GSI TECHNOLOGY INC
Form 10-K
June 02, 2011
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

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

For the fiscal year ended March 31, 2011
or

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

For the transition period from to
Commission File Number 000-33387

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 Q
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 Q
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 Q 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):

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Large accelerated filer £ Accelerated filer Q 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 Q
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, 2010, as reported on the Nasdaq Global Market, was approximately $114.0 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 20, 2011, there were 28,794,712 shares of the registrant's common stock issued and outstanding.
DOCUMENTS INCORPORATED BY REFERENCE
Portions of the registrant's definitive proxy statement for its 2011 annual meeting of stockholders are incorporated by reference into Part III hereof.

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2011 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.

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PART I

Item 1. Business

Overview

We develop and market 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. In addition, we serve the ongoing needs of the military, industrial, test equipment 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 sell our products to leading original equipment manufacturer, or OEM, customers including Alcatel-Lucent, Cisco Systems and Huawei Technologies. 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.

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.

Industry Background

SRAM and LLDRAM 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. Dynamic random access memory, or DRAM, is a memory device that loses it's charge when stored data is read from the memory and must be refreshed in order for the device to retain the data for future use. The act of reading a DRAM memory bit drains off the charge in the cell. This is known as a destructive read and it must be followed immediately by an automatic re-write of the cell in order for the DRAM cell to retain data for later use. A DRAM memory cell is much smaller than an SRAM memory cell. 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, and power consumption. There are several different industry measures of speed:

- latency, also referred to as random access time, which is the delay between the request for data and the delivery of such data for use and is measured in nanoseconds, or ns;
- bandwidth, which is the rate at which data can be streamed to or from a device and is measured in gigabits per second, or Gb/s;
- clock frequency, which is the cycle rate of a clock within a synchronous device and is measured in megahertz, or MHz;
- clock access time, which is the delay between the beginning of the clock cycle and the delivery of data as measured in nanoseconds; and
- transaction rate, which is the rate at which new address references can be loaded into the memory device, and is measured in gigahertz, or GHz.

Historically, SRAMs have been utilized wherever other memory technologies have been inadequate.

SRAMs demonstrate

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lower latency and support not-destructive reads, resulting in faster random access times, relative to DRAMs and other types of memory technologies. Historically, the volatile memory market has had three price-performance nodes, DRAM at the low end, Fast SRAM at the high end and slow SRAM in the middle. Over the past few decades, less expensive alternatives have been introduced to address certain applications formerly using lower performance SRAMs. For example, new types of DRAM are now in the process of displacing lower performance SRAM products in applications such as cell phones. As a result, particularly in the networking memory market, a technology vacuum formed between Fast SRAMs on one end and DRAMs at the other with no high bandwidth, moderate latency, high transaction rate, moderate cost volatile memory product to fill the void. Low latency DRAMs, or LLDRAMs, are now poised to re-fill the substantial gap in the volatile memory market between commodity DRAMs that cannot meet the transaction rate requirement for many networking market applications and Fast SRAMs that cannot meet the density requirements for some networking applications. Like the Slow SRAMs that came before them, LLDRAMs have a much higher price-per-bit cost than commodity DRAMs (in order to deliver higher transaction rates) but demonstrate a significantly longer latency than Fast SRAMs. Interestingly, their value in the market seems to place them squarely in the price - performance range successfully occupied by Slow SRAMs a decade ago.

The need for increasingly greater bandwidth from commodity DRAMs and the need for higher and higher transaction rates and higher data bandwidth from Fast SRAMs continues unabated as the networking market begins to make preparations for Terabit networking in the latter half of the current decade. It is expected that both Fast SRAM and Low Latency DRAM 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 greater networking bandwidth, 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 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 seen by most of the memory arrays in networking equipment are often significantly different from those seen by memory devices 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 ten 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 require a variety of memory types; both SRAM-based and DRAM-based. Some of the required memory arrays are internal to 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.

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 board density and the need for low 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 different 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.

