SILICON LABORATORIES INC
Form 10-K/A
April 24, 2006

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

AMENDMENT NO. 1

(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, 2005

Or

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

For the transition period from to

Commission file number: 000-29823

SILICON LABORATORIES INC.

(Exact name of registrant as specified in its charter)

Delaware	**74-2793174**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4635 Boston Lane, Austin, Texas	**78735**
(Address of principal executive offices)	(Zip Code)
(512) 416-8500	

(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, $0.0001 Par Value

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Sections 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. x Yes o 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 the 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. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer x Accelerated filer o Non-accelerated filer o

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of the last business day of the registrant s most recently completed second fiscal quarter (July 1, 2005) was $1,222,304,855 (assuming, for this purpose, that only directors and officers are deemed affiliates).

There were 55,117,300 shares of the registrant s common stock issued and outstanding as of February 1, 2006.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the registrant s 2006 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

EXPLANATORY NOTE

This Amendment No. 1 to the Annual Report on Form 10-K of Silicon Laboratories Inc. for the fiscal year ended December 31, 2005 is being filed in order to classify our investments in variable-rate demand notes as short-term investments rather than cash and cash equivalents on our consolidated balance sheet at December 31, 2005 included in our Annual Report on Form 10-K filed on February 9, 2006 (the Original Report). We have also made corresponding adjustments to the consolidated statement of cash flows for the fiscal year ended December 31, 2005. The reclassifications had no impact on our consolidated statements of income or stockholders equity. See RECLASSIFICATIONS in Note 2 of the Notes to Consolidated Financial Statements included in this Form 10-K/A for additional information. References herein to the Form 10-K refer to our Original Report, as amended by this Amendment No. 1.

Except for matters related to the aforementioned reclassification, this Amendment No.1 does not modify or update other disclosures in the Original Report, including the nature and character of such disclosure to reflect events occurring after the filing date of the Original Report. While we are amending only certain portions of our Form 10-K, for convenience and ease of reference, we are filing the entire Form 10-K, except for certain exhibits. Accordingly, this Form 10-K/A should be read in conjunction with our filings made with the Securities and Exchange Commission.

SILICON LABORATORIES INC.

FORM 10-K ANNUAL REPORT

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CAUTIONARY STATEMENT

EXCEPT FOR THE HISTORICAL FINANCIAL INFORMATION CONTAINED HEREIN, THE MATTERS DISCUSSED IN THIS REPORT ON FORM 10-K (AS WELL AS DOCUMENTS INCORPORATED HEREIN BY REFERENCE) MAY BE CONSIDERED FORWARD-LOOKING STATEMENTS WITHIN THE MEANING OF SECTION 27A OF THE SECURITIES ACT OF 1933, AS AMENDED, AND SECTION 21E OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED. SUCH FORWARD-LOOKING STATEMENTS INCLUDE DECLARATIONS REGARDING THE INTENT, BELIEF OR CURRENT EXPECTATIONS OF SILICON LABORATORIES INC. AND ITS MANAGEMENT AND MAY BE SIGNIFIED BY THE WORDS EXPECTS, ANTICIPATES, INTENDS, BELIEVES OR SIMILAR LANGUAGE. YOU ARE CAUTIONED THAT ANY SUCH FORWARD-LOOKING STATEMENTS ARE NOT GUARANTEES OF FUTURE PERFORMANCE AND INVOLVE A NUMBER OF RISKS AND UNCERTAINTIES. ACTUAL RESULTS COULD DIFFER MATERIALLY FROM THOSE INDICATED BY SUCH FORWARD-LOOKING STATEMENTS. FACTORS THAT COULD CAUSE OR CONTRIBUTE TO SUCH DIFFERENCES INCLUDE THOSE DISCUSSED UNDER RISK FACTORS AND ELSEWHERE IN THIS REPORT. SILICON LABORATORIES DISCLAIMS ANY INTENTION OR OBLIGATION TO UPDATE OR REVISE ANY FORWARD-LOOKING STATEMENTS, WHETHER AS A RESULT OF NEW INFORMATION, FUTURE EVENTS OR OTHERWISE.

