ALTERA CORP
Form 10-K
March 11, 2005
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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES

EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2004

OR

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES

EXCHANGE ACT OF 1934

For the transition period from _____ to _____

ALTERA CORPORATION

(Exact Name of Registrant as Specified in its Charter)

Delaware	77-0016691
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

101 Innovation Drive, San Jose, California 95134

(Address of Principal Executive Offices) (Zip Code)

(408) 544-7000

(Registrant s Telephone Number, Including Area Code)

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

None

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

Common Stock, $0.001 par value per share

(Title of Class)

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

Indicate by check mark 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 an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes x No ¨

The aggregate market value of the registrant s common stock held by non-affiliates of the registrant was approximately $6,148,264,244 as of July 2, 2004, based upon the closing sale price on the Nasdaq National Market for that date. For purposes of this disclosure, shares of common stock held by persons who hold more than 5% of the outstanding shares of common stock and shares held by executive officers and directors of the registrant have been excluded because such persons may be deemed affiliates. This determination is not necessarily conclusive.

There were 372,298,725 shares of the registrant s common stock issued and outstanding as of February 15, 2005.

DOCUMENTS INCORPORATED BY REFERENCE

Item 6 of Part II incorporates information by reference from the Annual Report to Stockholders for the fiscal year ended December 31, 2004.

Item 5 of Part II and Items 10, 11, 12, 13, and 14 of Part III incorporate information by reference from the Proxy Statement for the Annual Meeting of Stockholders to be held on May 10, 2005.

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FORWARD-LOOKING STATEMENTS

This report and certain information incorporated herein by reference contains forward-looking statements, which are provided under the safe harbor protection of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are generally written in the future tense and/or are preceded by words such as will, may, should, could, expect, suggest, believe, anticipate, or other similar words. Forward-looking statements include statements regarding (1) our gross margins and factors that affect gross margins, (2) the commercial success of our new products, (3) our research and development expenditures and efforts, (4) our capital expenditures, (5) our share repurchases, (6) the growth prospects of the semiconductor industry and PLD market, including the FPGA and CPLD product sub-segments, and (7) trends in our future sales, including our opportunities for growth by displacing ASICs, ASSPs and other fixed chip alternatives, the geographic mix of our sales and our belief that maintaining or increasing market share in the FPGA product sub-segment is important to our success.

Forward-looking statements are not guarantees of future performance and involve risks and uncertainties. The forward-looking statements contained in this report are based on information that is currently available to us and expectations and assumptions that we deem reasonable at the time the statements were made. We do not undertake any obligation to update any forward-looking statements in this report or in any of our other communications, except as required by law. All such forward-looking statements should be read as of the time the statements were made and with the recognition that these forward-looking statements may not be complete or accurate at a later date.

Many factors may cause actual results to differ materially from those expressed or implied by the forward-looking statements contained in this report. These factors include, but are not limited to, those risks set forth under Management s Discussion and Analysis of Financial Condition and Results of Operations Risk Factors.

PART I

ITEM 1. Business.

Founded in 1983, Altera Corporation designs, manufactures, and markets: (1) programmable logic devices, or PLDs; (2) HardCopy® devices; (3) pre-defined design building blocks known as intellectual property, or IP, cores; and

(4) associated development tools. Our headquarters facility is located at 101 Innovation Drive, San Jose, California 95134, and our Web site is www.altera.com. Our common stock trades on the Nasdaq National Market under the symbol ALTR.

Our PLDs, which consist of field-programmable gate arrays, or FPGAs, and complex programmable logic devices, or CPLDs, are semiconductor integrated circuits that are manufactured as standard chips that our customers program to perform desired logic functions within their electronic systems. Our HardCopy devices enable our customers to move from a high-density FPGA to a low-cost, high-volume, non-programmable implementation of their designs. Our customers can license IP cores from us for implementation of standard functions in their PLD designs. Customers develop, compile, and verify their PLD designs, and then program their designs into our PLDs using our proprietary development software, which operates on personal computers and engineering workstations.

We were one of the first suppliers of complementary metal oxide semiconductor, or CMOS, PLDs and are currently a global leader in this market. Today, we offer a broad range of PLDs that offer unique features as well as differing densities and performance specifications. Our products serve a wide range of customers within the communications, computer and storage, consumer, and industrial market segments. An overview of typical PLD applications within these markets is shown in the table below.

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Market Segment	Market Sub-Segment	Application/Product
Communications	Networking	Routers
		Switches
	Wireline	Access Systems
		Metropolitan Area Networks
		Optical Networks
	Wireless	Cellular Base Stations
		Wireless Local Area Networks
Computer and Storage	Computer	Mainframes
		Servers
	Office Automation	Copiers
		Multi-Function Peripherals
		Printers
	Storage	Redundant Array of Inexpensive Disks (RAID) Systems
		Storage Area Networks
Consumer	Broadcast	Studio Editing
		Satellite Equipment
		Broadcasting Equipment
	Entertainment	Audio/Video Systems
		Video Display Systems, Televisions
Industrial	Automotive	Car Entertainment Systems
		Navigation Systems
	Instrumentation	Manufacturing Systems
		Medical Diagnostic Systems
		Test Equipment
	Military	Guidance and Control
		Radar Systems
		Secure Communications
	Security/Energy Management	Automatic Teller Machines (ATMs)

Card Readers

Energy Management Systems

Digital Logic Overview

Three principal types of digital integrated circuits are used in most electronic systems: (1) processors, (2) memory, and (3) logic.

Processors, which include microprocessors, microcontrollers, and digital signal processors, are typically used for control and central computing tasks;

Memory is used to store programming instructions and data; and

Logic is typically used to manage the interchange and manipulation of digital signals within a system.

While system designers employ a relatively small number of standard architectures to meet their processor and memory needs, they require a wide variety of logic circuits to differentiate their end products.

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The majority of the digital logic market is made up of three product sub-segments: (1) application-specific integrated circuits, or ASICs; (2) application-specific standard products, or ASSPs; and (3) PLDs. In a broad sense, all of these products are competitive with each other as they generally may be used in the same types of applications in electronic systems. However, differences in cost, performance, density, flexibility, ease-of-use, and time-to-market dictate the extent to which they may be directly competitive for particular applications. The table below summarizes key characteristics of ASIC, ASSP, and PLD products from the perspective of the end customer.

	ASIC	**ASSP**	**PLD**
Customizable	Yes, by chip fabrication facility	No	Yes, by end user
Erasability/Re-programmability	No	No	Yes
Relative Time-to-Market	Slow	Fast	Fast
Relative Unit Cost	Low	Moderate	Moderate to High
Customer s Development Cost	High	Low	Moderate

ASICs, also referred to as standard cells, are defined by the end customer and customized during manufacturing at the chip fabrication facility. As a result, a given ASIC has a fixed function for use by a single customer in a single application. ASSPs are defined by the ASSP supplier and sold as standard devices that cannot be customized by the end user. Rather than being built for a single customer as in the case of an ASIC, an ASSP is built for a specific type of application and is typically targeted and sold to a limited number of customers. For simplicity, an ASSP may be viewed as an ASIC developed for more than one customer. In contrast to the fixed nature of both ASICs and ASSPs, PLDs are customized by the end customer and hence can be used in a wide range of applications. As a result, a given PLD is typically sold to hundreds or thousands of customers.

The inherent flexibility of PLDs provides significant advantages over ASICs, including design change simplicity, shorter design cycles, and lower development cost. In contrast to ASIC users, PLD users program their design directly into the PLD and can have custom chips that are fully functioning and verified at the time the design is completed, thereby bypassing the lengthy and complex cycles involved in the verification and fabrication of ASICs. As a result of user programmability, PLD customers may experiment with and revise their designs in a relatively short amount of time and with minimum development cost. The ease-of-use and time-to-market advantages of PLDs are complemented by the added benefit of field upgradeability, which generally enables PLD users to modify the PLD design after the electronic system has been shipped.

Due to their programmability, however, PLDs generally have a larger die size and associated higher per-unit cost when compared to ASICs. While the customized manufacturing of ASICs can result in more optimized chip performance and lower per-unit cost than PLDs, ASICs require higher up-front costs and longer manufacturing lead times.

Historically, due to their lower per-unit costs, ASICs have been viewed as more cost effective than PLDs for large-volume, low-cost applications such as consumer electronics. Consequently, the unit volume of a PLD implementation is typically lower than that for an ASIC implementation. Additionally, some customers may choose to prototype with PLDs for initial engineering development and then re-design to an ASIC in volume production for lower per-unit cost. While such re-designs have always been an aspect of the PLD business, we believe that the following factors are driving electronic systems manufacturers to use PLDs for their systems entire life cycle: (1) the continual reduction in the price premium of programmable logic; (2) the ever-shortening product life cycle of many electronic systems; and (3) the use of more advanced chip manufacturing technology, which elevates the failure risk of

ASICs and the up-front costs of design, verification and mask development, known as non-recurring engineering costs, or NREs.

ASSPs have been used in applications where specific fixed functions are needed and where little differentiation is required, such as in implementing certain electronic industry standards. However, the fixed functionality of ASSPs limits the range of applications they can address. In contrast to ASSPs, the flexibility found in PLDs allows users to define

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circuitry to suit their value-added and differentiated system architecture, rather than restrict their system architecture based upon the ASSP manufacturer s device specification. Furthermore, the emergence of IP design blocks in PLDs has allowed the implementation of standardized functions otherwise performed by ASSPs.

We believe that the adoption of more advanced chip manufacturing technology, which is increasing the total cost of chip development, is reducing the cost advantage of ASICs and ASSPs. The cost and time for us to develop a PLD is comparable to the cost and time for others to develop an ASIC or ASSP. Since each of our PLDs is sold to hundreds or thousands of customers, we generally spread development costs and generate revenue across a wide customer base. In contrast, ASIC and ASSP suppliers build fixed, custom chips for a single customer or for a single application. Because

it is increasingly difficult for ASIC and ASSP suppliers to identify opportunities that generate enough revenue relative to the high development costs, we believe that ASIC suppliers are imposing ever-higher up-front costs and minimum order quantities on customers, and ASSP manufacturers may be developing fewer products.

Strategy and Competition

We believe that the increasing cost associated with the use of advanced chip manufacturing technology is driving the development and use of standard, programmable digital integrated circuits. As in microprocessors and memory, PLDs provide the flexibility for the end user to change and define circuits without incurring the cost, risk and delays of custom chip fabrication. Consequently, we believe that customers will increasingly use PLDs rather than ASICs or ASSPs, despite the higher per-unit cost of PLDs.

We believe that competitive pressures to improve chip functionality, performance, reliability, and cost are driving customers increasingly towards high-density PLDs. With high-density PLD solutions, system designers require fewer, if any, separate microprocessor, memory, or logic chips, thereby allowing them to reduce the size and cost of their systems. Programmability allows the user to quickly develop and modify custom circuitry, thereby enhancing time-to-market and reducing risk.

In order to capture a larger percentage share of the semiconductors purchased by our customers, we are focused on providing the most advanced programmable solutions. To accomplish this goal, we strive to offer our customers:

- PLDs with the speed, density, functionality, and package types to meet their specific needs;
- HardCopy devices that enable our customers to easily move from a PLD to a low-cost structured ASIC implementation of their designs;
- Optimized, pre-verified system-level IP cores to speed their design process;
- State-of-the-art development tools that offer low cost and ease of use and compatibility with other industry-standard electronic design automation, or EDA, tools; and

A complete customer support system.