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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 memories. Until very recently, all of our products have been SRAM-based, but increased investment in high performance DRAM-based networking memory products is allowing us to increase our market share in the overall networking memory market. Our SRAM product line has evolved from BurstRAMs with an average transaction rate of about 125 MHz to our latest SigmaQuad-IIIe+ SRAMs that deliver a 1.35 GHz transaction rate, the fastest SRAMs currently available. Low Latency DRAMs start at a transaction rate of 533 MHz and will evolve further from there. Our fastest SRAMs deliver over 102 Gb/s per SRAM of raw data bandwidth per device, and our LLDRAMs deliver 38 Gb/s per device. Our SRAM products can produce data at latencies of less than 4 nanoseconds while LLDRAM latencies are as short as 15ns. 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 manufacturer, 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 Very Fast SRAMs in order to maximize product performance, optimize yields, lower manufacturing costs and improve quality. Our most advanced 72 and 144 megabit, or Mb, synchronous Very Fast SRAMs are manufactured using 65 nanometer process technology. Our initial LLDRAMs are produced using 72 nanometer DRAM process technology at Powerchip Semiconductor Corporation in Taiwan. We are currently developing 144 megabit and 288 megabit synchronous Very Fast SRAMs using 40 nanometer process technology, which will allow us to further increase product performance, lower power consumption and reduce costs.

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. During fiscal 2010, we further solidified our position as a technology leader by being the first vendor to ship 144 megabit monolithic SRAMs to customers and the first vendor to ship Type-IIIe SigmaQuad and SigmaDDR SRAMs, the fastest SRAMs to reach the open market. 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 of theirs that operate at any voltage within that range. Moreover, for certain Very Fast Synchronous SRAMs, we are the only vendor to offer a product that operates at 1.8 volts, which uses approximately one half to two-thirds the power of our competitors' 2.5 volt products. We intend to apply the same approaches we used to take the lead in SRAM-based networking memory to the development of our line of DRAM-based networking memory 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

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Very Fast SRAM products currently available, and our LLDRAM product line further expands our position in the networking market. Our product line includes a wide range of products with varying densities, features, clock speeds, and voltages, as well as several operating temperature ranges and numerous package options in both 5/6 (leaded) and 6/6 (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 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.

Accelerated Time-to-market. 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

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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.

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 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 will continue to allow us to provide networking and telecommunications OEMs with the early access to next generation Very Fast SRAMs and Low Latency DRAMS that offer superior performance, advanced feature sets and continued high reliability, which they need to allow them 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 65 nanometer process technology on 300 millimeter wafers. We intend to continue to collaborate closely with TSMC in the refinement of 40 nanometer process technology.

Exploit New Market Opportunities. While we design our Very Fast SRAMs and LLDRAMs specifically for the networking and telecommunications markets, our products are often applicable across a wide range of industries and applications. We have recently experienced growth in both the defense and medical markets and intend to continue

penetrating these and other new markets with similar needs for high-performance memory technologies.

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

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density, low latency, high bandwidth, fast clock access times and low power consumption. We continue to offer 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 and two families of LLDRAMs. 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 multi-service access routers, universal gateways, enterprise edge routers, service provider edge routers, optical edge routers, fast Ethernet switches, multi-gigabit Ethernet switches, wireless base stations, Asymmetric Digital Subscriber Line ("ADSL") modems, wireless local area networks, Internet Protocol phones and OC192 layer 2 switches. We also sell our products to OEMs that manufacture products for defense 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 voice recognition systems, and for medical applications such as ultrasound and CAT scan equipment.

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. Our single data rate synchronous SRAMs feature clock access times as short as 2 nanoseconds and our double data rate synchronous SRAMs have clock access times as fast as 0.45 nanoseconds. Today, we supply synchronous SRAMs that can cycle at operating frequencies as high as 714 MHz.

Burst 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 that were developed to address the needs of moderate performance networking 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 SRAMs, our SigmaQuad family as well as double data rate common I/O versions of the same products, our SigmaDDR family Quad data rate SRAMs are separate input/output, or I/O, synchronous SRAMs that features 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. We offer our SigmaQuad devices in two different bus protocol versions, two different power supply and interface voltage versions, with two different data burst length options, all under the name SigmaQuad or SigmaQuad-II. The common I/O (a single bi-directional data port) double data rate SRAMs in the same family of products are known as SigmaDDR SRAMs. There is also an additional variant in the family that is designed to address some segments of the market currently served by dual-port

SRAMs. These are known as SigmaSIO DDR SRAMs.

We currently offer SigmaQuad/SigmaDDR products in four storage densities, 18 megabits, 36 megabits, 72 megabits and a market leading 144 megabits, with clock frequency rates up to 550 MHz and clock access times as fast as 0.45 nanoseconds. These operate at voltages of 2.5 and 1.8 volts.

