitive developments or end-user requirements. For example, because we have limited experience developing integrated circuits, or IC, products other than Very Fast SRAMs and LLDRAMs, our efforts to introduce new products may not be successful and our business may suffer. Other challenges that we face include:

- our products may become obsolete upon the introduction of alternative technologies;
- we may incur substantial costs if we need to modify our products to respond to these alternative technologies;
- we may not have sufficient resources to develop or acquire new technologies or to introduce new products capable of competing with future technologies;
- new products that we develop may not successfully integrate with our end-users' products into which they are incorporated;
- we may be unable to develop new products that incorporate emerging industry standards;
- we may be unable to develop or acquire the rights to use the intellectual property necessary to implement new technologies; and
- when introducing new or enhanced products, we may be unable to manage effectively the transition from older products.

In particular, we are devoting substantial efforts and resources to the development of in-place associative computing solutions utilizing patented technology obtained in our recent acquisition of MikaMonu. This new development project involves the commercialization of new, cutting-edge technology, will require a substantial effort over more than a year and will be subject to significant risks, including technical problems, delays or unanticipated costs that may be encountered in the development of the new associative computing products and risks associated with the establishment of new markets and customer relationships for the sale of such products.

We are subject to the highly cyclical nature of the networking and telecommunications markets.

Our products are incorporated into routers, switches, wireless local area network infrastructure equipment, wireless base stations and network access equipment used in the highly cyclical networking and telecommunications markets. We expect that the networking and telecommunications markets will continue to be highly cyclical,

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characterized by periods of rapid growth and contraction. Our business and our operating results are likely to fluctuate, perhaps quite severely, as a result of this cyclicality.

The market for Very Fast SRAMs is highly competitive.

The market for Very Fast SRAMs, which are used primarily in networking and telecommunications equipment, is characterized by price erosion, rapid technological change, cyclical market patterns and intense foreign and domestic competition. Several of our competitors offer a broad array of memory products and have greater financial, technical, marketing, distribution and other resources than we have. Some of our competitors maintain their own semiconductor fabrication facilities, which may provide them with capacity, cost and technical advantages over us. We cannot assure you that we will be able to compete successfully against any of these competitors. Our ability to compete successfully in this market depends on factors both within and outside of our control, including:

- real or perceived imbalances in supply and demand of Very Fast SRAMs;
- the rate at which OEMs incorporate our products into their systems;
- the success of our customers' products;
- our ability to develop and market new products; and
- the supply and cost of wafers.

In addition, we are vulnerable to advances in technology by competitors, including new SRAM architectures and new forms of DRAM, or the emergence of new memory technologies that could enable the development of products that feature higher performance, lower cost or lower power capabilities. Additionally, the trend toward incorporating SRAM into other chips in the networking and telecommunications markets has the potential to reduce future demand for Very Fast SRAM products. There can be no assurance that we will be able to compete successfully in the future. Our failure to compete successfully in these or other areas could harm our business.

The average selling prices of our products are expected to decline, and if we are unable to offset these declines, our operating results will suffer.

Historically, the average unit selling prices of our products have declined substantially over the lives of the products, and we expect this trend to continue. A reduction in overall average selling prices of our products could result in reduced revenues and lower gross margins. Our ability to increase our net revenues and maintain our gross margins despite a decline in the average selling prices of our products will depend on a variety of factors, including our ability to introduce lower cost versions of our existing products, increase unit sales volumes of these products, and introduce new products with higher prices and greater margins. If we fail to accomplish any of these objectives, our business will suffer. To reduce our costs, we may be required to implement design changes that lower our manufacturing costs, negotiate reduced purchase prices from our independent foundries and our independent assembly and test vendors, and successfully manage our manufacturing and subcontractor relationships. Because we do not operate our own wafer foundry or assembly facilities, we may not be able to reduce our costs as rapidly as companies that operate their own foundries or facilities.

Global economic and market conditions may adversely affect our business, financial condition and results of operations.

We sell our products to end customers both in the United States and internationally. We also rely heavily on our suppliers in Asia. We are therefore susceptible to adverse domestic and international economic and market

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conditions. In recent years, turmoil in global financial markets and economic conditions has impacted credit availability, consumer spending and capital expenditures, including expenditures for networking and telecommunications equipment. Weakness in global networking and telecommunications markets, particularly in Asia, has continued to adversely impact our revenues in recent quarters. Slowness in economic growth, domestically and in our key markets, uncertainty regarding macroeconomic trends, and volatility in financial markets may continue to adversely affect our business, financial condition and results of operations over coming quarters.

We are dependent on a number of single source suppliers, and if we fail to obtain adequate supplies, our business will be harmed and our prospects for growth will be curtailed.