We believe that the greatest opportunity for our growth is displacing ASICs and ASSPs. We compete with other PLD vendors to realize this opportunity and for market share within the PLD market. The programmable logic market is highly concentrated with two vendors accounting for a majority of the total market: ourselves and Xilinx, Inc. Smaller vendors, including Lattice Semiconductor Corporation and Actel Corporation, each comprise less than 10% of the PLD market. Within the PLD market, sales of FPGAs and CPLDs constitute the majority of revenues. CPLDs and FPGAs are often viewed as two distinct sub-segments of the PLD market and, due to product differences, generally do not compete directly for the same customer designs. Altera was an early entrant in the CPLD sub-segment and, by our estimates based on publicly available data, has held over 40% market share for more than five years. The FPGA sub-segment has outgrown the CPLD sub-segment. It now comprises approximately 74% of total PLD sales, and it is generally accepted by participants and observers of the industry that the FPGA sub-segment will continue to be the fastest growing sub-segment of the PLD market. Based on publicly available data, we believe that in 2004 we had a 30% share in the FPGA sub-segment, up from 29% in 2003 and 27% in 2002, and that maintaining or increasing market share in this sub-segment is important to our long term growth.

Competition between vendors is most intense in the design-win phase of the customer s design. The design win phase refers to the customer s selection of a particular vendor s product for use in the customer s electronic system.

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Because each vendor s product offering is proprietary, the cost to switch PLD devices after a system has been designed and prototyped is very high. Therefore, customers rarely switch PLD vendors after this initial selection for a particular design. From the time a design-win is secured it can be as long as two years, and sometimes longer, before the customer starts volume purchases of our devices. Typically the customer selects the PLD vendor relatively early in the customer s design program. It takes several years from that point before the customer has completed its entire system design, built prototypes, sampled the marketplace for customer acceptance, made any modifications, and established volume manufacturing capacity. Thus, movements in PLD market share often occur some time after the change in relative competitiveness that gave rise to the market share shift. Because of this time lag, market share is a lagging indicator of relative competitive strength. Because it is extremely difficult to forecast the degree of success or timing of

a customer s program, and because the end markets are so fragmented (there are approximately 14,000 PLD customers) it is difficult even for PLD vendors to gauge their competitive strength in securing design wins as of a particular point in time.

Principal competitive factors in the programmable logic sub-segment include:

- Technical innovation;
- Device performance and features;
- Capability of software development tools and IP cores;
- Pricing and availability;
- Quality and reliability;
- Technical service and customer support;
- Manufacturing and operational competence; and
- Customer familiarity with existing vendors and entrenched products.

We believe that we compete favorably with respect to these factors and that our proprietary device architecture and our installed base of software development systems may provide some competitive advantage. We have been able to introduce new product families that, as compared to their predecessors, provide greater functionality at a lower price for any given density because of unique architectural innovation and advanced technologies.

We also believe that in certain circumstances these new product families compete favorably against ASICs and ASSPs, as well as against other types of chips such as microcontrollers, microprocessors, and digital signal processors. Some of the functionality

offered by these other types of chips can be implemented in PLDs using pre-built and pre-verified IP cores. An IP core is typically offered in either a hard or soft form. A hard IP core is embedded into the actual circuitry of our chips. A soft IP core is a licensed design file that our customers incorporate into their design and program onto the PLD. By incorporating more functionality and logic capacity on a programmable fabric while providing the necessary design tools and IP cores to design a reliable system, we believe we can enhance the advantages of PLDs over competing solutions.

As is true of the semiconductor industry as a whole, the digital logic segment and the PLD sub-segment are intensely competitive and are characterized by rapid technological change, rapid rates of product obsolescence, and price erosion. All of these factors may adversely affect our future operating results. For a discussion of risk factors associated with our strategy and competition, see Item 7: Risk Factors Our financial results depend on our ability to compete successfully in the highly competitive semiconductor industry and Our future success depends on our ability to define, develop, and manufacture technologically-advanced products.

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Products

Our products consist primarily of devices, IP cores, and proprietary development tools. A brief overview of these products follows.

Devices

Our devices fall into the following four categories: (1) FPGAs, (2) CPLDs, (3) low-cost structured ASIC devices, and (4) configuration devices that store the programming code for our FPGAs. These devices span multiple architectures and device families, with numerous product options. Each device family offers unique functional benefits and differing density and performance specifications. Sales of FPGAs accounted for 68% of our total sales in 2004, 65% in 2003 and 61% in 2002. Sales of CPLDs accounted for 23% of our total sales in 2004, 27% in 2003 and 31% in 2002. Sales of our other products accounted for less than 10% of our total sales in 2004, 2003 and 2002. Some of our latest device families, which are typically designed into new end equipment, are summarized and described below. Certain of our more mature device families, which are not now typically designed into new end equipment but may still comprise significant portions of our total revenue, have been omitted from the descriptions below.

Stratix® and Stratix II High-End, System-Level FPGAs

Our Stratix product families are built using the most advanced CMOS static random access memory, or SRAM, process technology and address a broad range of applications in communications, computing and storage, consumer, and industrial markets. Architectural innovations within Stratix FPGAs help provide industry-leading logic density and performance, while offering high speed and flexible embedded system functionality such as memory and digital signal processing (DSP) blocks. Additionally, some Stratix FPGA devices offer advanced transceiver capabilities for applications which require reliable, multi-gigabit data transfer rates.

Cyclone and Cyclone II Low-Cost, High Volume FPGAs

Our Cyclone product families are built using advanced CMOS SRAM process technology and bring programmable flexibility to cost-sensitive applications across a vast array of end markets within communications, computing and storage, consumer, and industrial. Architectural innovation allows Cyclone devices to combine a low-cost structure with abundant device resources making them ideal for high-volume applications across all our served markets in areas such as digital set-top boxes, DVD player/recorder systems, automotive telematics, and flat panel televisions.

MAX® and MAX II CPLDs

Our MAX CPLD product families are instant-on, non-volatile devices which address a wide range of high-speed glue logic functions found in a broad range of electronics equipment in the communications, computing and storage, consumer, and industrial markets. Glue logic enables the interaction of multiple subsystem components. Our current generation MAX II devices are based on a newly developed and revolutionary architecture that reduces costs by up to 50 percent or more, consumes 90 percent less power, and increases performance by as much as 50 percent over the previous generation MAX family.

HardCopy Structured ASIC Devices

Our HardCopy products offer customers a migration path from the highest density FPGA families to a low-cost structured ASIC device for high-volume production applications. In contrast to traditional ASICs, in which every mask layer is custom and unique to the customer s design, structured ASICs share a common set of base layers and the customer s design is implemented in the device by customizing only the last few mask layers. For a given process technology, structured ASIC devices deliver most of the performance of comparable ASICs but with reduced development costs and shorter production lead-times.

HardCopy device base arrays are developed from equivalent FPGAs by removing the configuration circuitry, programmable routing, and programmability for logic and memory. This process reduces the die size while maintaining compatibility with the FPGA architecture, providing seamless migration of the customer design to a HardCopy device. As a result, HardCopy devices extend the flexibility and time-to-market advantages of high-density FPGAs to high-volume, more cost-sensitive applications traditionally served by fixed ASICs.

Intellectual Property Cores

IP cores are pre-verified building blocks that implement standard system-level functions that customers incorporate in their PLD design by using our proprietary development software. Soft IP cores available for use in our devices consist

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of our Nios® and Nios II soft core embedded processors and our portfolio of MegaCore® functions, which we license to our customers, and our Altera Megafunction Partners Program, or AMPP℠, cores, which are licensed to our customers by third parties.

The Nios and Nios II embedded processors utilize a reduced instruction set computing, or RISC, architecture and is a cost-competitive and flexible alternative to discrete microcontroller solutions. The Nios embedded processors can be efficiently implemented in all of our newer FPGA devices. The Nios II soft core embedded processor provides up to a 300% improvement in price/performance when compared to the original Nios embedded processor and competes favorably with many discrete microcontrollers.

With IP cores, system designers can focus more time and energy on improving and differentiating the unique aspects of their system design, rather than spending time designing common off-the-shelf functions. IP cores are essential to providing our customers solutions that enable higher levels of integration and faster time to market. Today, we offer a broad range of soft IP cores for various system blocks for DSP algorithms, bus interfaces, memory controllers, telecommunications, data communications, microprocessors, and peripherals. Prior to licensing a soft IP core, customers may download an encrypted soft IP core from our web site and verify that it works in their own system design. While licensing soft IP cores represents a small portion of our total revenues, we believe a broad product offering in this area is necessary to compete with ASIC and ASSP suppliers as well as other PLD suppliers.

Development Tools

Our proprietary development tools, consisting primarily of the Quartus® II software, enable our customers to successfully complete all necessary PLD design steps. Our tools enhance engineering productivity by facilitating design entry, design compilation, design verification, and device programming during the initial design and subsequent design revisions.

Our development tools can be used on a variety of computer platforms and have built-in interfaces with other engineering design software, thus making it possible for customers to utilize their existing design environment. Our Quartus II software development tools run under the Microsoft Windows, UNIX (including Solaris and HP-UX), and Linux operating environments. Our development tools also provide interfaces to many industry-standard EDA tools, including those offered by Mentor Graphics Corporation, Synplicity, Inc., Synopsys, Inc., and Cadence Design Systems, Inc.

Like soft IP cores, our development tools generate less than 10% of our total revenues but are a critical and necessary element of our product portfolio because they are used to program our devices and can drive our success in competing for design wins against ASIC and ASSP suppliers as well as other PLD suppliers.

Research and Development

Our research and development activities have focused primarily on PLDs and on the associated IP cores and development software and hardware. We have developed these related products in parallel to provide comprehensive design support to customers upon device introduction. As a result of our research and development efforts, we have introduced during the past three years a number of new families, including the Stratix II, Stratix, Stratix GX, Cyclone II, Cyclone, MAX II, and HardCopy device families, as well as major enhancements to our IP core offering and the Quartus II development platform.

Our research and development expenditures were $180.5 million in 2004, $178.5 million in 2003, and $182.8 million in 2002. We expense all research and development costs that have no alternative future use as incurred. We intend to continue to spend substantial amounts on research and development in order to continue to develop new products and achieve market acceptance for such products, particularly in light of the industry pattern of short product life cycles and intense competition within the digital logic market. For a discussion of risk factors associated with our research and development efforts, see Item 7: Risk Factors Our future success depends on our ability to define, develop, and manufacture technologically-advanced products.

Patents, Trademarks, and Licenses

We generally rely on intellectual property law, including patent, copyright, trademark, and trade secret laws, to establish and maintain our proprietary rights in products and technology. We have increased investment in intellectual property protection in the last several years and, as of December 31, 2004, we owned more than 940 United States and 180 foreign patents. We also have a significant number of patent applications currently pending. Also, we have used,

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registered, and applied to register certain trademarks and service marks to distinguish our products, technologies, and services from those of our competitors in the United States and foreign countries. In addition, we file registrations in the United States under the Semiconductor Chip Protection Act to protect our chip designs.

We have also entered into technology licensing agreements that give us rights to design, manufacture, and package products using certain intellectual property owned by others. In July 2001, we entered into a settlement agreement with Xilinx under which we settled all pending litigation with Xilinx. As part of the settlement agreement, we entered into a royalty-free patent cross license agreement with Xilinx, including a prohibition of further patent litigation between the two companies through July 2006. In connection with the settlement agreement, we paid Xilinx a one-time payment of

$20.0 million. Similarly, in July 2001, we entered into a settlement agreement with Lattice under which we settled all pending patent litigation. As part of the settlement agreement, we entered into a royalty-free patent cross license agreement with Lattice, including a multi-year prohibition of further patent litigation between the two companies. No payments were made by Altera or Lattice as part of the settlement.