PART I

Item 1. Business

GENERAL

Silicon Laboratories Inc. designs and develops proprietary, analog-intensive, mixed-signal integrated circuits (ICs) for a broad range of applications. Mixed-signal ICs are electronic components that convert real-world analog signals, such as sound and radio waves, into digital signals that electronic products can process. Therefore, mixed-signal ICs are critical components in numerous applications, including mobile handsets, cable and satellite set-top boxes, personal computer modems, Voice over Internet Protocol (VoIP) on data networks, voice over digital subscriber line (DSL) modems, satellite tuners and FM radio tuners, personal video recorders, telephone equipment and optical networking equipment. We also design and develop mixed-signal 8-bit microcontrollers (MCUs) which are incorporated in a broad range of applications in a variety of markets, including automotive, communications, consumer, industrial, medical and power management.

Our world-class, mixed-signal design engineers typically use standard complementary metal oxide semiconductor (CMOS) technology to create our innovative ICs that can improve the performance and dramatically reduce the cost, size and system power requirements of devices that our customers sell to their end-user customers. Our expertise in analog-intensive, mixed-signal IC design in CMOS allows us to develop new and innovative products that are highly integrated, which simplifies our customers designs and improves their time-to-market.

INDUSTRY BACKGROUND

According to market research firm Gartner, personal computers (PCs) and mobile handsets are expected to remain the most significant market drivers for semiconductor consumption through 2008. In wired communications, increased enterprise equipment spending and capital expenditures by service providers combined with broadband and Voice over Packet technology continue to represent growth areas in the communications IC market which Gartner expects to top $80 billion by 2008.

Recent growth in the market for ICs has been due to a number of factors, including the growth of Internet usage, development of new communications technologies, availability of improved communications services at lower costs, broad deployment of optical networks and remote access requirements for corporate networks. This demand has fueled tremendous growth in the number of electronic devices. For example, in mobile handset markets, the demand for wireless phones and other wireless devices, such as personal digital assistants, has grown steadily as wireless services have become increasingly popular and affordable. In other markets, demand has increased for a wide range of electronic products, including PCs, cable and satellite set-top boxes, fax machines, digital cameras, satellite radios and personal video recorders (PVRs). Consumers increasingly demand higher capacity connections at their residences using cable modems or high speed DSL. Voice over Internet Protocol technology, which enables voice traffic over data networks, is emerging as a viable alternative to traditional telephone networks. The demand for greater and faster Internet access by households and businesses has increased the need to significantly upgrade the communications backbone to handle this traffic, increasing the need for smaller, faster and better performing networking systems that route this traffic.

This intersection between the analog world we live in and the digital world requires numerous analog-intensive, mixed-signal circuits. Traditional designs for electronic devices have used mixed-signal solutions built with numerous, complex discrete analog and digital components. While these traditional designs provide the required functionality, they can be inefficient and inadequate for use in markets where size, cost, power consumption and performance are increasingly important product differentiators. In order to improve their competitive position, electronic device manufacturers need advanced mixed-signal ICs that reduce the number of discrete components and required board space to create smaller products with improved price/performance characteristics. Additionally, these manufacturers require programmable ICs that can be reconfigured to comply with numerous and constantly evolving international electronic standards without altering the fundamental design of a product.

Manufacturers of electronic devices face accelerating time-to-market demands and must adapt to evolving industry standards and new technologies. Because analog-intensive, mixed-signal IC design expertise is difficult to find, these manufacturers increasingly are turning to third parties, like us, to provide advanced mixed-signal solutions. Mixed-signal design involves great complexity and difficulty, because the performance of the IC depends on the creative analog expertise of engineers to optimize speed, power, amplitude and resolution despite the noisy digital environment and within the constraints of standard manufacturing processes. The development of analog design expertise typically requires years of practical analog design experience under the guidance of a senior engineer, and engineers with the required level of skill and expertise are in short supply.

Many third-party IC providers lack sufficient analog expertise to develop compelling mixed-signal ICs. As a result, manufacturers of electronic devices value third-party providers that can supply them with mixed-signal ICs with greater functionality, smaller size and lower power requirements at a reduced cost and shorter time-to-market.

PRODUCTS

We provide analog-intensive, mixed-signal ICs for use in a variety of electronic products in a broad range of applications including mobile handsets, PC modems, satellite set top boxes, automotive controls and sensors, radio tuners, personal video recorders, industrial monitoring and control, central office telephone equipment and optical networking equipment. Our products integrate complex mixed-signal functions that are frequently performed by numerous discrete components in competitive products into single chips or chipsets. By doing so, we are able to create products that when compared to many competitive products:

- Require less board space;
- Reduce the use of external components;
- Can offer superior performance;
- Provide increased reliability;
- Reduce system power requirements;
- Are easier for customers to use; and
- Reduce costs.