SigmaRAM Products. We offer a family of high-performance, low voltage, synchronous SigmaRAM™ SRAM products designed for use in networking and telecommunications systems. Our SigmaRAM products include the full range of common I/O SRAM functionality, including late write and double late write protocols, pipelined read cycles, burst data transfers and

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double data rate read and write data transfers. We currently offer SigmaRAM products with storage density of 18 megabits, speeds of up to 350 MHz and clock access times as fast as 1.7 nanoseconds that operate at 1.8 volts.

Asynchronous SRAM Products

Unlike synchronous SRAMs, asynchronous SRAMs employ a clock-free control interface. They are widely used in support of high-end digital signal processors, or DSPs. We believe we have one of the broadest portfolios of 3.3 volt, high-speed asynchronous SRAMs. These products are designed to meet the stringent power and performance requirements of networking and telecommunications applications, such as VoIP, cellular base stations, DSL line cards and modems.

We currently offer asynchronous SRAM products with a variety of storage densities between 1 megabit and 8 megabits and random access times ranging from 7 nanoseconds to 15 nanoseconds. All of our asynchronous SRAMs operate at 3.3 volts.

We intend to regularly introduce new products with high-performance advanced features of increasing complexity. These product solutions will require us to achieve volume production in a rapid timeframe. We believe that by using the advanced technologies offered by our fabrication partner and its expertise in high-volume manufacturing, we can rapidly achieve volume production. However, lead times for materials and components we order vary significantly and depend on such factors as the specific supplier, contract terms and demand for a component at a given time.

Low Latency DRAM Products

Our new 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 DRAMs are not good enough but Fast SRAMs are not necessary. 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 is a 576 Megabit device that operates on a 1.8 volt power supply and supports the HSTL interface. The family includes 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.

Customers

Our primary sales and marketing strategy is to achieve design wins with OEM customers who are leading networking and telecommunications companies. 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, 2011:

Alcatel-Lucent	Ciena	Cisco Systems
Honeywell	Huawei Technologies	Motorola
Rockwell	Tellabs	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 networking and telecommunications 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 39.5%, 39.2% and 29.3% of our net revenues for fiscal 2011, 2010 and 2009, respectively. Sales to foreign and domestic distributors accounted for 48.9%, 50.2% and 61.1% of our net revenues for fiscal 2011, 2010 and 2009, 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,		
	2011	2010	2009
Consignment warehouses:			
SMART Modular Technologies	5.8 %	20.8 %	25.7 %
Jabil Circuit	18.6	10.4	—
Flextronics	11.7	4.7	0.5
Distributors:			
Avnet Logistics	17.0	21.7	25.3
Nexcomm	10.8	9.6	10.6

Cisco Systems, our largest OEM customer, purchases our products primarily through its consignment warehouses, SMART Modular Technologies, Jabil Circuit and Flextronics Technology, 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 37%, 35% and 26% of our net revenues in fiscal 2011, 2010 and 2009, respectively. To our knowledge, none of our other OEM customers accounted for more that 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, 2011, we employed 19 sales and marketing personnel, and were supported by over 200 independent sales representatives. We believe that our relationship with our three U.S. distributors, Arrow, Avnet and Nu Horizons, puts us in a strong position to address the Very Fast SRAM and LLDRAM memory markets in the U.S. We currently have regional sales offices located in Canada, China, Italy 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 focused on increasing brand name awareness and providing solutions that address our customers' needs. Key components of our marketing efforts include maintaining an active role in industry standards committees, such as the JEDEC Solid State Technology Association (formerly the Joint Electron Device Engineering Council), or JEDEC, which is responsible for establishing detailed specifications, which can be utilized in future system designs. We believe that our participation in and sponsorship of numerous proposals within these committees have increased our profile among leading manufacturers in the networking and telecommunications segment of the Very Fast SRAM market. Our marketing group 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 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.

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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 under individually negotiated purchase orders. We do not currently have a long-term supply contract with TSMC, and therefore, TSMC is not 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 or other independent foundries to supply us with the wafers we require.