When necessary, we seek to enforce our intellectual property rights. Although we believe that protection afforded by our intellectual property rights has value, the rapidly changing technology in the semiconductor industry makes our future success dependent primarily on the innovative skills, technological expertise, and management abilities of our employees rather than on our patent, trademark, or other proprietary rights. For a discussion of risk factors associated with our patents, trademarks, and licenses, see Item 7: Risk Factors Our intellectual property rights may not provide meaningful protection from our competitors and We are at risk of intellectual property infringement claims by third parties.

Marketing and Sales

We market our products worldwide through a network of third-party distributors, independent sales representatives, and direct sales personnel. From time to time, we may add or remove independent sales representatives or third party distributors from our selling organization as we deem appropriate.

Altera Distributors

We engage distributors in all major geographic markets that we serve. These distributors are franchised by several component manufacturers to sell a wide variety of products to many customers, and they may sell competing products or solutions. We have contracts with our distributors, which can be terminated by either party in a relatively short period of time. The main roles of the independent distributors are to provide demand creation for the broad base of customers and order fulfillment services.

All of our distributors stock inventory of our products. The distributors purchase products from us at a set distributor cost which is denominated in U.S. dollars. Title and risk of loss generally transfer upon delivery to the distributor or upon shipment from our stocking locations, which are primarily located at the independent subcontractors we employ for test and assembly services in the Asia Pacific region or our warehouse in San Jose. Upon shipment to the distributor, we defer revenue on the sale in accordance with our revenue recognition policy. Consequently, the deferred revenue and the corresponding deferred cost of sales are recorded

as a current liability under the caption titled deferred income and allowances on sales to distributors. All payments to us are denominated in U.S. dollars. For a detailed discussion of our revenue recognition policy, see Item 7: Critical Accounting Estimates Revenue Recognition.

Our sales cycle during the design-win phase is generally lengthy and often requires the ongoing participation of sales, engineering, and managerial personnel. Once customer demand has been created and a design is ready to move into production, the order fulfillment process begins. Regardless of whether Altera, the independent sales representative, or the distributor created the demand, a local distributor will process and fulfill over 95% of all orders from customers. The distributor is the legal seller of the products and as such they bear all risks generally related to the sale of commercial goods, such as credit loss, inventory shrinkage and theft, as well as foreign currency fluctuations.

In accordance with our distribution agreements and industry practice, we have granted the distributors the contractual right to return certain amounts of unsold product on a periodic basis and also to receive price concessions for unsold product in the case of a subsequent decrease in list prices. In addition, we also provide a mechanism for the distributor to seek a price discount in order to meet a high volume and/or competitive situation. This process is standard business practice in the industry and we engage in some level of discounting with every distributor. All discounts are

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managed on a case-by-case basis and require Altera approval in advance. These discounts are contingent on an actual sale being made by the distributor to the end customer on the terms and conditions agreed upon by Altera. Discounts are material and are settled on a periodic basis.

For the year ended December 31, 2004, worldwide sales through distributors for subsequent resale to original equipment manufacturers, or OEMs, or their subcontract manufacturers accounted for more than 95% of total sales. In 2004, three distributors, Arrow Electronics, Inc., Altima Corporation, and Paltek Corporation, each accounted for more than 10% of sales. In 2003 and 2002, two distributors, Arrow Electronics, Inc. and Altima Corporation, each accounted for more than 10% of sales. Arrow Electronics, Inc. is our largest distributor and on a worldwide basis accounted for 46% of sales in 2004, 51% of sales in 2003, and 53% of sales in 2002. Altima Corporation, which serves the Japanese market, accounted for 16% of sales in 2004, 16% of sales in 2003, and 14% of sales in 2002. Paltek Corporation, which also serves the Japanese market, accounted for 10% of total sales in 2004 and below 10% in 2003 and 2002.

For a discussion of the risk factors associated with our distribution model, see Item 7: Risk Factors We depend on distributors to generate sales and fulfill our customer orders and Conditions outside the control of our independent subcontractors and distributors may impact their business operations. See also Note 2 Significant Accounting Policies Concentrations of Credit Risk to our Consolidated Financial Statements.

Altera Sales, Marketing, and Customer Support

Altera also maintains a dedicated global sales and marketing organization to create customer demand and manage the network of distributors and independent sales representatives. In general, Altera focuses its direct demand creation efforts on a limited number of key accounts, as well as providing technical, business, and marketing support to the distributors and independent sales representatives. The independent sales representatives are mostly located in North America and in select European countries. The independent sales representatives create demand and provide customer support in a defined territory and, in many cases, with a defined set of customers. They stock no inventory and provide no order fulfillment services. All of our contracts with independent sales representatives may be terminated by either party in a relatively short period of time.

Customer support and service are important aspects of selling and marketing our products. We provide several levels of technical user support, including applications assistance, design services, and customer training. Also, our applications engineering staff publishes data sheets and application notes, conducts technical seminars, and provides design assistance via the Internet and electronic links to the customer.

Throughout the United States, we have domestic sales offices in numerous major metropolitan areas. In addition, we maintain international sales support offices in various metropolitan areas including Bangalore, Beijing, Cork, Helsinki, Hong Kong, London, Munich, Osaka, Ottawa, Paris, Seoul, Shanghai, Shenzhen, Stockholm, Taipei, Tokyo, and Turin.

No single end customer accounted for more than 10% of our sales in 2004, 2003, or 2002.

International Sales

International sales, which consist of all sales outside of North America, constituted 71% of sales in 2004, 67% of sales in 2003, and 60% of sales in 2002. Sales to Japan accounted for 25% of total revenue in 2004, 24% in 2003, and 21% in 2002. No other country accounted for sales in excess of 10% of total revenue during 2004, 2003 or 2002. We expect international sales to continue to increase as a percentage of our revenue in the future. All of our sales to foreign entities are denominated in United States dollars. For a detailed description of our sales by geographic region, see Item 7: Results of Operations Sales by Geography and Note 10 Segment and Geographic Information to our Consolidated Financial Statements. For a discussion of the risk factors associated with our foreign operations, see Item 7: Risk Factors We depend on international sales for a majority of our total sales and Our business is subject to tax risks associated with being a multinational corporation.

Backlog

Our backlog consists mostly of distributor orders, as well as limited OEM orders, that are for delivery within the next three months. Our backlog of orders on December 31, 2004, was approximately $330.8 million, compared to $292.4 million on January 2, 2004. The increase in backlog is attributable to an increase in sales, together with an increase in advance orders made by our distributors and OEMs.

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Historically, backlog has been a poor predictor of future customer demand. While our backlog can increase during periods of high demand and supply constraints, our orders are generally cancelable without significant penalty at the option of the purchaser within a short period of time. Further, we defer recognition of revenue on shipments to distributors until the product is resold. For all of these reasons, backlog as of any particular date should not be used as a predictor of future sales.

Manufacturing

Wafer Supply

Die, cut from silicon wafers, are the essential components of all our devices and a significant portion of the total device cost. Our manufacturing strategy is known as a fabless business model since we do not directly manufacture our silicon wafers. Instead, our silicon wafers are produced by independent semiconductor foundries. This enables us to take advantage of these suppliers high-volume economies of scale and also gives us direct and timely access to advanced process technology. We purchase nearly all of our silicon wafers from Taiwan Semiconductor Manufacturing Company, or TSMC, who is recognized as the preeminent independent semiconductor foundry. We have no formalized long-term supply or allocation commitments from TSMC. In the past, we have used other foundry vendors, and we may establish additional foundry relationships as such arrangements become economically useful or technically necessary. For a discussion of risk factors associated with our wafer supply arrangements, see Item 7: Risk Factors We depend entirely on independent subcontractors to supply us with finished silicon wafers and Conditions outside the control of our independent subcontractors and distributors may impact their business operations.

Testing and Assembly

After wafer manufacturing is completed, each silicon wafer is tested using a variety of test and handling equipment. The vast majority of such silicon wafer testing is performed at TSMC, and our San Jose pilot line facility which is used primarily for new product development. This testing is performed on equipment owned by us and consigned to our partners.

The wafers are then shipped to various assembly suppliers in Asia, where good die are separated into individual chips that are then encapsulated in packages. We employ a number of independent suppliers for assembly purposes. This enables us to take advantage of these subcontractors high-volume economies of scale and supply flexibility, and gives us direct and timely access to advanced packaging technology. We purchase almost all of our assembly services from Amkor Electronics, Inc., in Korea and the Philippines, ASAT Limited in Hong Kong, and Advanced Semiconductor Engineering, Inc., or ASE, in Malaysia and Taiwan.

Following assembly, each of the packaged units receives final testing, marking, and inspection prior to being packaged for storage as finished goods. We obtain almost all of our final test and back-end operation services from Amkor, ASAT, and ASE. Final testing by these assembly suppliers is accomplished through the use of our proprietary test software, as well as hardware that is consigned to or owned by such suppliers.

The majority of our inventory, including finished goods, is warehoused at our subcontract test and assembly partners located in Asia with a smaller portion located at our corporate facility in San Jose, California. On our behalf, these suppliers also ship our products to our OEMs and distributors.

For a discussion of risk factors associated with our testing and assembly arrangements, see Item 7: Risk

Factors We depend on independent subcontractors, located in Asia, to assemble and test our semiconductor products and Conditions outside the control of our independent subcontractors and distributors may impact their business operations.

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Executive Officers of the Registrant

Our executive officers and their ages are as follows:

Name	Age	Position
John P. Daane	41	President and Chief Executive Officer
Denis M. Berlan	55	Executive Vice President and Chief Operating Officer
John R. Fitzhenry	55	Vice President, Human Resources
Lance M. Lissner	55	Senior Vice President, Business Development
George A. Papa	56	Senior Vice President, Worldwide Sales
Jordan S. Plofsky	44	Senior Vice President, Marketing
Nathan M. Sarkisian	46	Senior Vice President and Chief Financial Officer
Katherine E. Schuelke	42	Vice President, General Counsel and Secretary

There are no family relationships among our executive officers or between any executive officer and any of our directors.

John P. Daane joined us as our President and Chief Executive Officer in November 2000, and was elected as one of our directors in December 2000 and our Chairman of the Board in May 2003. Prior to joining us, Mr. Daane spent 15 years at LSI Logic Corporation, a semiconductor manufacturer, most recently as Executive Vice President, Communications Products Group, with responsibility for ASIC technology development and the Computer, Consumer, and Communications divisions. Mr. Daane earned his bachelors degree from the University of California, Berkeley in 1986.

Denis M. Berlan joined us in December 1989 as Vice President, Product Engineering and was named Vice President, Operations and Product Engineering in October 1994. In January 1996, he was named Vice President, Operations. In January 1997, he was named Executive Vice President and Chief Operating Officer. He was previously employed by Advanced Micro Devices, Inc., or AMD, a semiconductor manufacturer, and by Lattice Semiconductor Corporation, a semiconductor manufacturer, in engineering management capacities. Mr. Berlan received his M.S.E.E. in 1972 and Ph.D. in 1977 from the University of Grenoble in France and an M.B.A. in 1987 from the University of Santa Clara.

John R. Fitzhenry joined us in May 1995 as Vice President, Human Resources. From February 1983 to May 1995, he was employed by Apple Computer, Inc., a manufacturer of personal computers, in various human resource management positions. Mr. Fitzhenry earned his bachelors degree from the University of California, Santa Barbara in 1971 and his J.D. from the University of the Pacific, McGeorge School of Law in 1976.