We group our products into two categories: mobile handset products and broad-based mixed-signal products. Mobile handset products include the Aero® Transceivers, the AeroFONE single-chip phone, Power Amplifiers (PA) and to the extent incorporated into handsets, the FM radio tuners. Broad-based mixed-signal products include our silicon Direct Access Arrangement (DAA), ISOmodem® embedded modems, ProSLIC® telephony interface circuits, microcontroller products, DSL analog front end, SiPHY® optical physical layer transceivers, precision clock & data recovery ICs (CDRs), XM satellite radio tuner, digital power products, FM broadcast radio tuners for non-handset applications, oscillators (XOs), voltage-controlled oscillators (VCXOs), general purpose RF Synthesizers and SiRX™ satellite receivers. The following table summarizes the diverse product areas and applications for the various ICs that we have introduced to customers:

PRODUCT AREAS AND DESCRIPTION	APPLICATIONS
MOBILE HANDSET PRODUCTS	
Aero Transceivers The Aero Transceiver family provides highly integrated transmit and receive radio functionality that is found between the antennae electronics and the digital baseband section of a GSM/GPRS/EDGE mobile handset or wireless data communication device. These solutions require a smaller footprint than most competing solutions in this form-factor sensitive market and can be paired with virtually any baseband. The Aero Transceivers are designed using 100% standard CMOS process technology which facilitates cost reduction and integration. The Aero IIe product is still in the early stages of customer adoption and is not yet being produced in volume.	• GSM/GPRS/EDGE wireless phones, smart phones and personal digital assistants (PDAs) • GSM/GPRS/EDGE data communications devices
AeroFONE Our AeroFONE single-chip phone is an integrated, high performance solution for GSM/GPRS handsets. The AeroFONE is based on patent pending, breakthrough innovations enabling a fully-functional single-chip phone that integrates the power management unit (PMU), battery interface and charging circuitry, digital baseband, analog baseband and a quad-band RF transceiver in a single monolithic CMOS IC. This product is still in the early stages of customer adoption and is not yet being produced in volume.	• GSM/GPRS wireless phones
Power Amplifiers Our Power Amplifiers for dual and tri-band cellular handsets are monolithic GSM PA solutions implemented in CMOS, creating high levels of integration and performance without sacrificing quality or reliability. Our PA integrates power control circuits, innovative temperature and overvoltage protection circuits, input and output matching networks and harmonic filters. Our PA provides customers with flexibility to meet key specifications for low cost phones.	• Dual and tri-band GSM/GPRS handsets

FM Radio Tuners for Mobile Handsets

Our FM tuner delivers the entire FM tuner from antenna input to audio output in CMOS. Using a digital architecture, the FM tuners significantly improve performance while reducing component count and saving board space. The FM tuner integrates selectivity filtering, automatic gain control, frequency synthesizer and audio processing making it ideal for portable audio applications.

- All wireless phones
- PDAs

BROAD-BASED MIXED-SIGNAL PRODUCTS

Silicon Direct Access Arrangement (DAA)

Our DAA provides the functionality of both a direct access arrangement and a codec in a single chipset. A direct access arrangement provides electrical isolation between a wireline device, such as a modem, and the telephone line to guard against power surges in the telephone line, while the codec provides analog-to-digital and digital-to-analog conversion.

- Desktop and notebook modems
- Modem Riser Cards
- Mobile Daughter Cards
- Modem on motherboard
- Mini PCI cards
- Handheld organizers
- Set-top boxes
- Video conferencing systems
- PBXs and IP telephony products

ISOmodem Embedded Modems

The ISOmodem combines an analog modem with a silicon DAA, resulting in a complete modem implemented in a very small form factor. The ISOmodem products are designed for embedded modem applications, outside of the personal computer area such as set-top boxes and PVRs. The ISOmodem contains a programmable line interface that meets global telephone line requirements, allowing manufacturers to implement a single modem design world-wide. The ISOmodem family includes embedded modem solutions for speeds ranging from 2400 bps to 56Kbps, suitable for a wide range of applications.

- Set-top and digital cable boxes
- Industrial monitoring
- Postage meters
- Security systems
- Remote medical monitoring
- Gaming consoles
- PVRs
- Point of sale (POS) terminals
- Fax machines and multi- function printers

ProSLIC Telephony Interface Circuits

The ProSLIC provides the analog telephone interface on the source end of the telephone which generates dial tone, busy tone, caller ID and ring signal. Our ProSLIC product family has offerings for short-haul applications suitable for the customer premises as well as long-haul applications suitable for the traditional

- IP telephony

telephone company central office.