Our newest, leading edge SRAM products are manufactured using 65 nanometer process technology at TSMC. The majority of our current SRAM products are manufactured using 0.13 micron and 90 nanometer process technologies on 300 millimeter wafers at TSMC. Our LLDRAM production at Powerchip uses 72 nanometer technology . Including our new LLDRAM product line, we currently have seven separate product families in production. On-going development programs are underway to extend, expand and/or cost reduce most our product families, including two programs targeting 40 nanometer SRAM products and a project to extend the reach of our LLDRAM product line using a more aggressive DRAM process technology.

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 six to ten 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 in our Taiwan and US test facilities.

Research and Development

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. Research and development expenses were $10.6 million in fiscal 2011, $9.1 million in fiscal 2010 and $5.7 million in fiscal 2009. Our research and development staff includes engineering professionals with extensive experience in the areas of SRAM design, DRAM design and systems level networking and telecommunications equipment design. Our current development focus is on the SigmaQuad SRAM family and our new family of LLDRAM products.

We are also leveraging our advanced design capabilities to expand into other networking and telecommunications products, including a channelized OC-3 processor that incorporates over 90 embedded SRAM modules. When completed, this single chip solution will be capable of simultaneously processing multiple types of traffic at OC-3 bandwidth and, we believe, will offer power, chip count and cost advantages compared to traditional network processor solutions. We have established a design center in Norcross, Georgia to focus on the development of these products.

Competition

Our existing competitors include many large domestic and international companies, some of which have substantially greater resources, offer other sorts 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 Device Technology, Integrated Silicon Solution, REC and Samsung Electronics. 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.

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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 a new memory technology may not be successful and our business may suffer.

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 ten United States patents and have several 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 are currently involved in a patent infringement lawsuit. 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.

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Employees

As of March 31, 2011, we had 133 full-time employees, including 66 engineers, of which 39 are engaged in research and development and 37 have PhD or MS degrees, 19 employees in sales and marketing, ten employees in general and administrative capacities and 68 employees in manufacturing. Of these employees, 55 are based in our Sunnyvale facility and 55 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 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, and our code of conduct (including code of ethics provisions that apply to our principal executive officer, principal financial officer, controller, and senior financial officers) 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, 2011:

Name	Age	Title
Lee-Lean Shu	56	President, Chief Executive Officer and Chairman
David Chapman	55	Vice President, Marketing
Didier Lasserre	46	Vice President, Sales
Douglas Schirle	56	Chief Financial Officer
Bor-Tay Wu	59	Vice President, Taiwan Operations
Ping Wu	54	Vice President, U.S. Operations
Robert Yau	58	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. In October 2000, Mr. Shu became 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.

David Chapman has served as our Vice President, Marketing since July 2002. From November 1998 to June 2002, Mr. Chapman served as our Director of Strategic Marketing and Applications Engineering. From February 1988 to November 1998, Mr. Chapman served in various product planning and applications engineering management capacities in the Memory Operation division and later the Fast SRAM division of Motorola Semiconductor Product Sector, Motorola, Inc., an electronics manufacturer. Mr. Chapman has been a member of JEDEC since 1985, and served as Chairman of its SRAM committee in 1999.

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, a semiconductor company.

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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.

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, 2011, we recorded net revenues of as much as $26.7 million and as little as $13.6 million and quarterly operating income of as much as $6.7 million and as little as $1.3 million. 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; and
- 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

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price of our common stock could fall.

Cisco Systems, our largest OEM customer, accounts for a significant percentage of our net revenues. If Cisco Systems, or any of our other major customers reduce the amount they purchase or stop purchasing our products, our operating results will suffer.

Cisco Systems, our largest OEM customer, purchases our products through SMART Modular Technologies, Jabil Circuit and Flextronics Technology, its consignment warehouses, through its contract manufacturers and directly from us. Based on information provided to us by its consignment warehouses and contract manufacturers, purchases by Cisco Systems represented approximately 37%, 35% and 26% of our net revenues in fiscal 2011, 2010 and 2009, respectively. We expect that our operating results in any given period will continue to depend significantly on orders from our key OEM customers, particularly 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 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 Cisco Systems will continue to fluctuate significantly on a quarterly basis and that such fluctuations may significantly 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. For example, in fiscal 2003 and 2004, we incurred losses of $7.4 million and $670,000, respectively. Although we have operated profitably during the last seven fiscal years, there can be no assurance that our Very Fast SRAMs will continue to receive broad market acceptance or that we will be able to sustain revenue growth or profitability. Our failure to do so may result in additional losses in the future. In addition, we expect our operating expenses to increase as we expand our business. If our revenues do not grow to offset these expected increased expenses, our business will suffer.