We currently purchase several key components used in the manufacture of our products from single sources and are dependent upon supply from these sources to meet our needs. If any of these suppliers cannot provide components on a timely basis, at the same price or at all, our ability to manufacture our products will be constrained and our business will suffer. Most significantly, we obtain wafers for our Very Fast SRAM products from a single foundry, TSMC, and most of them are packaged at ASE. Wafers for our LLDRAM products are obtained exclusively from Powerchip. If we are unable to obtain an adequate supply of wafers from TSMC or Powerchip or find alternative sources in a timely manner, we will be unable to fulfill our customer orders and our operating results will be harmed. We do not have supply agreements with TSMC, Powerchip, ASE or any of our other independent assembly and test suppliers, and instead obtain manufacturing services and products from these suppliers on a purchase-order basis. Our suppliers, including TSMC and Powerchip, have no obligation to supply products or services to us for any specific product, in any specific quantity, at any specific price or for any specific time period. As a result, the loss or failure to perform by any of these suppliers could adversely affect our business and operating results.

Should any of our single source suppliers experience manufacturing failures or yield shortfalls, be disrupted by natural disaster or political instability, choose to prioritize capacity or inventory for other uses or reduce or eliminate deliveries to us for any other reason, we likely will not be able to enforce fulfillment of any delivery commitments and we would have to identify and qualify acceptable replacements from alternative sources of supply. In particular, if TSMC is unable to supply us with sufficient quantities of wafers to meet all of our requirements, we would have to allocate our products among our customers, which would constrain our growth and might cause some of them to seek alternative sources of supply. Since the manufacturing of wafers and other components is extremely complex, the process of qualifying new foundries and suppliers is a lengthy process and there is no assurance that we would be able to find and qualify another supplier without materially adversely affecting our business, financial condition and results of operations.

Because we outsource our wafer manufacturing and independent wafer foundry capacity is limited, we may be required to enter into costly long-term supply arrangements to secure foundry capacity.

We do not have long-term supply agreements with TSMC or Powerchip, but instead obtain our wafers on a purchase order basis. In order to secure future wafer supply from TSMC or Powerchip or from other independent foundries, we may be required to enter into various arrangements with them, which could include:

- contracts that commit us to purchase specified quantities of wafers over extended periods;
- investments in and joint ventures with the foundries; or
- non-refundable deposits with or prepayments or loans to foundries in exchange for capacity commitments.

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We may not be able to make any of these arrangements in a timely fashion or at all, and these arrangements, if any, may not be on terms favorable to us. Moreover, even if we are able to secure independent foundry capacity, we may be obligated to use all of that capacity or incur penalties. These penalties may be expensive and could harm our financial results.

If we are unable to offset increased wafer fabrication costs by increasing the average selling prices of our products, our gross margins will suffer.

If there is a significant upturn in the networking and telecommunications markets that results in increased demand for our products and competing products, the available supply of wafers may be limited. As a result, we could be required to obtain additional manufacturing capacity in order to meet increased demand. Securing additional manufacturing capacity may cause our wafer fabrication costs to increase. If we are unable to offset these increased costs by increasing the average selling prices of our products, our gross margins will decline.

We rely heavily on distributors and our success depends on our ability to develop and manage our indirect distribution channels.

A significant percentage of our sales are made to distributors and to contract manufacturers who incorporate our products into end products for OEMs. For example, in fiscal 2016, 2015 and 2014, our distributor Avnet Logistics accounted for 28.2%, 35.2% and 30.3%, respectively, of our net revenues. Avnet Logistics and our other existing distributors may choose to devote greater resources to marketing and supporting the products of other companies. Since we sell through multiple channels and distribution networks, we may have to resolve potential conflicts between these channels. For example, these conflicts may result from the different discount levels offered by multiple channel distributors to their customers or, potentially, from our direct sales force targeting the same equipment manufacturer accounts as our indirect channel distributors. These conflicts may harm our business or reputation.

We may be unable to accurately predict future sales through our distributors, which could harm our ability to efficiently manage our resources to match market demand.

Our financial results, quarterly product sales, trends and comparisons are affected by fluctuations in the buying patterns of the OEMs that purchase our products from our distributors. While we attempt to assist our distributors in maintaining targeted stocking levels of our products, we may not consistently be accurate or successful. This process involves the exercise of judgment and use of assumptions as to future uncertainties, including end user demand. Inventory levels of our products held by our distributors may exceed or fall below the levels we consider desirable on a going-forward basis. This could result in distributors returning unsold inventory to us, or in us not having sufficient inventory to meet the demand for our products. If we are not able to accurately predict sales through our distributors or effectively manage our relationships with our distributors, our business and financial results will suffer.

A small number of customers generally account for a significant portion of our accounts receivable in any period, and if any one of them fails to pay us, our financial position and operating results will suffer.

At March 31, 2016, four customers accounted for 26%, 25%, 13% and 11% of our accounts receivable, respectively. If any of these customers do not pay us, our financial position and operating results will be harmed. Generally, we do not require collateral from our customers.

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We have previously disclosed a material weakness in our internal control over financial reporting relating to the evaluation and calculation of our inventory reserve which management believes has been fully remediated. Should we have inadequately remediated this material weakness or should we otherwise fail to maintain effective internal control over financial reporting and disclosure controls and processes, our ability to report our financial condition and results of operations accurately and on a timely basis could be adversely affected.