- Wireless local loop providing remote access for a wireline system
- Voice over broadband modems and terminal adapters
- VoIP residential gateways
- PBXs
- Wired long loop and central office systems

Microcontroller Products

Our C8051F family of 8-bit mixed-signal microcontrollers integrates intelligent data capture in the form of high-resolution data converters, a traditional MCU computing function, Flash memory and a highly programmable set of communication interfaces in a single system on a chip. The combination of configurable high-performance analog, up to 100 Million Instructions Per Second (MIPS), 8051 core and in-system field programmability provides the user with design flexibility, improved time-to-market, superior system performance and greater end product differentiation. These products are designed for use in a large variety of end-markets, including the automotive, communications, consumer, industrial, medical and power management markets.

- Industrial automation and control
- Automotive sensors and controls
- Medical instrumentation
- Electronic test and measurement equipment
- Power management
- Weigh scales
- Optical line cards
- Digital cameras
- Computer peripherals
- Wireless headsets
- Magstripe readers
- Gaming consoles
- Electronic toys
- Personal computer modems
- External modems
- Residential gateways
- Network interface devices

DSL Analog Front End

The DSL Analog Front End (AFE) is designed to provide the connectivity functions for business or residential asymmetric digital subscriber line (ADSL) connection at the user end in customer premises equipment. Such a connection addresses the business and residential demand for high-speed connectivity. The DSL AFE supports several ADSL communication standards enabling various upload and download data rates.

SiPHY Optical Physical Layer Transceivers

We offer a family of high-speed physical layer ICs that meet the high-speed fiber Synchronous Optical Network (SONET) and Synchronous Digital Hierarchy (SDH) specifications. The transceiver IC provides both the receive path deserialization and transmit path serialization as required by the SONET/SDH physical layer. We also offer a family of clock and data recovery chips to provide specific functions at multiple speeds up to the OC-48 rate. All of our physical layer products utilize our proprietary digital signal processing technology to reduce the device s sensitivity to board-level noise and improve performance.

- Optical port cards for SONET/SDH optical networking equipment
- Optical test equipment
- High speed serial back plane interfaces

Precision Clock Integrated Circuits Our precision clock product family includes various products ranging from general purpose clock multiplier products up to high performance multi-port, redundant, multiple frequency range clock multipliers and regenerators. Network systems require very high precision, low jitter, clock sources. Our knowledge gained in developing the physical layer transceiver subsections provided us the technology to offer these high performance clock products. Traditionally, these clock sources have been implemented using expensive, bulky modules, numerous crystal sources, complicated discrete circuitry requiring numerous components, or hybrid IC/discrete solutions that offer limited functionality. The frequency agility, performance, and integration offered by these devices are key design features for our customer base.	• Optical port cards for SONET/SDH optical networking equipment • Networking test equipment • Short and long haul networking equipment
Satellite Radio Tuner Our satellite radio tuner combines our RF Synthesizer with a highly integrated tuner for a complete XM satellite radio tuner chipset. By leveraging CMOS technology, our satellite radio tuner minimizes the use of external components such as external voltage-controlled oscillators (VCOs), varactor diodes, and loop filters. The tuner provides strong system performance, meets stringent quality standards and fits into a very small footprint.	• Consumer and automotive XM satellite radios
Digital Power Products Our Si8250 family of digital power products are specifically designed for power control applications. Based on a patented architecture, the family of single-chip digital power supply controllers combines the flexibility and programmability of a DSP with the fast response of a hardware-based controller. This unique architecture enables the family of products to provide both digital power control and power management functions for most isolated and non-isolated switch-mode power supply topologies while consuming significantly less space and supply current than typical DSP solutions. These products are still in the early stages of customer adoption.	• Networking and servers • Medical instrumentation • Power bricks • Industrial applications
General Purpose FM Radio Tuners Our FM tuners (described above) are also deployed in applications other than mobile handsets.	• Stand-alone FM radios • PCs • Portable audio devices • MP3 players
Oscillators Our families of oscillators (XOs) and voltage-controlled oscillators (VCXOs) for applications up to 1.4 GHz include the industry s first quad frequency XO and VCXO devices. Leveraging our patented DSPLL® technology, both families are easy to design in and provide superior reliability and performance. These products are still in the early stages of customer adoption and are not yet being produced in volume.	• Networking equipment • Base stations • Test and measurement equipment • Storage area networks • Video systems

General Purpose RF Synthesizers

A RF synthesizer generates high frequency signals that are used in wireless communications systems to select a particular radio channel. We provide general purpose RF Synthesizers for a variety of wireless communications devices, including the industrial, science, medical (ISM) band applications and satellite radio applications. Our synthesizers are well-suited to meet the increasing requirement for highly-integrated electronics that reduce component count and consume less power.