Lance M. Lissner joined us in May 1998 as Vice President of Business Development and Investor Relations and was appointed Senior Vice President, Business Development in November 2000. Prior to that time, Mr. Lissner was a corporate officer of Measurex Corporation, a developer of computer-integrated measurement, control, and information systems, where he was employed since 1973 and held various positions in sales, marketing, engineering, and business development. Mr. Lissner earned his bachelors degree from Harvey Mudd College in 1972 and his masters degree from Stanford University in 1973.

George A. Papa joined us in February 2002 as Senior Vice President, Worldwide Sales. From February 2000 to February 2002, Mr. Papa served as Vice President of Worldwide Sales of the Communications Business Group of Marvell Semiconductor, Inc., a semiconductor company. From March 1997 to February 2000, he served as Vice President of Worldwide Sales for Level One Communications, Inc., a subsidiary of Intel Corporation, a semiconductor company. From February 1991 to March 1997, Mr. Papa served as Vice President of North American Sales for Siemens Corporation, a diversified global technology company. Mr. Papa earned his bachelors degree from Northeastern University in 1971.

Jordan S. Plofsky joined us in February 2001 as Senior Vice President, Vertical Markets and Embedded Processor Products and became Senior Vice President, Applications Business Groups in March 2002 and Senior Vice President, Marketing in November 2004. Prior to joining us, Mr. Plofsky was employed by LSI Logic from October 1996 to February 2001, most recently as Executive Vice President, Enterprise Infrastructure Group from November 2000 to

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February 2001 and Vice President and General Manager, Networking Products Division from June 1998 to November 2000. Mr. Plofsky earned a bachelors degree from the University of Illinois, Urbana-Champaign in 1982.

Nathan M. Sarkisian joined us in June 1992 as Corporate Controller. He was appointed Vice President, Finance and Chief Financial Officer in August 1995 and Senior Vice President and Chief Financial Officer in March 1998. Prior to joining us, Mr. Sarkisian held various accounting and financial positions at Fairchild Semiconductor and at Schlumberger Limited, an oil field services company. Mr. Sarkisian earned a bachelors degree from Stanford University in 1981 and an M.B.A. from Harvard University in 1992.

Katherine E. Schuelke joined us in March 1996 as Corporate Attorney. She became Senior Corporate Attorney in July 1997 and Assistant General Counsel and Assistant Secretary in July 1999. In October 2001, she was appointed Vice President, General Counsel and Secretary. Prior to March 1996, Ms. Schuelke was an attorney at the law firm of Morrison & Foerster LLP for seven years. Ms. Schuelke earned a bachelors degree from the State University of New York at Buffalo in 1986 and a J.D. from New York University School of Law in 1989.

Employees

As of December 31, 2004, we had 2,164 regular employees. Of these employees, 1,333 were located in the United States, and 831 were employed in 18 other countries. None of our employees is represented by a labor union or collective bargaining agreement. We have not experienced any work stoppages, and we believe that our employee relations are good.

Web Site Access to Company s Reports

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge on our Web site at www.altera.com, as soon as reasonably practical after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission. We will also provide a copy, free of charge, upon request made to Altera Corporation, Attn: Investor Relations, 101 Innovation Drive, San Jose, California 95134.

This annual report includes trademarks and servicemarks of Altera and other companies which are unregistered and registered in the United States and other countries.

ITEM 2. Properties.

Our headquarters facility is located in San Jose, California, on approximately 25 acres of land that we purchased in June 1995. The campus for the headquarters facility currently consists of four interconnected buildings totaling approximately 500,000 square feet.

Design, research, marketing, administrative, and limited manufacturing activities are performed in this facility. We also have a 240,000 square foot design and test engineering facility in Penang, Malaysia. This facility is situated on land leased on a long-term basis from the Penang Development Corporation. Finally, we lease our domestic and international offices, including our European Technology Center in the United Kingdom, our Toronto Technology Center, and our Ottawa Technology Center. Rental expense under all operating leases amounted to approximately $9.1 million in 2004. We believe that our existing facilities and any planned future expansions are adequate for our current and foreseeable future needs.

ITEM 3. Legal Proceedings.

None.

ITEM 4. Submission of Matters to a Vote of Security Holders.

None.

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PART II

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

Our common stock trades on the Nasdaq National Market under the symbol ALTR. As of February 15, 2005, there were approximately 637 stockholders of record. The majority of our shares are held by brokers and other institutions on behalf of approximately 103,589 stockholders as of February 15, 2005.

The closing price of our common stock on February 15, 2005 was $20.51 per share as reported by the Nasdaq National Market. The following table sets forth, for the periods indicated, the high and low closing sale prices for our common stock as reported by the Nasdaq National Market:

	2004		2003	
	High	Low	High	Low
First Quarter	$ 26.82	$ 19.32	$ 15.20	$ 10.84
Second Quarter	23.57	19.75	19.32	13.90
Third Quarter	21.39	17.75	23.11	17.44
Fourth Quarter	24.04	19.57	25.36	17.70

Our policy has been to reinvest our earnings to fund future growth and to repurchase shares of our common stock. Accordingly, we have not paid any cash dividends on our common stock and do not anticipate paying cash dividends in the foreseeable future.

Issuer Purchases of Equity Securities: During the fourth quarter of 2004, we repurchased shares of our common stock as follows:

(*In thousands, except footnotes and per share amounts*)		Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Additional shares authorized for repurchase	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs
10/02/2004	10/29/2004	75	$ 22.63	75		21,793
10/30/2004	11/26/2004	42	$ 21.81	42		21,751
11/27/2004	12/31/2004	490	$ 20.38	490		21,261

(1) No shares were purchased outside of publicly announced plans or programs.

The company repurchases shares under the program announced on July 15, 1996 that has no specified expiration. As of December 31, 2004, the Board of Directors had authorized, since the inception of the program, a total of 88.0 million shares for repurchase. No existing repurchase plans or programs expired, nor has the company decided to terminate any repurchase plans or programs prior to expiration. There are no existing plans or programs under which the company does not intend to make further purchases.

During the fourth quarter of 2004, we entered into an agreement pursuant to SEC Rule 10b5-1 under which we authorized a third-party broker to purchase shares on our behalf during our normal blackout period according to predetermined trading instructions. In addition, we may repurchase shares of our common stock under the guidelines of SEC Rule 10b-18.

ITEM 6. Selected Financial Data.

The section entitled Selected Consolidated Financial Data in our 2004 Annual Report is incorporated herein by reference.

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

Critical Accounting Estimates

The preparation of our financial statements and related disclosures in conformity with accounting principles generally accepted in the United States requires our management to make judgments and estimates that affect the amounts reported in our financial statements and accompanying notes. Our management believes that we consistently apply these judgments and estimates and the financial statements and accompanying notes fairly represent all periods presented. However, any differences between these judgments and estimates and actual results could have a material impact on our statement of income and financial conditions. Critical accounting estimates, as defined by the Securities and Exchange Commission, are those that are most important to the portrayal of our financial condition and results of operations and require our management s most difficult and subjective judgments and estimates of matters that are inherently uncertain. Our critical accounting estimates include those regarding (1) revenue recognition; (2) valuation of inventories; and (3) taxes.

Revenue Recognition: We sell our products to original equipment manufacturers, or OEMs, and to electronic components distributors who resell these products to OEMs, or their subcontract manufacturers. We recognize revenue on products sold to OEMs upon shipment. As of December 31, 2004, more than 95% of our products are sold to distributors for subsequent resale to OEMs or their subcontract manufacturers. Because our sales to distributors are made under agreements allowing for product returns, price adjustments or, under certain circumstances, other credits, we defer recognition of revenue on products sold to distributors until the products are resold. Deferred revenue and the corresponding deferred cost of sales are recorded in the caption titled deferred income and allowances on sales to distributors in the current liability section of our consolidated balance sheets.

Our revenue reporting is highly dependent on receiving pertinent and accurate data from our distributors in a timely fashion. Distributors provide us periodic data regarding the product, price, quantity, and end customer when products are resold as well as the quantities of our products they still have in stock. In determining the appropriate amount of revenue to recognize, we use this data and apply judgment in reconciling differences between their reported inventories and activities. If distributors incorrectly report their inventories or activities, or if our judgment is in error, it could lead to inaccurate reporting of our revenues and deferred income and net income.

Valuation of Inventories: Inventories are recorded at the lower of cost determined on a first-in-first-out basis (approximated by standard cost) or market. We establish provisions for inventory if it is in excess of projected customer demand, and the creation of such provisions results in a write-down of inventory to net realizable value and a charge to cost of goods sold. Historically, it has been difficult to forecast customer demand especially at the part-number level. Many of the orders we receive from our customers and distributors request delivery of product on relatively short notice and with lead times less than our manufacturing cycle time. In order to provide competitive delivery times to our customers, we build and stock a certain amount of inventory in anticipation of customer demand that may or may not materialize. Moreover, as is common in the semiconductor industry, we may allow customers to cancel orders with minimal advance notice. Thus, even product built to satisfy specific customer orders may not ultimately be required to fulfill customer demand.

We routinely compare our inventory against projected demand and record provisions for excess and obsolete inventories as necessary. However, actual demand may materially differ from our projected demand, and this difference could have a material adverse impact on our gross margin and inventory balances.

Taxes: We make certain estimates and judgments in the calculation of tax liabilities and the determination of net deferred tax assets, which arise from temporary differences between tax and financial statement recognition methods. We record valuation allowances, when necessary, to reduce our deferred tax assets to the amount that management estimates is more likely than not to be realized. If in the future we determine that we are not likely to realize all or part of our net deferred tax assets, an adjustment to the deferred tax asset valuation allowance would be recorded as a charge to earnings in the period such determination is made.

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In addition, the calculation of our tax liabilities involves the inherent uncertainty associated with the application of complex tax laws. We are subject to examination by various taxing authorities. We have adequately provided in our financial statements for additional taxes that we estimate may be required to be paid as a result of such examinations. If the payment ultimately proves to be unnecessary, the reversal of the tax liabilities would result in tax benefits being recognized in the period we determine the liabilities are no longer necessary. If an ultimate tax assessment exceeds our estimate of tax liabilities, an additional charge to expense will result. See Provision for Income Taxes and Note 9 Income Taxes for further discussion.

Executive Overview

Company and Market Overview

We are a global semiconductor company and the second largest supplier of high-density programmable logic devices (PLDs) as measured by market share. PLDs are semiconductor integrated circuits that are built as standard chips that customers program to perform desired logic functions within their electronic systems. Our PLDs consist of field-programmable gate arrays, or FPGAs, and complex programmable logic devices, or CPLDs. We estimate that the PLD market was approximately $3 billion in 2004, based on publicly available data. Because of user-programmability, we believe PLDs provide greater advantages in flexibility, development cost, and time-to-market over fixed chip logic alternatives which currently amount to approximately $36 billion in annual sales, based on publicly available data. These alternatives include application-specific integrated circuits, or ASICs, and application-specific standard products, or ASSPs. It is generally thought that PLDs will be increasingly chosen over fixed chip alternatives and semiconductor industry forecasts typically identify PLDs as one of the fastest growing segments within the semiconductor industry, based on publicly available data.

We design, manufacture, and market high-performance, high-density PLDs; HardCopy® structured ASIC devices which provide a fixed-function, lower cost migration path for our largest PLDs; pre-defined software design building blocks known as intellectual property, or IP, cores; and associated development tools. Over 90% of our revenue consists of sales of our devices, which are sold to approximately 14,000 customers within the communications, computer and storage, industrial, and consumer markets. The remainder of our sales is made up of IP cores and development tools which are necessary for using our devices.