In connection with the completion of the quarter-end closing and review procedures for the quarter ended December 31, 2013, certain errors were identified in the evaluation and calculation of our inventory write-down for the quarter and nine month period then ended that were the result of a material weakness in our internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

During these closing and review procedures, our management determined that we had not designed and maintained effective controls over the review of supporting information to confirm the completeness and accuracy of our calculations for the write-down of excess or obsolete inventory, thereby affecting the valuation of our inventory as of December 31, 2013. While this control deficiency did not result in any material misstatement of our historical financial statements, it did result in adjustments identified by our auditors as part of their quarterly review process, and require corrections after our initial estimate of excess and obsolete inventory write-downs for the three month period ended December 31, 2013.

A material weakness in our internal control over financial reporting could adversely impact our ability to provide timely and accurate financial information. Following the identification of the error in our financial statements and the material weakness that gave rise to the error, our management implemented a remediation plan which it believes fully remediated the material weakness. Should our remediation efforts prove to have been inadequate or should we otherwise fail to maintain effective internal control over financial reporting and disclosure controls and procedures, we could be unable to meet our reporting obligations accurately and on a timely basis. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could adversely affect the trading price of our common stock.

Our acquisition of companies or technologies could prove difficult to integrate, disrupt our business, dilute stockholder value and adversely affect our operating results.

In November 2015, we acquired all of the outstanding capital stock of privately held MikaMonu Group Ltd., a development-stage, Israel-based company that specializes in in-place associative computing for markets including big data, computer vision and cyber security. We also acquired substantially all of the assets related to the SRAM memory device product line of Sony Corporation in 2009. We intend to supplement our internal development activities by seeking opportunities to make additional acquisitions or investments in companies, assets or technologies that we believe are complementary or strategic. Other than the MikaMonu and Sony acquisitions, we have not made any such acquisitions or investments, and therefore our experience as an organization in making such acquisitions and investments is limited. In connection with the recently completed MikaMonu acquisition, we are subject to risks related to potential problems, delays or anticipated costs that may be encountered in the development of products based on the MikaMonu technology and the establishment of new markets and customer relationships for the potential new products. In addition, in connection with the MikaMonu acquisition and any future acquisitions or investments we may make, we face numerous other risks, including:

- difficulties in integrating operations, technologies, products and personnel;
- diversion of financial and managerial resources from existing operations;

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- risk of overpaying for or misjudging the strategic fit of an acquired company, asset or technology;
- problems or liabilities stemming from defects of an acquired product or intellectual property litigation that may result from offering the acquired product in our markets;
- challenges in retaining key employees to maximize the value of the acquisition or investment;
- inability to generate sufficient return on investment;
- incurrence of significant one-time write-offs; and
- delays in customer purchases due to uncertainty.

If we proceed with additional acquisitions or investments, we may be required to use a considerable amount of our cash, or to finance the transaction through debt or equity securities offerings, which may decrease our financial liquidity or dilute our stockholders and affect the market price of our stock. As a result, if we fail to properly evaluate and execute acquisitions or investments, our business and prospects may be harmed.

Claims that we infringe third party intellectual property rights could seriously harm our business and require us to incur significant costs.

In recent years, there has been significant litigation in the semiconductor industry involving patents and other intellectual property rights. We have recently been involved in protracted patent infringement litigation, and we could become subject to additional claims or litigation in the future as a result of allegations that we infringe others' intellectual property rights or that our use of intellectual property otherwise violates the law. Claims that our products infringe the proprietary rights of others would force us to defend ourselves and possibly our customers, distributors or manufacturers against the alleged infringement. Any such litigation regarding intellectual property could result in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition and results of operations. Similarly, changing our products or processes to avoid infringing the rights of others may be costly or impractical. If any claims received in the future were to be upheld, the consequences to us could require us to:

- stop selling our products that incorporate the challenged intellectual property;
- obtain a license to sell or use the relevant technology, which license may not be available on reasonable terms or at all;
- pay damages; or
- redesign those products that use the disputed technology.

Although patent disputes in the semiconductor industry have often been settled through cross-licensing arrangements, we may not be able in any or every instance to settle an alleged patent infringement claim through a cross-licensing arrangement in part because we have a more limited patent portfolio than many of our competitors. If a successful claim is made against us or any of our customers and a license is not made available to us on commercially reasonable terms or we are required to pay substantial damages or awards, our business, financial condition and results of operations would be materially adversely affected.

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Our business will suffer if we are unable to protect our intellectual property.