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.

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. Our operating results declined sharply in fiscal 2002 and 2003 as a result of the severe contraction in demand for networking and telecommunications equipment in which our products are incorporated. Prior to this period of contraction, the networking and telecommunications markets experienced a period of rapid growth, which resulted in a significant increase in demand for our products. We expect that the networking and telecommunications markets will continue to be highly cyclical, 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.

We are subject to a pending patent infringement lawsuit.

In March 2011, Cypress Semiconductor Corporation, a semiconductor manufacturer, filed a lawsuit against us alleging that our products, including our Sigma DDR and Sigma Quad families of Fast SRAMs, infringe five patents held by Cypress. The complaint seeks unspecified damages for past infringement and a permanent injunction against future infringement. We believe that we have strong defenses against Cypress's lawsuit and intend to defend the lawsuit vigorously. However, the case is in its preliminary stages, and we cannot predict its outcome with certainty.

The litigation process is inherently uncertain, and we may not prevail. Patent litigation is particularly complex and can extend for a protracted period of time, which can

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substantially increase the cost of such litigation. In connection with the Cypress litigation, we expect to incur substantial legal fees and expenses, and we expect the litigation to divert the efforts and attention of some of our key management and technical personnel. As a result, our defense of this litigation, regardless of its eventual outcome, will likely be costly and time consuming. Should the outcome of litigation be adverse to us, we could be required to pay significant monetary damages to Cypress and could be enjoined from selling those of our products found to infringe Cypress's patents unless and until we are able to negotiate a license from Cypress. Any such license would likely require the payment of royalties which would increase our costs of revenues and reduce our gross profit. If we are required to pay significant monetary damages, are enjoined from selling any of our products or are required to make substantial royalty payments pursuant to any such license arrangement, our business would be significantly harmed.

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.

Current unfavorable economic and market conditions, domestically and internationally, may adversely affect our business, financial condition, results of operations and cash flows.

We have significant customer sales both in the United States and internationally. We are also reliant upon U.S. and international suppliers, manufacturing partners and distributors. We are therefore susceptible to adverse U.S. and international economic and market conditions, including the challenging economic conditions that have prevailed and continue to prevail in the United States and worldwide. The recent turmoil in the financial markets has resulted in dramatically higher borrowing costs which have made it more difficult (in some cases, prohibitively so) for many companies to obtain credit and fund their working capital obligations. If any of our manufacturing partners, customers, distributors or suppliers experiences serious financial difficulties or ceases operations, our business could be adversely affected. In addition, the adverse impact of the credit crisis on consumers, including higher unemployment rates, is expected to adversely impact consumer spending, which will adversely impact demand for consumer products such as certain end products in which our SRAMs are embedded. As a result of the difficulty that businesses (including our customers) may have in obtaining credit and the decreased consumer spending that may result from the credit market crisis, high unemployment rates and continued global economic and market turmoil are likely to have an adverse impact on our business, financial condition, results of operations and cash flows.

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 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, 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, we likely will not be able to enforce fulfillment of any delivery commitments and we would have to identify and qualify

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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.

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 2011, 2010 and 2009, our distributor Avnet Logistics accounted for 17.0%, 21.7% and 25.3%, 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.

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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 operating results will suffer.

At March 31, 2011, three customers accounted for 21%, 17% and 13% of our accounts receivable, respectively. If any of these customers do not pay us, our operating results will be harmed. Generally, we do not require collateral from our customers.

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

In August 2009, we consummated the acquisition of substantially all of the assets related to the SRAM memory device product line of Sony Corporation. In the future, we may make additional acquisitions or investments in companies, assets or technologies that we believe are complementary or strategic. Prior to the Sony acquisition, we had not made any acquisitions or investments, and therefore our ability as an organization to make acquisitions or investments is limited. In connection with future acquisitions or investments we may make, we face numerous risks, including:

- difficulties in integrating operations, technologies, products and personnel;
- diversion of financial and managerial resources from existing operations;
- 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 are currently involved in a patent infringement lawsuit. See "We are subject to a pending patent infringement lawsuit" above. 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 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 would be severe and 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

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not be able in any or every instance to settle an alleged patent infringement claim through a cross-licensing arrangement. 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.