Competing for Design Wins and General Competitive Factors

Because of the general industry trend moving from fixed chip alternatives to PLDs, the larger PLD vendors recently have enjoyed strong, albeit volatile, revenue growth rates and higher levels of profitability and positive cash flows. Despite the attractive business model, two vendors account for a majority of the total PLD market: ourselves and Xilinx Inc. Smaller vendors, including Lattice Semiconductor Corporation and Actel Corporation, each comprises less than 10% of the PLD market. We believe that higher profit levels and higher market concentration in the PLD industry are partly the result of (1) the fact that PLD vendors each have a large installed base of software development tools that are proprietary to each vendor and specific to its devices, and (2) the resource intensive process required to achieve design wins . A design win occurs when a customer selects a particular PLD vendor for use in the customer s electronic system. To achieve a design win success, the technical capability of the respective vendors product offerings (primarily devices and design tools) is the most significant competitive factor within the PLD market. Additional competitive factors that can impact design win success include on-time delivery and the ability to train, educate and support customers. Because each vendor s product offering is proprietary, the cost to switch PLD devices after a system has been designed and prototyped is very high. Therefore, a design win can provide the PLD vendor a predictable and profitable revenue stream through

the life of the customer s program.

From the time a design-win is secured, it can be as long as two years, and sometimes longer, before the customer starts the volume production of their system. Typically a PLD vendor for a particular application is selected relatively early in the customer s design program. It may take several years from that point before the customer has completed their entire system design, built prototypes, sampled the marketplace for customer acceptance, made any modifications, and established volume manufacturing capacity. Thus, movements in PLD market share often occur some time after the change in relative competitiveness that gave rise to the market share shift. Because of this time lag, market share is a lagging indicator of relative competitive strength. Because it is extremely difficult to forecast the degree of success and

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timing of customers programs, and because the end markets are so fragmented (there are approximately 14,000 PLD customers) it is difficult even for PLD vendors to gauge their own competitive strength in securing design wins as of a particular point in time.

Competition in the PLD market exists across its two primary product subsegments: CPLDs and FPGAs. Generally, CPLDs and FPGAs do not compete directly for the same customer designs based on product differences. Altera was an early entrant in the CPLD space and we believe, based on publicly available data, has held market share of more than 40% for more than five years. We believe, based on publicly available data, that Xilinx currently leads the FPGA subsegment with more than 55% market share. Due to the higher integration density and lower cost per function, the FPGA sub-segment has outgrown the CPLD sub-segment in recent times and it is generally accepted by participants and observers of the industry that this trend will continue. We believe, based on publicly available data, that we have approximately 30% market share in the FPGA sub-segment and that maintaining or increasing market share in this growing sub-segment is important to our long term growth and profitability.

2004 in Review

In 2004 we saw a period of accelerated revenue growth in the first half of the year followed by an industry correction and period of revenue decline during the second half of the year. Despite the decline during the second half of 2004 and the uncertainty as we begin 2005, we were able to achieve some significant milestones. Total revenue grew 23% over 2003 to $1.02 billion in 2004, driven primarily by our New Product category which grew 186% in 2004 and now comprises 27% of total revenue. Importantly, the Stratix® family, introduced in May 2002 is now our largest family in revenue contribution. Nevertheless it is relatively early in this product s life cycle revenues for new families typically achieve their peak three to five years after the initial ramp. In order to continue our design win momentum, we announced three new product families during 2004: Stratix II, MAX® II and Cyclone II. Software design tools relating to these new product families were made available to our broad customer base as early as the first quarter of 2004 and Stratix II and MAX II devices began shipping in the third quarter of 2004 with Cyclone II devices to begin shipment in the first quarter of 2005. We believe these new device offerings offer significant competitive advantages in many applications that can further our design win momentum and future revenue growth opportunity. At the same time we believe that Xilinx has a secure position in many customers legacy systems and that Xilinx will continue to generate revenue from these design-wins as long as the customers legacy systems remain in production. It is difficult to forecast the ramp of new products as they are dependent on our customers end product transitions and market success. It is also difficult to estimate the rate of growth or decline of revenues attributable to legacy design-wins.

The Challenges We Face in 2005

Looking ahead into 2005, we are engaged in a critical competitive contest for market share in the PLD market. We believe we have had recent success in securing market share and design wins that may bode well for future growth, but we cannot be certain this is the case nor can we predict with any reliability the rate at which recent design-wins may transition into volume production of our products.

Our longer term success depends on our ability to execute roll-out of our new product families and capitalize on their technical advantages by capturing design wins. Stratix II and Cyclone II are manufactured on a new leading-edge process technology for which our principal foundry vendor, Taiwan Semiconductor Manufacturing Company, has limited experience and for which we have no production experience. Simultaneous introduction of new PLD architectures and ramp of new technology processes is inherently risky. Diagnosing failures, identifying root causes, and implementing corrective actions in a production wafer fabrication facility is

expensive and time-consuming. There are no assurances that our new products will be successfully commercialized and enable us to gain additional market share. However, all recent new product roll-outs have been on or ahead of schedule.

Based on publicly available data, including market forecasts, and recent results for the semiconductor industry and the PLD industry in particular, we believe that we are in a period of inventory correction, although one that, we believe, is much smaller in magnitude than experienced in year 2000. Industry analysts generally believe that the correction will end and an upturn will begin during 2005 and the PLD industry will experience moderate growth in 2005 followed by higher levels of growth in 2006. However, we and other participants in the semiconductor industry have historically failed to accurately forecast the turning points in various previous cycles.

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Results of Operations

Results of operations expressed as a percentage of net sales were as follows:

	Years Ended		
	December 31, 2004	January 2, 2004	December 27, 2002
Net sales	100%	100%	100%
Cost of sales	31%	32%	37%
Gross margin	69%	68%	63%
Research and development expenses	18%	22%	26%
Selling, general, and administrative expenses	21%	22%	23%
Income from operations	31%	24%	14%
Interest and other income, net	2%	2%	3%
Provision for income taxes	5%	7%	4%
Net income	27%	19%	13%

Sales

Sales were $1.02 billion in 2004, $827.2 million in 2003, and $711.7 million in 2002. Sales increased 23% in 2004 from 2003 and increased 16% in 2003 from 2002.

The increase in sales in 2004 was driven primarily by the sales of our New Products which increased 186% year-over-year predominantly due to higher sales of our Stratix and Cyclone families. Stratix was our largest selling family over the last few quarters and for the year. Our FPGA sales reached a new record representing 68% of total sales and grew 28% in 2004. We continued to gain market share in the FPGA space, the fastest growing segment of the programmable logic industry. Despite the slowing industry conditions in the latter part of 2004, total sales in 2004 increased 23% from 2003.

Sales increases for both 2004 and 2003 were due to higher unit sales of all product categories, with the largest unit increases in New and Mainstream Products, partially offset by routine declines in average unit selling prices primarily in our Mainstream and Mature and Other categories. For the composition of our product categories, see Sales by Product Category.

Sales of FPGAs and CPLDs

Our PLDs consist of field-programmable gate arrays, or FPGAs, and complex programmable logic devices, or CPLDs. FPGAs consist of our Stratix, Stratix GX, Stratix II, Cyclone, APEX , APEX II, FLEX®, ACEX®, Excalibur , and Mercury families, and CPLDs consist of our MAX, MAX II, and Classic families. Our other products consist of

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HardCopy and other masked programmed logic devices, configuration devices, software and other tools and IP cores. Our sales of FPGAs and CPLDs, as a percentage of total sales, were as follows, for the periods indicated:

	Years Ended				
	December 31, 2004	January 2, 2004	December 27, 2002	2004 vs. 2003 Change	2003 vs. 2002 Change
FPGA	68%	65%	61%	28%	26%
CPLD	23%	27%	31%	7%	(2%)
Other	9%	8%	8%	34%	15%
Total Sales	100%	100%	100%	23%	16%

Sales by Product Category

We classify our products into three categories: New, Mainstream, and Mature and Other Products. During the fourth quarter of 2003, we updated our product categories, and all prior year data have been adjusted to reflect the following compositions:

New Products include the Stratix, Stratix II, Stratix GX, Cyclone, MAX 3000A, MAX II, and HardCopy families;

Mainstream Products include the APEX 20K, APEX 20KC, APEX 20KE, APEX II, FLEX 10KE, ACEX 1K, Excalibur, Mercury, MAX 7000A, and MAX 7000B families; and

Mature and Other Products include the FLEX 6000, FLEX 8000, FLEX 10K, FLEX 10KA, MAX 7000, MAX 7000S, MAX 9000, Classic, and configuration families, other masked programmed logic devices and other devices, software and other tools, and IP cores.

Sales by product category, as a percentage of total sales, as well as yearly growth or decline, for the periods indicated were as follows:

	Years Ended				
	December 31, 2004	January 2, 2004	December 27, 2002	2004 vs. 2003 Change	2003 vs. 2002 Change
New	27%	12%	4%	186%	288%

Mainstream	42%	50%	49%	2%	18%
Mature and Other	31%	38%	47%	0%	(5%)
Total Sales	100%	100%	100%	23%	16%

Our New Products have been developed and introduced to the marketplace over the last several years and have additional features and higher densities than their predecessors. We expect that sales of New Products will continue to increase over time as customer adoption of these products continues to be strong, and customers ramp their programs into volume production.

Sales by Market Segment

The following market segment data is derived from data that is provided to us by our distributors and end customers. With a broad base of customers, who in some cases manufacture end products spanning multiple market segments, the assignment of revenue to a market segment requires the use of estimates, judgment, and extrapolation. As such, actual results may differ from those reported.

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Sales by market segment, as a percentage of total sales, as well as yearly growth or decline, were as follows for the periods indicated:

	Years Ended				
	December 31, 2004	January 2, 2004	December 27, 2002	2004 vs. 2003 Change	2003 vs. 2002 Change
Communications	45%	44%	46%	25%	12%
Industrial	30%	30%	27%	23%	26%
Consumer	14%	15%	14%	19%	30%
Computer and Storage	11%	11%	13%	21%	(4%)
Total Sales	100%	100%	100%	23%	16%

In absolute dollars, sales grew across all market segments in 2004 as a result of increased customer demand in some segments and penetration into new applications. Since our new devices offer more logic capability and features than the prior generation, we believe we can continue to extend our reach into applications that traditionally relied on an ASIC solution. While we expect that the Communications market segment will remain our largest market segment, we anticipate that other segments will continue to contribute to our future growth.

During 2003, our Consumer and Industrial market segments provided strong growth primarily due to increased usage of PLDs by customers in these market segments. The Communications market segment grew 12% due to improving market conditions in the telecom subsegment and increased market share in the wireless subsegment across multiple customers.

No single end customer provided more than 10% of our sales for each of the three years ended December 31, 2004.

Sales by Geography

The following table is based on the geographic location of the original equipment manufacturers or the distributors who purchased our products. For sales to our distributors, their geographic locations may be different from the geographic locations of the ultimate end users. Sales by geography, as a percentage of total sales, as well as yearly growth or decline, for the periods indicated, were as follows:

	Years Ended				
	December 31,	January 2,	December 27,	2004 vs.	2003 vs.

	2004	2004	2002	2003 Change	2002 Change
North America	29%	33%	40%	7%	(4%)
Europe	23%	22%	24%	27%	9%
Japan	25%	24%	21%	29%	30%
Asia Pacific (other than Japan)	23%	21%	15%	36%	62%
Total International	71%	67%	60%	30%	30%
Total Sales	100%	100%	100%	23%	16%

In absolute dollars, sales increased in all geographies in 2004, but most significantly in international geographies. The percentage of total sales represented by international locations increased due to increased sales to international end customers, as well as the transfer of end customers business from North America to international locations which we expect to continue in 2005.