Our success and ability to compete depends in large part upon protecting our proprietary technology. We rely on a combination of patent, trade secret, copyright and trademark laws and non-disclosure and other contractual agreements to protect our proprietary rights. These agreements and measures may not be sufficient to protect our technology from third-party infringement. Monitoring unauthorized use of our intellectual property is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. Our attempts to enforce our intellectual property rights could be time consuming and costly. We have recently been involved in litigation to enforce our intellectual property rights and to protect our trade secrets. Additional litigation of this type may be necessary in the future. Any such litigation could result in substantial costs and diversion of resources. If competitors are able to use our technology without our approval or compensation, our ability to compete effectively could be harmed.

We may experience difficulties in transitioning to smaller geometry process technologies and other more advanced manufacturing process technologies, which may result in reduced manufacturing yields, delays in product deliveries and increased expenses.

In order to remain competitive, we expect to continue to transition the manufacture of our products to smaller geometry process technologies. This transition will require us to migrate to new manufacturing processes for our products and redesign certain products. The manufacture and design of our products is complex, and we may experience difficulty in transitioning to smaller geometry process technologies or new manufacturing processes. These difficulties could result in reduced manufacturing yields, delays in product deliveries and increased expenses. We are dependent on our relationships with TSMC and Powerchip to transition successfully to smaller geometry process technologies and to more advanced manufacturing processes. We cannot assure you that TSMC or Powerchip will be able to effectively manage the transition or that we will be able to maintain our relationship with them. If we or TSMC or Powerchip experience significant delays in this transition or fail to implement these transitions, our business, financial condition and results of operations could be materially and adversely affected.

Manufacturing process technologies are subject to rapid change and require significant expenditures for research and development.

We continuously evaluate the benefits of migrating to smaller geometry process technologies in order to improve performance and reduce costs. Historically, these migrations to new manufacturing processes have resulted in significant initial design and development costs associated with pre-production mask sets for the manufacture of new products with smaller geometry process technologies. For example, in fiscal 2014, we incurred $809,000 and $648,000, respectively, in research and development expense associated with pre-production mask sets which were not later used in production as part of the transition to our new 40 nanometer SRAM process technology and 63 nanometer DRAM process technology. We will incur similar expenses in the future as we continue to transition our products to smaller geometry processes. The costs inherent in the transition to new manufacturing process technologies will adversely affect our operating results and our gross margin.

Our products are complex to design and manufacture and could contain defects, which could reduce revenues or result in claims against us.

We develop complex products. Despite testing by us and our OEM customers, design or manufacturing errors may be found in existing or new products. These defects could result in a delay in recognition or loss of revenues, loss of market share or failure to achieve market acceptance. These defects may also cause us to incur significant warranty, support and repair costs, divert the attention of our engineering personnel from our product development efforts, result

in a loss of market acceptance of our products and harm our relationships with our OEM customers.

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Our OEM customers could also seek and obtain damages from us for their losses. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly to defend.

Defects in wafers and other components used in our products and arising from the manufacturing of these products may not be fully recoverable from TSMC or our other suppliers. For example, in the quarter ended December 31, 2005, we incurred a charge of approximately $900,000 related to the write-off of inventory resulting from an error in the assembly process at one of our suppliers. This write-off adversely affected our operating results for fiscal 2006.

Demand for our products may decrease if our OEM customers experience difficulty manufacturing, marketing or selling their products.

Our products are used as components in our OEM customers' products, including routers, switches and other networking and telecommunications products. Accordingly, demand for our products is subject to factors affecting the ability of our OEM customers to successfully introduce and market their products, including:

- capital spending by telecommunication and network service providers and other end-users who purchase our OEM customers' products;
- the competition our OEM customers face, particularly in the networking and telecommunications industries;
- the technical, manufacturing, sales and marketing and management capabilities of our OEM customers;
- the financial and other resources of our OEM customers; and
- the inability of our OEM customers to sell their products if they infringe third-party intellectual property rights.

As a result, if OEM customers reduce their purchases of our products, our business will suffer.

Our products have lengthy sales cycles that make it difficult to plan our expenses and forecast results.

Our products are generally incorporated in our OEM customers' products at the design stage. However, their decisions to use our products often require significant expenditures by us without any assurance of success, and often precede volume sales, if any, by a year or more. If an OEM customer decides at the design stage not to incorporate our products into their products, we will not have another opportunity for a design win with respect to that customer's product for many months or years, if at all. Our sales cycle can take up to 24 months to complete, and because of this lengthy sales cycle, we may experience a delay between increasing expenses for research and development and our sales and marketing efforts and the generation of volume production revenues, if any, from these expenditures. Moreover, the value of any design win will largely depend on the commercial success of our OEM customers' products. There can be no assurance that we will continue to achieve design wins or that any design win will result in future revenues.

Any significant order cancellations or order deferrals could adversely affect our operating results.

We typically sell products pursuant to purchase orders that customers can generally cancel or defer on short notice without incurring a significant penalty. Any significant cancellations or deferrals in the future could materially and adversely affect our business, financial condition and results of operations. Cancellations or deferrals could cause us to hold excess inventory, which could reduce our profit margins, increase product obsolescence and

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restrict our ability to fund our operations. We generally recognize revenue upon shipment of products to a customer. If a customer refuses to accept shipped products or does not pay for these products, we could miss future revenue projections or incur significant charges against our income, which could materially and adversely affect our operating results.