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, or to protect us from the claims of others. Monitoring unauthorized use of our products 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. Litigation may be necessary in order to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. If competitors are able to use our technology without our approval or compensation, our ability to compete effectively could be harmed.

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 heightened 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.

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 to transition successfully to smaller geometry process technologies and to more advanced manufacturing processes. We cannot assure you that TSMC will be able to effectively manage the transition or that we will be able to maintain our relationship with TSMC. If we or TSMC 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.

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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 2010 and 2011, we incurred $650,000 and $727,000, 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 65 nanometer SRAM process technology and 72 nanometer DRAM process technology, respectively. We will incur similar expenses in the future as we continue to transition our products to smaller geometry processes. The transition 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. 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 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. For example, Cisco Systems, our largest OEM customer, incorporates our products in a number of its networking routers and switches. 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.

Downturns in the semiconductor industry may harm our revenues and margins.

The semiconductor industry is highly cyclical. The industry has experienced significant downturns, often in connection with, or in anticipation of, maturing product cycles of both semiconductor companies' and their customers' products and declines in general economic conditions. These downturns have been characterized by production overcapacity, high inventory levels and accelerated erosion of average selling prices. From time to time, the semiconductor industry also has experienced periods of increased demand and production capacity constraints. Our operating results may suffer during the down portion of these cycles. Downturns in the semiconductor industry could cause our stock price to be volatile, and a prolonged decline in the industry could adversely affect our revenues. If we are

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unable to control our expenses adequately in response to reduced net sales, our results of operations would be negatively impacted. For example, the industry downturn in 2001 resulted in a $3.9 million inventory write-off in fiscal 2002.

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.

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, 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.

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 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.

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

We plan to continue expanding our business, and our expected growth could place a significant strain on our management systems, infrastructure and other resources. To manage the expected growth of our operations and increases in the number of our personnel, we will need to invest the necessary capital to improve our operational, financial and management controls and our reporting systems and procedures. Our controls, systems and procedures might not be adequate to support a growing public company. 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 and the majority of our management had no previous experience in managing a public company or communicating with securities analysts and public company investors prior to the initial public offering of our common stock in 2007. 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 70.3%, 68.9% and 61.6% of our net revenues in fiscal 2011, 2010 and 2009, respectively. Moreover, a substantial portion of our products is manufactured and tested in Taiwan. We intend to expand 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;
- legal uncertainties regarding taxes, tariffs, quotas, export controls, competition, export licenses and other trade barriers;
- political and economic instability in, or foreign conflicts that involve or affect, the countries of our customers;
- difficulties in collecting accounts receivable and longer accounts receivable payment cycles;
- difficulties in staffing and managing personnel, distributors and representatives;
- 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 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, 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 foundry that manufactures our Fast SRAM products, TSMC, 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

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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, as it was during parts of 2003, 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.

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 additional dilution or the new equity securities may have rights, preferences or privileges senior to those of our common stock.

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 have risen significantly in recent years. However, should the current conflicts in Iraq and Afghanistan and the general war on terror subside, our operating results would likely 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.

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If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements could be impaired, which could adversely affect our operating results, our ability to operate our business and investors' views of us.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming process. On a continuous basis, we update our internal controls documentation and, where appropriate, improve our internal controls and procedures. Section 404 of the Sarbanes-Oxley Act of 2002 requires annual management assessments of the effectiveness of our internal control over financial reporting and a report by our independent registered public accounting firm addressing the effectiveness of our internal control over financial reporting. Both we and our independent registered public accounting firm test our internal controls and, as part of that documentation and testing process, identify areas for further attention and improvement. Implementing any appropriate changes to our internal controls may entail substantial costs in order to modify our existing financial and accounting systems, take a significant period of time to complete, and distract our officers, directors and employees from the operation of our business. These changes may not, however, be effective in maintaining the adequacy of our internal controls. Any failure to maintain that adequacy, or a consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs, materially impair our ability to operate our business, and adversely affect our stock price.

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 also face increasing complexity in our product design as we adjust to new and future requirements relating to the materials composition of our products, including the restrictions on lead and other hazardous substances applicable to specified electronic products placed on the market in the European Union (Restriction on the Use of Hazardous Substances Directive 2002/95/EC, also known as the RoHS Directive). We also expect that our operations will be affected by other new environmental laws and regulations on an ongoing basis. Although we cannot predict the ultimate impact of any such new laws and regulations, they will likely result in additional costs, and could require that we change the design and/or manufacturing of our products, any of which could have a material adverse effect on our business.