In 2003, sales in Asia Pacific and Japan increased significantly compared to the prior year primarily due to strong demand from a broad base of customers for our New Products in those geographic locations.

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Gross Margin

	Years Ended		
	December 31, 2004	January 2, 2004	December 27, 2002
(Dollars in millions)			
Gross Margin Percentage	69.5%	67.9%	63.0%
Included in Reported Gross Margin Percentage Above:			
Gross Margin Benefit from Sale of Inventory Written down in 2001	$ 14.7	$ 29.0	$ 18.0
Percentage of Sales	1.4%	3.5%	2.5%

Gross margin increased 1.6 percentage points in 2004 from 2003. The increase was primarily due to yield enhancements especially in newer products, as well as overall declines in material and subcontractor costs. Gross margin benefit resulting from the sale of previously written-down inventory decreased in 2004. We anticipate that this benefit will continue to decline over time.

As of December 31, 2004, the book value of the inventory written down in 2001 was zero while the cost basis was $13.9 million. The cost was comprised of $10.9 million of raw materials and work in process inventory and $3.0 million of finished goods inventory.

Gross margin increased 4.9 percentage points in 2003 from 2002 primarily due to yield enhancements and overall declines in unit costs, and partially due to higher gross margin benefit resulting from the sale of previously written-down inventory.

Research and Development Expenses

	Years Ended				
	December 31, 2004	January 2, 2004	December 27, 2002	2004 vs. 2003 Change	2003 vs. 2002 Change
(Dollars in millions)					
Research and Development	$ 180.5	$ 178.5	$ 182.8	1%	(2%)
Percentage of Sales	18%	22%	26%		

Research and development expenses include expenditures for labor and benefits, masks, prototype wafers, depreciation, and the amortization of deferred stock-based compensation for employees engaged in research and development activities. These expenditures were for the design of new PLD families, and the development of process technologies, new packages, software to support new products and design environments, and IP cores.

Research and development expenses were relatively flat in 2004 compared to 2003. Higher labor and benefit costs and higher spending on masks for our next generation products were offset by a decrease in depreciation as well as lower spending on prototype wafers. Research and development expenses decreased slightly in 2003 compared to 2002, primarily due to lower spending on prototype wafers, which was partially offset by increased spending on labor and benefit costs. Historically, the level of our research and development expenses has fluctuated in part due to the timing of the purchase of masks and prototype wafers used in the development of new products.

We will continue to make significant investments in the development of new products and focus our efforts on the development of new programmable logic devices that utilize advanced semiconductor wafer fabrication processes, as well as related development software. We are currently investing in the development of our Stratix II, MAX II, Cyclone II, and HardCopy families, our Nios® II soft core embedded processor, our Quartus® II software, our library of IP cores, and other future products. As a result of the continuing investment in new products, we expect that our research and development costs will increase in absolute dollars in 2005.

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Selling, General, and Administrative Expenses

	Years Ended				
	December 31, 2004	January 2, 2004	December 27, 2002	2004 vs. 2003 Change	2003 vs. 2002 Change
(Dollars in millions)					
Selling, General, and Administrative	$ 210.7	$ 184.6	$ 168.5	14%	10%
Percentage of Sales	21%	22%	23%		

Selling, general, and administrative expenses primarily include labor and benefit expenses related to sales, marketing, and administrative personnel, commissions and incentives, depreciation, legal, advertising, facilities, and travel expenses.

Selling, general, and administrative expenses increased by $26.1 million in 2004 compared to 2003. The increase was primarily attributable to higher spending on labor and benefit costs. The increase was also due to higher spending on commissions and incentives, and various marketing programs as we continue to invest in the rollout of newer products. Consulting expenses also increased in part due to costs related to the initial adoption of Section 404 of the Sarbanes Oxley Act of 2002. These increases were partially offset by lower depreciation expense.

Selling, general, and administrative expenses increased by $16.1 million in 2003 compared to 2002. The increase was primarily due to higher spending for labor and benefits costs, as well as higher spending for commissions and incentives, and consulting and professional services.

Interest and Other Income, Net

	Years Ended				
	December 31, 2004	January 2, 2004	December 27, 2002	2004 vs. 2003 Change	2003 vs. 2002 Change
(Dollars in millions)					
Interest and Other Income, Net	$ 15.9	$ 14.3	$ 26.0	11%	(45%)
Percentage of Sales	2%	2%	3%		

Interest and other income consists mainly of interest income generated from investments in high-quality fixed income securities. The increase in interest and other income during the year ended December 31, 2004 compared to the prior year was primarily due to a recognized loss of $3.1 million in 2003 on the sale of certain securities, partially offset by a decrease in interest income in 2004 due to lower investment yields.

The decline in 2003 from 2002 was primarily due to declines in market interest rates as well as a recognized loss of $3.1 million on the sale of certain securities in the second quarter of 2003.

Provision for Income Taxes

Our effective tax rates were 17% for 2004, 27% for 2003, and 26% for 2002. An income tax benefit of $17.1 million, primarily related to a tax settlement with the Hong Kong Inland Revenue Department, contributed to a 5 percentage point rate decrease in our effective tax rate in 2004 from 2003. The remaining decrease in our effective tax rate was due to a favorable change in the geographic mix of income, partially offset by smaller benefits from tax-exempt income and research and development tax credits.

The increase in the effective tax rate in 2003 over 2002 primarily resulted from the decreased benefit of tax-exempt income and research and development tax credits, which was partially offset by a favorable change in the geographic mix of income.

Financial Condition, Liquidity, and Capital Resources

We ended 2004 with over $1.2 billion of cash, cash equivalents, and short-term investments available to finance our operating activities and future growth. We currently use cash generated from operations to support our operating activities, capital expenditures, and acquisitions and investments. We also use our available cash for repurchases of our common stock under our stock repurchase program. As of December 31, 2004, we had no borrowings. Based on past

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performance and current expectations, we believe that our available sources of funds including cash, cash equivalents, short-term investments, and cash we expect to generate from operations will be adequate to finance our operations for at least the next year.

In 2004, we spent $176.3 million to repurchase our common stock, compared to $239.0 million in 2003, and $139.5 million in 2002. We also spent $24.7 million on capital expenditures in 2004, compared to $13.9 million in 2003, and $9.9 million in 2002. We expect that capital expenditures will increase in 2005 and we will continue to use a portion of our available capital to repurchase shares of our common stock.

Year 2004: Cash and cash equivalents increased $321.1 million, or 124%, to $579.9 million at December 31, 2004, from $258.8 million at January 2, 2004. Our positive cash flow from operating activities was primarily attributable to net income, adjusted for non-cash items. Working capital sources of cash included a decrease in accounts receivable of $19.7 million, and an increase in accounts payable and accrued liabilities of $81.5 million. Working capital uses of cash included increases in other assets of $56.6 million and inventories of $22.9 million and a decrease in deferred income and allowances on sales to distributors of $24.3 million.

Cash provided by investing activities of $134.9 million primarily consisted of proceeds from the maturity and sale of investments, net of purchases, of $161.4 million. We also spent $24.7 million on capital expenditures and $1.8 million on intangible assets in 2004.

Cash used for financing activities of $127.8 million resulted from repurchases of our common stock of $176.3 million, which was partially offset by net proceeds of $49.6 million from the issuance of our common stock to employees through our stock option plans and employee stock purchase program.

Year 2003: We ended 2003 with $1.0 billion of cash, cash equivalents, and short-term investments. Cash and cash equivalents increased $3.4 million, or 1%, to $258.8 million at January 2, 2004, from $255.4 million at December 27, 2002. Our positive cash flow from operating activities was primarily attributable to net income, adjusted for non-cash items, as well as an increase in deferred income and allowances on sales to distributors of $101.1 million, and an increase in income taxes payable of $46.2 million. These items were partially offset by increases in accounts receivable of $30.1 million and inventories of $5.5 million.

During 2003, cash used for investing activities of $121.8 million primarily consisted of purchases of investments, net of proceeds from maturity and sale, of $104.6 million. We also spent $13.9 million to purchase property and equipment. Cash used for financing activities of $200.7 million resulted from repurchases of our common stock of $239.0 million, which was partially offset by net proceeds of $36.7 million from the issuance of our common stock to employees through various option plans and our employee stock purchase plan.

Contractual Obligations

The following table summarizes our significant contractual cash obligations at December 31, 2004, and the effect such obligations is expected to have on liquidity and cash flow in future periods:

		Payment Due by Year			
(Dollars in millions)	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Operating Lease Obligations [1]	$ 17.5	$ 7.5	$ 6.8	$ 3.2	
Inventory and Related Purchase Obligations [2]	62.0	62.0			
Total Contractual Cash Obligations	$ 79.5	$ 69.5	$ 6.8	$ 3.2	

(1) We lease facilities under non-cancelable lease agreements expiring at various times through 2010. Rental expense amounted to $9.1 million in 2004.

(2) We depend entirely upon subcontractors to manufacture our silicon wafers and provide assembly and test services. Due to lengthy subcontractor lead times, we must order these materials and services from these subcontractors well in advance, and we are obligated to pay for the materials and services once they are completed. We expect to receive and pay for these materials and services within the next four to six months.

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Impact of Currency Translation and Inflation

We purchase the majority of our materials and services in U.S. dollars and sell our products to OEMs and distributors in U.S. dollars. As of December 31, 2004, we had no open forward contracts; however, we may enter into contracts from time to time to hedge foreign exchange exposure. We have, in the past, entered into forward contracts to hedge against currency fluctuations associated with contractual commitments denominated in foreign currencies.

Common Stock Repurchases

In 2004, our Board of Directors approved increases totaling 20.0 million shares in the shares authorized for repurchase from 68.0 million shares to 88.0 million shares. Share repurchase activities for 2004, 2003, and 2002, were as follows:

(In millions, except per share amounts)	2004	2003	2002
Shares repurchased	8.3	12.5	8.9
Cost of shares repurchased	$ 176.3	$ 239.0	$ 139.5
Average price per share	$ 21.36	$ 19.17	$ 15.67

Since the inception of our repurchase program in 1996 through December 31, 2004, we have repurchased a total of 66.7 million shares of our common stock for an aggregate cost of $1.4 billion. All shares were retired upon acquisition. At December 31, 2004, 21.3 million shares remained authorized for repurchases under the plan.

During the fourth quarter of 2004, we entered into an agreement pursuant to SEC Rule 10b5-1 under which we authorized a third-party broker to purchase shares on our behalf during our normal blackout period according to predetermined trading instructions. In addition, we may repurchase shares of our common stock under the guidelines of SEC Rule 10b-18.

Off-Balance Sheet Arrangements

We do not have any financial partnerships with unconsolidated entities, such as entities often referred to as structured finance or special purpose entities.