If our business grows, such growth may place a significant strain on our management and operations and, as a result, our business may suffer.

We are endeavoring to expand our business, and any growth that we are successful in achieving could place a significant strain on our management systems, infrastructure and other resources. To manage the potential growth of our operations and resulting increases in the number of our personnel, we will need to invest the necessary capital to continue to improve our operational, financial and management controls and our reporting systems and procedures. Our controls, systems and procedures may prove to be inadequate should we experience significant growth. In addition, we may not have sufficient administrative staff to support our operations. For example, we currently have only five employees in our finance department in the United States, including our Chief Financial Officer. Furthermore, our officers have limited experience in managing large or rapidly growing businesses. If our management fails to respond effectively to changes in our business, our business may suffer.

Our international business exposes us to additional risks.

Products shipped to destinations outside of the United States accounted for 60.3%, 66.2% and 69.2% of our net revenues in fiscal 2016, 2015 and 2014, respectively. Moreover, a substantial portion of our products is manufactured and tested in Taiwan, and we are now conducting business in Israel as a result of our recently completed acquisition of MikaMonu. We intend to continue expanding our international business in the future. Conducting business outside of the United States subjects us to additional risks and challenges, including:

- heightened price sensitivity from customers in emerging markets;
- compliance with a wide variety of foreign laws and regulations and unexpected changes in these laws and regulations;
- legal uncertainties regarding taxes, tariffs, quotas, export controls, competition, export licenses and other trade barriers;
- potential political and economic instability in, or foreign conflicts that involve or affect, the countries in which we, our customers and our suppliers are located;
- difficulties in collecting accounts receivable and longer accounts receivable payment cycles;
- difficulties and costs of staffing and managing personnel, distributors and representatives across different geographic areas and cultures, including assuring compliance with the U. S. Foreign Corrupt Practices Act and other U. S. and foreign anti-corruption laws;
- limited protection for intellectual property rights in some countries; and
- fluctuations in freight rates and transportation disruptions.

Moreover, our reporting currency is the U.S. dollar. However, a portion of our cost of revenues and our operating expenses is denominated in currencies other than the U.S. dollar, primarily the New Taiwanese dollar. As a result, appreciation or depreciation of other currencies in relation to the U.S. dollar could result in transaction gains or

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losses that could impact our operating results. We do not currently engage in currency hedging activities to reduce the risk of financial exposure from fluctuations in foreign exchange rates.

TSMC and Powerchip, as well as our other independent suppliers and many of our OEM customers, have operations in the Pacific Rim, an area subject to significant earthquake risk and adverse consequences related to the potential outbreak of contagious diseases such as the H1N1 Flu.

The foundries that manufacture our Fast SRAM and LLDRAM products, TSMC and Powerchip, and all of the principal independent suppliers that assemble and test our products are located in Taiwan. Many of our customers are also located in the Pacific Rim. The risk of an earthquake in these Pacific Rim locations is significant. The occurrence of an earthquake or other natural disaster near the fabrication facilities of TSMC or our other independent suppliers could result in damage, power outages and other disruptions that impair their production and assembly capacity. Any disruption resulting from such events could cause significant delays in the production or shipment of our products until we are able to shift our manufacturing, assembling, packaging or production testing from the affected contractor to another third-party vendor. In such an event, we may not be able to obtain alternate foundry capacity on favorable terms, or at all.

The outbreak of SARS in 2003 curtailed travel to and from certain countries, primarily in the Asia-Pacific region, and limited travel within those countries. If there were to be another outbreak of a contagious disease, such as SARS or the H1N1 Flu, that significantly affected the Asia-Pacific region, the operations of our key suppliers could be disrupted. In addition, our business could be harmed if such an outbreak resulted in travel being restricted or if it adversely affected the operations of our suppliers or our OEM customers or the demand for our products or our OEM customers' products.

Changes in Taiwan's political, social and economic environment may affect our business performance.

Because much of the manufacturing and testing of our products is conducted in Taiwan, our business performance may be affected by changes in Taiwan's political, social and economic environment. For example, any political instability resulting from the relationship among the United States, Taiwan and the People's Republic of China could damage our business. Moreover, the role of the Taiwanese government in the Taiwanese economy is significant. Taiwanese policies toward economic liberalization, and laws and policies affecting technology companies, foreign investment, currency exchange rates, taxes and other matters could change, resulting in greater restrictions on our ability and our suppliers' ability to do business and operate facilities in Taiwan. If any of these changes were to occur, our business could be harmed and our stock price could decline.

We are substantially dependent on the continued services and performance of our senior management and other key personnel.

Our future success is substantially 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. Members of our senior management team have long-standing and important relationships with our key customers and suppliers. The loss of services of Lee-Lean Shu, our President and Chief Executive Officer, Robert Yau, our Vice President of Engineering, any other executive officer or other key employee could significantly delay or prevent the achievement of our development and strategic objectives. We do not have employment contracts with, nor maintain key person insurance on, any of our executive officers.