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;
- 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;
- rapid changes in industry estimates in 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.

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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.

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

As of May 20, 2011, our executive officers, directors and entities affiliated with them beneficially owned approximately 23% 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
- 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.

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 approximately 44,277 square feet of space in Sunnyvale, California, which we acquired in the third quarter of 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 2012. 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 Georgia and Texas. The aggregate annual gross rent for our facilities was approximately $420,000 in fiscal 2011, approximately $62,000 of which represented rent paid for our former leased headquarters facility in Santa Clara, California.

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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 Sigma DDR and Sigma Quad families of Fast SRAMs, infringe five patents held by Cypress. The complaint seeks unspecified damages for past infringement and a permanent injunction against future infringement. We believe that we have strong defenses against Cypress's lawsuit and intend to defend the lawsuit vigorously. However, the case is in its preliminary stages, and we cannot predict its outcome with certainty. The litigation process is inherently uncertain, and we may not prevail. Patent litigation is particularly complex and can extend for a protracted period of time, which can substantially increase the cost of such litigation. In connection with the Cypress litigation, we expect to incur substantial legal fees and expenses, and we expect the litigation to divert the efforts and attention of some of our key management and technical personnel. As a result, our defense of this litigation, regardless of its eventual outcome, will likely be costly and time consuming. Should the outcome of litigation be adverse to us, we could be required to pay significant monetary damages to Cypress and could be enjoined from selling those of our products found to infringe Cypress's patents unless and until we are able to negotiate a license from Cypress. Any such license would likely require the payment of royalties which would increase our costs of revenues and reduce our gross profit. If we are required to pay significant monetary damages, are enjoined from selling any of our products or are required to make substantial royalty payments pursuant to any such license arrangement, our business would be significantly harmed.

Item 4. Submission of Matters to a Vote of the Security Holders

None.

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, 2010	High	Low
First quarter	$3.95	$2.33
Second quarter	$4.47	$3.55
Third quarter	$6.00	$3.22
Fourth quarter	$5.45	$4.10
Fiscal Year Ended March 31, 2011		
First quarter	$6.93	$4.65
Second quarter	$7.08	$5.50
Third quarter	$8.24	$5.61
Fourth quarter	$10.20	$8.02

Holders of Common Stock

On May 20, 2011, the closing price of our common stock on the Nasdaq Global Market was $6.87, and there were 48 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 stockholders represented by these record holders.

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Dividend Policy

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

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 2011 annual meeting of stockholders.

Issuer Purchases of Equity Securities

On November 6, 2008, our Board of Directors authorized us to repurchase, at management's discretion, up to $10 million 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. During the quarter ended March 31, 2011, we did not repurchase any shares under the repurchase program.

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, 2011, 2010 and 2009 and the selected consolidated balance sheet data as of March 31, 2011 and 2010 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, 2008 and 2007 and the selected consolidated balance sheet data as of March 31, 2009, 2008 and 2007 are derived from audited consolidated financial statements not included in this report.

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	Fiscal Year Ended March 31,				
	2011	2010	2009	2008	2007
	(In thousands, except per share amounts)				
Consolidated Statement of Operations Data:					
Net revenues	$97,763	$67,558	$62,108	$53,170	$58,159
Cost of revenues	53,009	38,342	35,552	31,847	36,042
Gross profit	44,754	29,216	26,556	21,323	22,117
Operating expenses:					
Research and development	10,632	9,069	5,737	4,365	4,951
Selling, general and administrative	10,722	9,534	9,295	9,464	6,209
Total operating expenses	21,354	18,603	15,032	13,829	11,160
Income from operations	23,400	10,613	11,524	7,494	10,957
Interest and other income (expense), net	461	1,965	1,363	1,784	728
Income before income taxes	23,861	12,578	12,887	9,278	11,685
Provision for income taxes	4,985	2,195	3,598	2,505	4,251
Net income	$18,876	$10,383	$9,289	$6,773	$7,434
Basic and diluted net income per share available to common stockholders:					
Basic	$0.67	$0.38	$0.33	$0.25	$1.04
Diluted	$0.64	$0.38	$0.33	$0.24	$0.32
Weighted average shares used in per share calculations:					
Basic	28,013	27,105	27,735	27,537	6,253
Diluted	29,685	27,688	28,836		