New Accounting Pronouncements

In December 2004, the Financial Accounting Standards Board (FASB) issued Statement No. 123 (revised 2004), or SFAS 123R, Share-Based Payment. This statement replaces SFAS 123, Accounting for Stock-Based Compensation and supersedes Accounting Principles Board s Opinion No. 25 (ABP 25), Accounting for Stock Issued to Employees . SFAS 123R will require us to measure the cost our employee stock-based compensation awards granted after the effective date based on the grant date fair value of those awards and to record that cost as compensation expense over the period during which the employee is required to perform services in exchange for the award (generally over the vesting period of the award). SFAS 123R addresses all forms of share-based payments awards, including shares issued under employee stock purchase plans, stock option, restricted stock and stock appreciation rights. In addition, we will be required to record compensation expense (as previous awards continue to vest) for the unvested portion of previously granted awards that remain outstanding at the date of adoption. SFAS 123R is effective for fiscal periods beginning after June 15, 2005. We, therefore, are required to implement the standard no later than our third fiscal quarter which begins on July 2, 2005. SFAS 123R permits public companies to adopt its requirements using the following methods:

1. A modified prospective method in which compensation cost is recognized beginning with the effective date (a) based on the requirements of SFAS 123R for all share-based payments granted after the effective date and (b) based on the requirements of SFAS 123 for all awards granted to employees prior to the effective date of SFAS 123R that remain unvested on the effective date.

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2. A modified retrospective method which includes the requirements of the modified prospective method described above, but also permits entities to restate their financial statement based on the amounts previously recognized under SFAS 123 for purposes of pro forma disclosures for either (a) all prior periods presented or (b) prior interim periods of the year of adoption.

We are currently evaluating the alternative methods of adoption as described above. As permitted by SFAS 123, we currently account for share-based payments to employees using APB 25 s intrinsic value method and, as such, generally recognize no compensation cost for employee stock options. Accordingly, the adoption of SFAS 123R s fair value method will have a significant impact on our result of operations, although it will have no negative impact on our cash

flow. The impact of adoption of SFAS 123R cannot be predicted at this time because it will depend on levels of share-based payments granted in the future. See Note 8 Stock-Based Compensation Plans for information related to the pro forma effects on our reported net income and net income per share of applying the fair value recognition provisions of the previous SFAS 123 to stock-based employee compensation.

In November 2004, the FASB issued Statement of Financial Accounting Standards No. 151, Inventory Costs, an amendment to ARB No. 43, Chapter 4 (SFAS 151). SFAS 151 amends ARB No. 43, Chapter 4, to clarify that abnormal amounts of idle facility expense, freight, handling costs and wasted materials (spoilage) should be recognized as current period charges. In addition, SFAS 151 requires that the allocation of fixed production overheads to the cost of conversion be based on the normal capacity of the production facilities. SFAS 151 is effective for inventory costs incurred for fiscal years beginning after June 15, 2005. We, therefore, are required to adopt the standard effective with our 2006 fiscal year. We do not expect the adoption of SFAS 151 to have a significant impact on our financial condition or results of operations.

In December 2004, the FASB issued Financial Staff Position (FSP) No. FAS 109-2, Accounting and Disclosure Guidance for the Foreign Earnings Repatriation Provision within the American Jobs Creation Act of 2004 (FSP 109-2). On October 22, 2004, the American Jobs Creation Act of 2004 (the Act) was signed into law. The Act creates a temporary incentive for U.S. corporations to repatriate accumulated income earned abroad by including an 85 percent deduction for certain foreign earnings that are repatriated, as defined in the Act, at an effective tax cost of 5.25 percent. FSP 109-2 is effective immediately and provides accounting and disclosure guidance for the repatriation provision. FSP 109-2 allows companies additional time to evaluate the effects of the law on its unremitted earnings for the purpose of applying the indefinite reversal criteria under APB 23, Accounting for Income Taxes Special Areas, and requires explanatory disclosures from companies that have not yet completed the evaluation. Altera is in the process of evaluating whether it will repatriate any foreign earnings under the Act and, if so, the amount that it will repatriate. However, Altera does not expect to be able to complete this evaluation until after Congress or the Treasury Department provides additional clarifying language on key elements of the provision. Based on our preliminary analysis, the range of possible amounts that Altera is considering for repatriation under this provision is between zero and $500 million. The related potential range of income tax is between zero and approximately $27 million. We expect to determine the amounts and sources of foreign earnings to be repatriated, if any, during 2005.

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Risk Factors

The following risk factors, among others, could in the future affect our actual results of operations and could cause our actual results to differ materially from those expressed in forward-looking statements made by us. Before you decide to buy, hold, or sell our common stock, you should carefully consider the risks described below, in addition to the other information contained elsewhere in this report. The following risk factors are not the only risk factors facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business. Our business, financial condition, and results of operation could be seriously harmed if any of the events underlying any of these risks or uncertainties actually occurs. In that event, the market price for our common stock could decline, and you may lose all or part of your investment.

Our financial results depend on our ability to compete successfully in the highly competitive semiconductor industry.

The programmable logic industry is intensely competitive. Our ability to compete successfully in the industry will depend on our ability to develop, manufacture, and sell complex semiconductor components and development tools that offer customers greater value than solutions offered by competing vendors such as Xilinx and Lattice.

Because we develop PLDs for applications that are presently served by vendors of ASICs, ASSPs, microcontrollers, and digital signal processors, we also indirectly compete against vendors of these products. Many of these vendors, including International Business Machines Corporation and Texas Instruments Inc., have substantially greater financial, technical, and marketing resources than we do and have well-established market positions and solutions that have been proven technically feasible and economically competitive over several decades. We may not be able to displace these vendors in the targeted applications and densities. Further, other programmable logic vendors are targeting these applications and may be successful in securing market share from us. Moreover, some of our customers have historically used standard cell technologies to achieve greater integration in their systems; this may not only impede our

efforts to penetrate the markets for ASICs, ASSPs, microcontrollers, and digital signal processors, but may also displace our products in the applications that we presently serve.

Our future success depends on our ability to define, develop, and manufacture technologically-advanced products

As a semiconductor company, we operate in a dynamic market characterized by rapid technological change. The manufacture of our products is a highly complex and precise process, requiring production in a highly controlled environment. Our current product development efforts focus on developing new PLDs, related development software and hardware, and advanced semiconductor wafer fabrication processes. Our development efforts may not result in the timely introduction of competitive new products, or enhancements to existing products. Additionally, we may not be successful in developing new products using, and converting established products to, new and more advanced process technologies. For example, our Stratix, Stratix GX and Cyclone families are manufactured on a 130-nanometer, all-layer-copper interconnect process. The company s next generation product families, the Stratix II and Cyclone II families, are manufactured on a 90-nanometer all-layer-copper interconnect process for which Altera has limited production history. We will continue to transition our fabrication process arrangements to smaller circuit geometries and our PLDs manufactured on a 130-nanometer process have recently transitioned from 200mm to 300mm wafer sizes. The use of advanced process technology entails inherent technological risks and start-up difficulties that can adversely affect R&D spending, yields, product costs, and timeliness of delivery.

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We depend entirely on independent subcontractors to supply us with finished silicon wafers.

We depend entirely upon subcontractors to manufacture our silicon wafers. Nearly all of our silicon wafers are produced by Taiwan Semiconductor Manufacturing Company, or TSMC, and its subsidiary, WaferTech LLC, in their manufacturing facilities located in Taiwan and the State of Washington, respectively. The remaining portion of our silicon wafers are produced by Sharp Corporation in Japan. Silicon wafer production facilities have at any given time a fixed capacity, the allocation of which is determined solely by our vendors and over which we have no direct control. We have no formalized long-term supply or allocation commitments from our foundry suppliers. If market demand for silicon wafers suddenly exceeds market supply, our supply of silicon wafers could quickly become limited. A shortage in foundry manufacturing capacity could hinder our ability to meet demand for our products. Moreover, silicon wafers constitute more than half of our product cost. If we are unable to procure wafers at favorable prices, our gross margins will be adversely affected.

To ensure the continued supply of wafers, we may establish other sources of wafer supply for our products as such arrangements become economically advantageous or technically necessary. However, there are only a few foundry vendors that have the capabilities to manufacture our products. If we engage alternative sources of supply with foundry vendors that have the capabilities to manufacture our products, we may encounter start-up difficulties and incur additional costs. Also, shipments could be delayed significantly while such sources are qualified for volume production.

In addition to sufficient foundry manufacturing capacity and wafer prices, we depend on good production yields (good die per wafer), and timely delivery of silicon wafers to meet our customers demand for products and to maintain profit margins. Wafer production yields depend on a wide variety of factors, including the level of contaminants in the manufacturing environment, impurities in the materials used, and the performance of personnel and equipment. As is common in the semiconductor industry, we have experienced, and may experience from time to time, problems with achieving acceptable production yields and timely delivery from our foundry vendors.

Difficulties in production yields can often occur when we begin production of new products, when we transition to new processes, or when our principal wafer supplier, TSMC, moves production of a product from one manufacturing plant to another, or manufactures the same product at multiple factories. Further, production throughput times vary considerably among the various factories used by our wafer suppliers, and we may experience delays from time to time in processing some of our products. These difficulties and delays can potentially result in significantly higher costs and lower product availability.

We depend on independent subcontractors, located in Asia, to assemble and test our semiconductor products.

Independent subcontractors, located in Asia, assemble and test our semiconductor products. Because we rely on independent subcontractors to perform these services, we cannot directly control our product delivery schedules or quality levels. Our future success also depends on the financial viability of our independent subcontractors. If the capital structures of our independent subcontractors weaken, we may experience product shortages, quality assurance problems, increased manufacturing costs, and/or supply chain disruption.

Conditions outside the control of our independent subcontractors and distributors may impact their business operations.

The economic, market, social, and political situations in countries where certain independent subcontractors and distributors are located are unpredictable, can be volatile, and can have a significant impact on our business because we may not be able to obtain or distribute product in a timely manner. Market and political conditions, including currency fluctuation, terrorism, political strife, war, labor disruption, and other factors, including natural or man-made disasters, adverse changes in tax laws, tariff, import or export quotas, power and water shortages, or interruption in air transportation, in areas where our independent subcontractors and distributors are located also could have a severe negative impact on our operating capabilities.

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Our intellectual property rights may not provide meaningful protection from our competitors.

We rely significantly on patents to protect our intellectual property rights. We have increased investment in intellectual property protection in the last several years and, as of December 31, 2004, we owned more than 940 United States and 180 foreign patents. We also have a significant number of patent applications pending. Our patents and patent applications may not provide meaningful protection from our competitors as the status of any patent involves complex legal and factual questions, and the breadth of claims allowed is uncertain. Our competitors may be able to circumvent our patents or develop new patentable technologies that displace our existing products. In addition to patent protection, we rely on trademark, trade secret, copyright, and mask work laws to protect our unpatented proprietary information or technologies. Despite our efforts to protect our proprietary rights from unauthorized use or disclosure, third parties, including our former employees or consultants, may attempt to disclose, obtain, or use our proprietary information or technologies without our authorization. If other companies obtain our proprietary information or technologies or develop substantially equivalent information or technologies, they may develop products that compete against our products. Moreover, the laws of certain countries in which our products are or may be developed, manufactured or sold may not protect our products and intellectual property rights to the same extent as the laws of the United States. Policing the unauthorized use of our products is difficult and may result in significant expense to us and could divert the efforts of our technical and management personnel. Even if we spend significant resources and efforts to protect our intellectual property, we cannot assure you that we will be able to prevent misappropriation of our technology. Use by others of our proprietary rights could materially harm our business and expensive litigation may be necessary in the future to enforce our intellectual property rights.

We are at risk of intellectual property infringement claims by third parties.