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

We must continue to identify, recruit, hire, train, retain and motivate highly skilled technical, managerial, sales and marketing and administrative personnel. Competition for these individuals is intense, and we may not be able to successfully recruit, assimilate or retain sufficiently qualified personnel. We may encounter difficulties in recruiting and retaining a sufficient number of qualified engineers, which could harm our ability to develop new products and adversely impact our relationships with existing and future end-users at a critical stage of development. The failure to recruit and retain necessary technical, managerial, sales, marketing and administrative personnel could harm our business and our ability to obtain new OEM customers and develop new products.

We may need to raise additional capital in the future, which may not be available on favorable terms or at all, and which may cause dilution to existing stockholders.

We may need to seek additional funding in the future. We do not know if we will be able to obtain additional financing on favorable terms, if at all. If we cannot raise funds on acceptable terms, if and when needed, we may not be able to develop or enhance our products, take advantage of future opportunities or respond to competitive pressures or unanticipated requirements, and we may be required to reduce operating costs, which could seriously harm our business. In addition, if we issue equity securities, our stockholders may experience dilution or the new equity securities may have rights, preferences or privileges senior to those of our common stock.

Some of our products are incorporated into advanced military electronics, and changes in international geopolitical circumstances and domestic budget considerations may hurt our business.

Some of our products are incorporated into advanced military electronics such as radar and guidance systems. Military expenditures and appropriations for such purchases rose significantly in recent years. However, as the current conflict in Afghanistan winds down, demand for our products for use in military applications may decrease, and our operating results could suffer. Domestic budget considerations may also adversely affect our operating results. For example, if governmental appropriations for military purchases of electronic devices that include our products are reduced, our revenues will likely decline.

Our operations involve the use of hazardous and toxic materials, and we must comply with environmental laws and regulations, which can be expensive, and may affect our business and operating results.

We are subject to federal, state and local regulations relating to the use, handling, storage, disposal and human exposure to hazardous and toxic materials. If we were to violate or become liable under environmental laws in the future as a result of our inability to obtain permits, human error, accident, equipment failure or other causes, we could be subject to fines, costs, or civil or criminal sanctions, face property damage or personal injury claims or be required to incur substantial investigation or remediation costs, which could be material, or experience disruptions in our operations, any of which could have a material adverse effect on our business. In addition, environmental laws could become more stringent over time imposing greater compliance costs and increasing risks and penalties associated with violations, which could harm our business.

We face increasing complexity in our product design as we adjust to new and future requirements relating to the material composition of our products, including the restrictions on lead and other hazardous substances that apply to specified electronic products put on the market in the European Union, China and California. Other countries, including at the federal and state levels in the United States, are also considering similar laws and regulations. Certain electronic products that we maintain in inventory may be rendered obsolete if they are not in compliance with such laws and regulations, which could negatively impact our ability to generate revenue from those products. Although we

cannot predict the ultimate impact of any such new laws and regulations, they will

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likely result in additional costs, or in the worst case decreased revenue, and could even require that we redesign or change how we manufacture our products. Such redesigns result in additional costs and possible delayed or lost revenue.

The trading price of our common stock is subject to fluctuation and is likely to be volatile.

The trading price of our common stock may fluctuate significantly in response to a number of factors, some of which are beyond our control, including:

- actual or anticipated declines in operating results;
- changes in financial estimates or recommendations by securities analysts;
- the institution of legal proceedings against us or significant developments in such proceedings;
- announcements by us or our competitors of financial results, new products, significant technological innovations, contracts, acquisitions, strategic relationships, joint ventures, capital commitments or other events;
- changes in industry estimates of demand for Very Fast SRAM products;
- the gain or loss of significant orders or customers;
- recruitment or departure of key personnel; and
- market conditions in our industry, the industries of our customers and the economy as a whole.

In recent years the stock market in general, and the market for technology stocks in particular, have experienced extreme price fluctuations, which have often been unrelated to the operating performance of affected companies. The market price of our common stock might experience significant fluctuations in the future, including fluctuations unrelated to our performance. These fluctuations could materially adversely affect our business relationships, our ability to obtain future financing on favorable terms or otherwise harm our business. In addition, in the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. This risk is especially acute for us because the extreme volatility of market prices of technology companies has resulted in a larger number of securities class action claims against them. Due to the potential volatility of our stock price, we may in the future be the target of similar litigation. Securities litigation could result in substantial costs and divert management's attention and resources. This could harm our business and cause the value of our stock to decline.

Use of a portion of our cash reserves to repurchase shares of our common stock presents potential risks and disadvantages to us and our continuing stockholders.