- Satellite radio
- Wireless local area networks
- Cordless phones
- Wireless headsets
- Wireless LAN (802.11b) modems

SiRX Satellite Receivers

The SiRX product family is a fully-integrated single-chip satellite RF front-end for direct broadcast satellite (DBS). Leveraging our world-class RF expertise in CMOS, the SiRX satellite RF front-end integrates a high-performance satellite L-band RF tuner, a dual-mode DVB-S/DSS digital demodulator and a power-efficient, step-up supply controller for the low-noise block converter (LNB) into a single 6 x 8 mm CMOS solution. These products are still in the early stages of customer adoption and are not yet being produced in volume.

- FTA and pay TV DBS equipment
- Satellite set-top boxes
- PC Cards
- DVD Recorders
- Televisions

During fiscal 2005, sales of our mobile handset products and broad-based mixed-signal products accounted for 44% and 56% of our revenues, respectively. During fiscal 2004 and 2003, sales of our mobile handset products and broad-based mixed-signal products each accounted for approximately 50% of our revenues.

CUSTOMERS, SALES AND MARKETING

We market our products in various markets through our direct sales force, a network of independent sales representatives, and electronics distributors. Direct and distributor customers buy on an individual purchase order basis, rather than pursuant to long-term agreements.

We consider our customer to be the end customer purchasing either directly from a distributor, a contract manufacturer or us. An end customer purchasing through a contract manufacturer typically instructs such contract manufacturer to obtain our products and incorporate such products with other components for sale by such contract manufacturer to the end customer. Although we actually sell the products to, and are paid by, the distributors and contract manufacturers, we refer to such end customer as our customer.

Two of our distributors, Edom Technology and Uniquest, each selling products to customers in Asia, represented 29% and 11% of our fiscal 2005 revenues, respectively. Distributors are not considered end customers, but rather serve as a sales channel to our end customers. No other distributor accounted for 10% or more of revenues for fiscal 2005.

During fiscal 2005, our ten largest end customers accounted for 51% of our revenues. We had one end customer, Samsung, which represented 14% of our revenues. No other single end customer accounted for more than 10% of our revenues. Our major customers include Advanced Digital Broadcast, Agere Systems, Apple, Conexant, Intel, LG Electronics, Motorola, Sagem, Samsung and Thomson.

We maintain five sales offices in North America. We provide European sales support through our subsidiaries in the United Kingdom, France, Germany, Italy and Sweden. Our Asia Pacific sales are supported through our subsidiaries in Japan, Hong Kong and Singapore, as well as sales offices in South Korea, Taiwan and China. Revenue is attributed to a geographic area based on the end customer s shipped-to location. The percentage of our revenues to customers located outside of the United States was 91% in fiscal 2005, 89% in fiscal 2004 and 80% in fiscal 2003. In fiscal 2005, South Korea, Taiwan and China accounted for 17%, 17% and 13% of revenues, respectively. In fiscal 2004, South Korea, Taiwan and China accounted for 28%, 16% and 10% of revenues, respectively.

Our direct sales force includes regional sales managers in the field and area business managers to further support customer communications. Many of these managers have engineering degrees. We maintain a dedicated website for our field sales organization, which includes technical documentation, backlog information, order status, product availability and new product introduction information to support our communications with that organization. Additionally, we provide direct communication to all field sales personnel as part of a structured sales communications program.

We also utilize independent sales representatives and distributors to generate sales of our products. We have relationships with many independent sales representatives and distributors worldwide whom we have selected based on their understanding of the mixed-signal IC marketplace and their ability to provide effective field sales applications support for our products.

Our marketing efforts are targeted at both identified industry leaders and emerging market participants. Direct marketing activities are supplemented by a focused marketing communications effort that seeks to raise awareness of our company and products. Our public relations efforts are focused on leading trade and business publications. Our external website is used to deliver corporate information and product information. We also pursue targeted advertising in key trade publications and we have a cooperative marketing program that allows our distributors and representatives to promote our products to their local markets in conjunction with their own advertising activities. Finally we maintain a presence at strategic trade shows and industry events. These activities, in combination with direct sales activities, help drive demand for our products.