From time to time in the normal course of business, we receive inquiries with respect to possible patent infringements. As a result of inquiries received from third parties, it may be necessary or desirable for us to obtain licenses relating to one or more of our current or future products. We may not be able to obtain such licenses on reasonable terms. Additionally, if we are sued for patent infringement, the costs and outcome of such litigation could be unpredictable and could have a negative impact on our financial results. Intellectual property claims, regardless of their merit, can result in costly litigation and divert the efforts of our technical and management personnel. Legal proceedings also tend to be unpredictable and may be affected by events outside of our control. If we are unsuccessful in defending against third-party intellectual property infringement claims, third parties may obtain significant monetary damages or an injunction against the manufacture and sale of one or more of our product families. Alternatively, we could be required to expend significant resources to develop non-infringing technology, the success of which may be uncertain. We cannot assure you that intellectual property litigation will not have an adverse effect on our financial position, or results of operations or cash flows.

We may incur warranty related liabilities.

We generally warrant our products against defects in materials and workmanship and non-conformance to our specifications for varying lengths of time. If there is a material increase in customer claims compared with our historical experience, or if costs of servicing warranty claims are greater than expected, we may record a charge against future cost of sales and our gross margin could be adversely affected.

We may be subject to product liability claims.

As we continue to expand our sales into new areas such as automotive, military, aerospace, avionics, and medical equipment applications where our devices are used in systems that could cause damage to property or persons if those systems were to fail, we may be subject to claims of product liability if our devices are the cause of such system failures. Based on our historical experience, we believe that the risk of exposure to product liability claims is currently low. However, if the volume of our sales into such applications increases, we may face increased exposure.

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We depend on distributors to generate sales and fulfill our customer orders.

Worldwide sales through distributors accounted for more than 95% of our total sales during 2004. We rely on many distributors to assist us in creating customer demand, providing technical support and other value-added services to our customers, filling customer orders, and stocking our products. Our contracts with our distributors may be terminated by either party in a relatively short period of time.

Our distributors are located all over the world and are of various sizes and financial conditions. Lower sales, lower earnings, debt downgrades, the inability to access capital markets, and higher interest rates could potentially impact our distributors operations.

We are highly dependent on Arrow Electronics, Inc., in many locations across the world, particularly in North America. During 2004, Arrow on a worldwide basis accounted for approximately 46% of sales, and our next largest distributors accounted for approximately 16% and 10% of sales, respectively. At December 31, 2004, three distributors, each of which accounted for more than 10% of total accounts receivable, accounted for 44%, 14%, and 13% of total accounts receivable. Our distributors have sole authority to accept returns from end customers in the ordinary course of business. Because we recognize revenue when distributors sell product to end customers, returns from end customers to our distributors reduce our reported sales. We have no direct control over our distributors policies or practices on accepting customer returns and may have no forewarning of significant customer returns. Consequently, large returns could have an unexpected material adverse impact on our sales.

The length of our design-in and sales cycle could impact our future sales.

Our sales depend on our products being designed into our end customers products and those products achieving volume production. Our products are very complex in nature, and the time from design-in to volume production ranges from 6 months to 3 years. From initial product design-in to volume production, many factors could impact the timing and/or amount of sales actually realized from the design-in. These factors include, but are not limited to, changes in the competitive position of our technology, the competitiveness of our customers products in the markets they serve, our customers financial stability, and our ability to ship products according to our customers schedule.

We depend on international sales for a majority of our total sales.

During each of the last three years, international sales were a majority of our total sales. During 2004, international sales constituted approximately 71% of our total sales. We expect that international sales will continue to account for a significant portion of our total sales. Risks related to our foreign operations include unfavorable economic, market, political, and social conditions in a specific country or region, fluctuation in foreign currency exchange rates, adverse changes in tax laws, increased freight costs, interruptions in air transportation, reduced protection for intellectual property rights in some countries, generally longer receivable collection periods, and natural or man-made disasters in a specific country or region where we sell our products. Our business is also subject to the burdens of complying with a variety of foreign laws, and risks associated with the imposition of legislation and regulations relating specifically to the importation or exportation of semiconductor products. Quotas, duties, tariffs, taxes, or other charges, restrictions, or

trade barriers may be imposed by the United States or other countries upon the importation or exportation of our products in the future.

Our business is subject to tax risks associated with being a multinational corporation.

As a multinational corporation, we conduct our business in many countries and are subject to taxation in many jurisdictions. The taxation of our business is subject to the application of multiple and sometimes conflicting tax laws and regulations as well as multinational tax conventions. The application of tax law is subject to legal and factual interpretation, judgment, and uncertainty and tax laws themselves are subject to change. Consequently, taxing authorities may impose tax assessments or judgments against us that could result in a significant charge to earnings relating to prior periods and/or an increase in our effective income tax rate.

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Our gross margins are subject to fluctuations due to many factors.

Our gross margins may fluctuate depending on many factors, including, but not limited to, our product mix, market acceptance of our new products, competitive pricing dynamics, geographic and/or market segment pricing strategies, and various manufacturing cost variables, including product yields, wafer prices and absorption of manufacturing overhead.

Our financial results are affected by general economic conditions and the cyclical nature of the semiconductor industry.

The semiconductor industry is highly cyclical, which means that semiconductor companies such as Altera experience significant fluctuations in sales and profitability. During 2000-2001, the semiconductor industry was significantly impacted by the economic downturn and contraction in the computing and communication equipment markets and by the ensuing inventory correction in the supply chain for those industries. This down cycle, like many of the preceding down cycles, resulted in significant reductions in unit demand, excess customer inventories, price erosion, and excess production capacity. We experienced five consecutive declines in quarterly sales beginning in the fourth quarter of 2000 and ending in the fourth quarter of 2001. The protracted deceleration resulted in a peak-to-trough decline in quarterly sales of nearly 60%.

In addition to reductions in sales, our profitability decreases during downturns as we are unable to reduce our expenses at the same rate as our sales decline. For example, at the height of the previous upcycle, in the third quarter of 2000, our operating expenses were less than 27% of sales compared to almost 49% in the first quarter of 2002. Similarly, our gross margins tend to deteriorate and fluctuate during down cycles. For example, in the third quarter of 2000, our reported gross margin was over 66% of sales compared to 60% of sales in the first quarter of 2002. Furthermore, the industry contraction during 2000-2001 was prolonged and severe and resulted in an inventory provision of $154.5 million in 2001 relating primarily to the write-off of inventories in excess of projected demand. Additionally, as a result of reduced demand and in an effort to reduce our ongoing expense levels, we incurred restructuring charges and write-downs totaling $47.7 million in 2001. In the year ended December 31, 2000, our net income was $496.9 million on sales of $1.4 billion whereas for the year ended December 31, 2001, we reported a net loss of $39.8 million on sales of $839.4 million. We expect that our future sales and profitability will continue to be volatile.

In an effort to reduce the possibility of future provision for excess inventory, we reduced our inventory carrying targets in 2002. Reductions in targeted inventory carrying levels may result in poorer delivery performance relative to our customers desired lead times, which over time may erode our competitive position and result in a loss of market share. Despite our intent to operate with lower inventory levels, we are likely to experience inventory write-downs in the future, especially if our inventory becomes out-of-mix with, or excess to, customer demand.

We carry only limited insurance coverages.

Our insurance policies may not be adequate to fully offset the losses resulting from covered incidents. Additionally, we do not have coverage for certain losses.

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ITEM 7A. Quantitative and Qualitative Disclosures about Market Risk.

Our investment portfolio consisted of fixed income securities of $1.2 billion as of December 31, 2004 and $1.0 billion as of January 2, 2004. These securities, like all fixed income instruments, are subject to interest rate risk and will vary in value as market interest rates fluctuate. If market interest rates were to increase or decline immediately and uniformly by 10% from levels as of December 31, 2004, the increase or decline in the fair value of the portfolio would not be material.

Although we purchase the majority of our materials and services in U.S. dollars and sell our products to OEMs and distributors in U.S. dollars, we do have international operations and are, therefore, subject to foreign currency rate exposure. To date, our exposure to exchange rate volatility has been insignificant. If foreign currency rates were to fluctuate by 10% from rates at December 31, 2004, our financial position, results of operations and cash flows would not be materially affected. However, we cannot assure you that there will not be a material impact in the future.

ITEM 8. Financial Statements and Supplementary Data.

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ALTERA CORPORATION

CONSOLIDATED BALANCE SHEETS

(In thousands, except par value amount)	December 31, 2004	January 2, 2004
ASSETS		
Current assets:		
Cash and cash equivalents	$ 579,936	$ 258,831
Short-term investments	623,312	773,059
Total cash, cash equivalents, and short-term investments	1,203,248	1,031,890
Accounts receivable, net	67,522	87,204
Inventories	67,454	44,583
Deferred income taxes	85,582	85,186
Other current assets	113,291	57,323
Total current assets	1,537,097	1,306,186
Long-term investments		14,451
Property and equipment, net	159,587	160,924
Deferred income taxes and other assets, net	49,982	42,199
	$ 1,746,666	$ 1,523,760
LIABILITIES AND STOCKHOLDERS EQUITY		
Current liabilities:		
Accounts payable	$ 31,507	$ 20,992
Accrued liabilities	80,131	22,733
Accrued compensation	47,949	35,507
Deferred income and allowances on sales to distributors	221,081	245,421
Income taxes payable	87,374	96,703
Total current liabilities	468,042	421,356
Commitments and contingencies (See Note 6 Commitments and Contingencies)		
Stockholders equity:		
Common stock: $.001 par value; 1,000,000 shares authorized; 373,759 and 376,080 shares issued and outstanding, respectively	374	376
Capital in excess of par value	386,058	365,583
Retained earnings	893,564	738,420
Deferred stock-based compensation	(328)	(2,665)
Accumulated other comprehensive (loss) income	(1,044)	690
Total stockholders equity	1,278,624	1,102,404
	$ 1,746,666	$ 1,523,760

See accompanying notes to consolidated financial statements.

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ALTERA CORPORATION

CONSOLIDATED STATEMENTS OF INCOME

	Years Ended		
(In thousands, except per share amounts)	December 31, 2004	January 2, 2004	December 27, 2002
Net sales	$ 1,016,364	$ 827,207	$ 711,684
Cost of sales	310,168	265,873	263,067
Gross margin	706,196	561,334	448,617
Research and development expenses	180,525	178,543	182,766
Selling, general, and administrative expenses	210,745	184,609	168,484
Income from operations	314,926	198,182	97,367
Interest and other income, net	15,857	14,319	25,961
Income before income taxes	330,783	212,501	123,328
Provision for income taxes	55,672	57,376	32,065
Net income	$ 275,111	$ 155,125	$ 91,263
Net income per share:			
Basic	$ 0.74	$ 0.41	$ 0.24
Diluted	$ 0.72	$ 0.40	$ 0.23
Shares used in computing per share amounts:			
Basic	373,785	381,387	383,619
Diluted	382,473	389,753	391,708

See accompanying notes to consolidated financial statements.

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ALTERA CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Years Ended December 31, 2004	January 2, 2004	December 27, 2002
Cash Flows from Operating Activities:			
Net income	$ 275,111	$ 155,125	$ 91,263
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	30,479	45,285	48,489
Amortization of deferred stock-based compensation	2,337	10,590	11,377
Deferred income tax (benefit) provision	(9,135)	(2,160)	21,710
Tax benefit from stock plans	27,131	8,423	11,491
Loss on securities		3,113	
Changes in assets and liabilities:			
Accounts receivable, net	19,682	(30,093)	(23,180)
Inventories	(22,871)	(5,494)	38,522
Other assets	(56,620)	(2,797)	30,781
Accounts payable and accrued liabilities	81,547	(3,389)	14,404
Deferred income and allowances on sales to distributors	(24,340)	101,114	(3,438)
Income taxes payable	(9,329)	46,207	6,242
Cash provided by operating activities	313,992	325,924	247,661