From November 2008 through March 2016 we repurchased and retired an aggregate of 10,340,501 shares of our common stock at a total cost of $53.5 million, including 3,846,153 shares repurchased at a total cost of $25 million pursuant to a modified “Dutch auction” self-tender offer that we completed in August 2014 and additional shares repurchased in the open market pursuant to our stock repurchase program. At March 31, 2016, we had outstanding authorization from our Board of Directors to purchase up to an additional $1.5 million of our common stock from time to time under our repurchase program. In May 2016, the Board extended the repurchase program by authorizing the repurchase of up to an additional $10 million of our common stock. Although our Board

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has determined that these repurchases are in the best interests of our stockholders, they expose us to certain risks including:

- the risks resulting from a reduction in the size of our "public float," which is the number of shares of our common stock that are owned by non-affiliated stockholders and available for trading in the securities markets, which may reduce the volume of trading in our shares and result in reduced liquidity and, potentially, lower trading prices;
- the risk that our stock price could decline and that we would be able to repurchase shares of our common stock in the future at a lower price per share than the prices we have paid in our tender offer and repurchase program; and
- the risk that the use of a portion of our cash reserves for this purpose has reduced, or may reduce, the amount of cash that would otherwise be available to pursue potential cash acquisitions or other strategic business opportunities.

Our executive officers, directors and entities affiliated with them hold a substantial percentage of our common stock.

As of May 31, 2016, our executive officers, directors and entities affiliated with them beneficially owned approximately 35% of our outstanding common stock. As a result, these stockholders will be able to exercise substantial influence over, and may be able to effectively control, matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, which could have the effect of delaying or preventing a third party from acquiring control over or merging with us.

The provisions of our charter documents might inhibit potential acquisition bids that a stockholder might believe are desirable, and the market price of our common stock could be lower as a result.

Our Board of Directors has the authority to issue up to 5,000,000 shares of preferred stock. Our Board of Directors can fix the price, rights, preferences, privileges and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock might delay or prevent a change in control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders might be adversely affected. The issuance of preferred stock might result in the loss of voting control to other stockholders. We have no current plans to issue any shares of preferred stock. Our charter documents also contain other provisions, which might discourage, delay or prevent a merger or acquisition, including:

- our stockholders have no right to remove directors without cause;
- our stockholders have no right to act by written consent;
- our stockholders have no right to call a special meeting of stockholders; and
- our stockholders must comply with advance notice requirements to nominate directors or submit proposals for consideration at stockholder meetings.

These provisions could also have the effect of discouraging others from making tender offers for our common stock. As a result, these provisions might prevent the market price of our common stock from increasing substantially in response to actual or rumored takeover attempts. These provisions might also prevent changes in our management.

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Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our executive offices, our principal administration, marketing and sales operations and a portion of our research and development operations are located in a 44,277 square foot facility in Sunnyvale, California, which we purchased in fiscal 2010. In addition, we occupy approximately 25,250 square feet in a facility located in Hsin Chu, Taiwan under a lease expiring in August 2017. This facility supports our manufacturing activities. We believe that both our Sunnyvale and Taiwan facilities are adequate for our needs for the foreseeable future. We also lease space in the United States in the states of Georgia and Texas and in Israel. The aggregate annual gross rent for our leased facilities was approximately $348,000 in fiscal 2016.

Item 3. Legal Proceedings

In March 2011, Cypress Semiconductor Corporation, a semiconductor manufacturer, filed a lawsuit against us in the United States District Court for the District of Minnesota alleging that our products, including our SigmaDDR and SigmaQuad families of Very Fast SRAMs, infringe five patents held by Cypress. The complaint sought unspecified damages for past infringement and a permanent injunction against future infringement.

On June 10, 2011, Cypress filed a complaint against us with the United States International Trade Commission (the "ITC"). The ITC complaint, as subsequently amended, alleged infringement by GSI of three of the five patents involved in the District Court case and one additional patent and also alleged infringement by three of our distributors and 11 of our customers who allegedly incorporate our SRAMs in their products. The ITC complaint sought a limited exclusion order excluding the allegedly infringing SRAMs, and products containing them, from entry into the United States and permanent orders directing GSI and the other respondents to cease and desist from selling or distributing such products in the United States. On July 21, 2011, the ITC formally instituted an investigation in response to Cypress's complaint. On June 7, 2013, the ITC announced that the full Commission had affirmed the determination of Chief Administrative Law Judge Charles E. Bullock that GSI's SRAM devices, and products containing them, do not infringe the Cypress patents and that Cypress had failed to establish the existence of a domestic industry that practices the patents. Moreover, the Commission reversed a portion of Judge Bullock's determination with respect to the validity of the patents, finding the asserted claims of one of the patents to have been anticipated by prior art and, therefore, invalid. The Commission ordered the investigation terminated, and Cypress did not appeal the ruling.