Due to the complex and innovative nature of our ICs, we employ experienced applications engineers who work closely with customers to support the design-win process, and can significantly accelerate the customer s time required to bring a product to market. A design-win occurs when a customer has designed our ICs into its product architecture. A considerable amount of effort to assist the customer in incorporating our ICs into its products is typically required prior to any sale. In many cases, our innovative ICs require significantly different implementations than existing approaches and, therefore, successful implementations may require extensive communication with potential customers. The amount of time required to achieve a design-win can vary substantially depending on a customer s development cycle, which can be relatively short (such as three months) or very long (such as two years) based on a wide variety of customer factors. Not all design wins ultimately result in revenue. However, once a completed design architecture has been implemented and produced in high volumes, our customers are reluctant to significantly alter their designs due to this extensive design-win process. We believe this process, coupled with our intellectual property protection, promotes relatively longer product life cycles for our ICs and high barriers to entry for competitive products, even if such competing products are offered at lower prices. Finally, our close collaboration with our customers provides us with knowledge of derivative product ideas or completely new product line offerings that may not otherwise arise in other new product discussions.

RESEARCH AND DEVELOPMENT

Through our research and development efforts, we apply our experienced analog and mixed-signal engineering talent and expertise to create new ICs that integrate functions typically performed inefficiently by multiple discrete components. This integration generally results in lower costs, smaller die sizes, lower power demands and enhanced price/performance characteristics. We attempt to reuse successful techniques for integration in new applications where similar benefits can be realized. We believe that reliable and precise analog and mixed-signal ICs can only be developed by teams of engineers that coordinate their efforts under the direction of senior engineers who have significant analog experience and are familiar with the intricacies of designing these ICs for commercial volume production. The development of test methodologies is a critical activity in releasing a new product for commercial success. We believe that we have attracted some of the best engineers in our industry.

Research and development expenses were $101.2 million, $78.1 million and $51.9 million in fiscal 2005, 2004, and 2003, respectively.

TECHNOLOGY

Our product development process facilitates the design of highly-innovative, analog-intensive, mixed-signal ICs. Our senior engineers start the product development process by forming an understanding of our customers products and needs and then design alternatives with increased functionality and with decreasing power, size and cost requirements. Our engineers deep knowledge of existing and emerging standards and performance requirements help us to assess the technical feasibility of a particular IC. We target areas where we can provide compelling product improvements. Once we have solved the primary challenges, our field application engineers continue to work closely with our customers design teams to maintain and develop an understanding of our customers needs, allowing us to formulate derivative products and refined features.

In providing mixed-signal ICs for our customers, we believe our key competitive advantages are:

- analog design expertise in CMOS;
- digital signal processing design expertise;
- microcontroller and system on a chip design expertise; and
- our broad understanding of systems technology and trends.

To fully capitalize on these advantages, we have assembled a world-class development team with exceptional analog and mixed-signal design expertise led by accomplished senior engineers.

ANALOG DESIGN EXPERTISE IN CMOS

We believe that our most significant core competency is our world-class analog design capability. Additionally, we strive to design substantially all of our ICs in CMOS processes. There are several modern process technologies for manufacturing semiconductors including CMOS, Bipolar, BiCMOS, silicon germanium and gallium arsenide. While it is significantly more difficult to design analog ICs in CMOS, CMOS provides multiple benefits versus existing alternatives, including significantly reduced cost, reduced technology risk and greater worldwide foundry capacity. CMOS is the most commonly used process technology for manufacturing digital ICs and as a result is most likely to be used for the manufacturing of ICs with finer line geometries, which enable smaller and faster ICs. By designing our ICs in CMOS, we enable our products to benefit from this trend towards finer line geometries, which allows us to integrate more digital functionality into our mixed-signal ICs.

Designing analog and mixed-signal ICs is significantly more complicated than designing stand alone digital ICs. While advanced software tools exist to help automate digital IC design, there are far fewer tools for advanced analog and mixed-signal IC design. In many cases, our analog circuit design efforts begin at the fundamental transistor level. We believe that we have a demonstrated ability to design the most difficult analog and RF circuits using standard CMOS technologies. For example, our ProSLIC product family integrates subscriber line interface circuit (SLIC), codec and battery generation functionality into a single low-voltage CMOS IC. Similarly, bulky wireless phone components such as voltage controlled oscillators and intermediate frequency sur