The Minnesota District Court case had been stayed pending the conclusion of the ITC proceeding. Following the termination of the ITC proceeding, the stay was lifted. On May 1, 2013, Cypress filed an additional lawsuit in the United States District Court for the Northern District of California alleging infringement by our products of five additional Cypress patents. Like the Minnesota case, the complaint in the California lawsuit sought unspecified damages for past infringement and a permanent injunction against future infringement. We filed answers in both cases denying liability and asserting affirmative defenses. On August 7, 2013, the parties stipulated that the claims in the Minnesota case with respect to three of the asserted patents would be dismissed without prejudice and that the claims with respect to the remaining two patents would be transferred to the Northern District of California and consolidated with the pending California case. On August 20, 2013, the Court in the California case ordered the cases consolidated.

On July 22, 2011, we filed a complaint against Cypress in the United States District Court for the Northern District of California. Our complaint alleged that Cypress had conducted an unlawful combination and conspiracy to monopolize the market for certain high-performance SRAM devices, known as fast synchronous Quad Data Rate (or

QDR) SRAMs and Double Data Rate (or DDR) SRAMs. The complaint alleged that the anti-competitive,

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collusive and conspiratorial conduct of Cypress and certain co-conspirators violated Section 1 of the Sherman Act and also constituted unlawful restraint of trade and unfair competition under applicable provisions of California law. The complaint sought treble damages, in an amount to be determined at trial, a preliminary and permanent injunction prohibiting the continuation of the unfair and illegal business practices and recovery of GSI's attorneys' fees and costs.

On May 6, 2015, the Company and Cypress entered into a settlement agreement to resolve the patent infringement and antitrust litigation. Under the settlement agreement:

· Each of the parties agreed to dismiss its lawsuit with prejudice in consideration of the dismissal with prejudice of the lawsuit brought by the other party; and

· Each party released all claims against the other with respect to issues raised in the two lawsuits.

The parties agreed that the settlement agreement was entered into to resolve disputed claims, and that each party denies any liability to the other party.

Item 4. Mine Safety Disclosures

Not applicable.

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PART II

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

Market Information

Our common stock has traded on the Nasdaq Global Market under the symbol "GSIT" since our initial public offering on March 29, 2007. The following table sets forth, for the periods indicated, the high and low sales prices for our common stock on such market.

Fiscal Year Ended March 31, 2015	High	Low
First quarter	$ 7.15	$ 5.36
Second quarter	6.62	4.91
Third quarter	5.50	4.52
Fourth quarter	5.90	4.87

Fiscal Year Ended March 31, 2016		
First quarter	$ 5.88	$ 4.75
Second quarter	5.43	4.00
Third quarter	4.55	3.72
Fourth quarter	4.64	3.33

Holders of Common Stock

On May 31, 2016, the closing price of our common stock on the Nasdaq Global Market was $4.00, and there were 34 holders of record of our common stock. Because many of such shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial holders of our common stock represented by these record holders.

Dividend Policy

We have never declared or paid cash dividends on our common stock. The payment of dividends in the future will be at the discretion of our Board of Directors. However, 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.

Securities Authorized for Issuance under Equity Compensation Plans

Please see Part III, Item 12 of this report for information regarding securities authorized for issuance under our equity compensation plans. Such information is incorporated by reference from our definitive proxy statement for our 2016 annual meeting of stockholders.

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Issuer Purchases of Equity Securities

Our Board of Directors has authorized us to repurchase, at management's discretion, shares of our common stock. Under the repurchase program, we may repurchase shares from time to time on the open market or in private transactions. The specific timing and amount of the repurchases will be dependent on market conditions, securities law limitations and other factors. The repurchase program may be suspended or terminated at any time without prior notice. Below is summary of the repurchases of our common stock made during the quarter ended March 31, 2016, all of which were made under our repurchase program.

Period	Shares Repurchased	Average Price per Share	Value of Shares That May Yet Be Repurchased Under the Program
Beginning approximate dollar value available to be repurchased as of December 31, 2015			$ 4,419,935
January 1 to January 31, 2016	166,317	$ 3.64	$ 3,815,140
February 1 to February 29, 2016	383,615	$ 3.52	$ 2,465,714
March 1 to March 31, 2016	244,123	$ 4.05	$ 1,476,041
Total shares repurchased	794,055		
Ending approximate dollar value that may be repurchased under the program as of March 31, 2016			$ 1,476,041

In May 2016, the Board extended the repurchase program by authorizing the repurchase of up to an additional $10 million of our common stock.

Item 6. Selected Financial Data

You should read the following selected consolidated financial data 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 in this report. The selected consolidated statement of operations data set forth below for the fiscal years ended March 31, 2016, 2015 and 2014 and the selected consolidated balance sheet data as of March 31, 2016 and 2015 are derived from, and are qualified by reference to, our audited consolidated financial statements included elsewhere in this report. The selected consolidated statement of operations data set forth below for the fiscal

years ended March 31, 2013 and 2012 and the selected consolidated balance sheet data as of March 31, 2014, 2013 and 2012 are derived from audited consolidated financial statements not included in this report.

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	Fiscal Year Ended March 31,				
	2016	2015	2014	2013	2012
	(In thousands, except per share amounts)				
Consolidated Statement of Operations Data:					
Net revenues	$ 52,736	$			