

SILICON LABORATORIES INC  
Form 10-K  
February 10, 2010

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

(Mark One)

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

For the fiscal year ended January 2, 2010

or

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission file number: 000-29823

**SILICON LABORATORIES INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**74-2793174**

(I.R.S. Employer Identification No.)

**400 West Cesar Chavez, Austin, Texas**

(Address of principal executive offices)

**78701**

(Zip Code)

**(512) 416-8500**

(Registrant's telephone number, including area code)

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

**Title of each class**

Common Stock, \$0.0001 par value

**Name of exchange on which registered**

The NASDAQ Stock Market LLC

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

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

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

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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.  Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) 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.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

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

The aggregate market value of the 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 2, 2009) was \$1,565,624,619 (assuming, for this purpose, that only directors and officers are deemed affiliates).

There were 45,929,347 shares of the registrant's common stock issued and outstanding as of January 31, 2010.

### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the registrant's 2010 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

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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 a broad range of applications in a variety of markets, including communications, consumer, industrial, automotive, medical and power management.

Our world-class, mixed-signal ICs use standard complementary metal oxide semiconductor (CMOS) technology to 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, simplifying our customers' designs and improving their time-to-market.

**Industry Background**

Communications, computing and consumer electronics continue to drive semiconductor consumption. Growth in these markets has been driven primarily by the increasing pervasiveness of Internet usage, development of new communications technologies and the availability of improved communication services at lower costs over high-speed, highly reliable networks. This demand has fueled tremendous growth in the number of electronic devices. Demand for functionality in mobile, handheld devices such as mobile phones, portable media players and personal navigation devices, has increased as manufacturers attempt to further differentiate their products. Consumer and enterprise demand for Internet connectivity, the availability of alternative telephony services and the transition to digital video are also key trends driving demand for innovative, mixed-signal ICs.

All of these applications are characterized by an intersection between the analog world we live in and the digital world of computing, and therefore require analog-intensive, mixed-signal circuits. Traditional mixed-signal designs relied upon solutions built with numerous, complex discrete analog and digital components. While these traditional designs provide the required functionality, they are often 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, electronics manufacturers need to reduce the cost and complexity of their systems and enable new features or functionality to differentiate themselves from their competitors.

Simultaneously, these manufacturers face accelerating time-to-market demands and must be able to rapidly 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 requires specific expertise and relies on creative, experienced engineers to deliver solutions that optimize speed, power and performance despite the noisy digital environment and within the constraints of standard manufacturing processes. The development of this 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 portable devices, satellite set top boxes, AM/FM radios and other consumer electronics, networking equipment, test and measurement equipment, industrial monitoring and control, central office telephone equipment and customer premises 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 competing products:

Require less board space;

Reduce the use of external components lowering the system cost and simplifying design;

Offer superior performance improving our customers' end products;

Provide increased reliability and manufacturability, improving customer yields; and/or

Reduce system power requirements enabling smaller form factors and/or longer battery life.

We group our products into the following categories:

Broadcast products, which include our broadcast radio receivers and transmitters, video tuners and demodulators, satellite set-top box receivers and satellite radio tuners;

Access products, which include our ISModem® embedded modems, Voice over IP (VoIP) products, such as our ProSLIC® subscriber line interface circuits and voice direct access arrangement (DAA), and our Power over Ethernet devices;

Broad-based products, which include 8-bit microcontroller products, timing products (including clocks, precision clock & data recovery ICs and oscillators), short-range wireless transceivers, isolators, current sensors and our QuickSense portfolio of touch, proximity and ambient light sensing devices; and

Mature products, which include our silicon DAA for PC modems, DSL analog front end ICs, optical physical layer transceivers and RF Synthesizers.

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**

***Broadcast Products***

***Broadcast Radio Receivers and Transmitters***

Our FM and AM receivers deliver the entire tuner from antenna input to audio output in a single chip. Ideal for portable audio applications, the broadcast audio products are based on an innovative digital architecture that enables significant improvements in performance, which translates to a better consumer experience, while reducing system cost and board space for our customers. The AM/FM receivers enable AM and/or FM radio in virtually any device and the transmitters allow customers to cost effectively add wireless AM/FM audio playback capability to any portable media device.

- Mobile phones
- Stand-alone AM/FM radios
- Personal computers
- Portable audio devices
- MP3/digital media players
- Navigation/GPS devices
- Satellite radios
- Home stereos
- Automotive infotainment systems

**Product Areas and Description**

*Video tuners and demodulators*

Our complete, globally-compliant hybrid TV tuner with analog TV demodulator in a single CMOS IC leverages our proven digital low-IF architecture and exceeds the performance of traditional discrete TV tuners, enabling TV makers to deliver improved picture quality and better reception for both analog and digital broadcasts. Our small, low power and high performance digital video demodulators support DVB-T, DVB-C and fixed reception DVB-H in a single chip and are ideal for equipment receiving digital terrestrial and/or cable services.

**Access Products**

*ISModem Embedded Modems*

The ISModem embedded modems leverage innovative silicon DAA technology and a digital signal processor to deliver a globally compliant, very small analog modem for embedded applications like set-top boxes, Personal Video Recorders (PVRs) and fax capability in multi-function printers.

*ProSLIC Subscriber Line Interface Circuits*

Our ProSLIC provides the analog subscriber line 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 telephone company central office.

*Voice Direct Access Arrangement*

Our DAA provides electrical isolation to guard against power surges in the telephone line, while the codec provides analog-to-digital and digital-to-analog conversion. In a voice over DSL application, our voice DAA also enables emergency backup telephone service in the event the data network goes down.

**Applications**

Integrated digital televisions (iDTV)  
Free-to-Air (FtA) or pay-TV set-top  
box receivers  
PC-TV applications  
DVD/HDD personal video recorders

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

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

PBXs and IP telephony products

**Product Areas and Description**

*Power over Ethernet*

Our Power over Ethernet (PoE) Power Source Equipment and Powered Device ICs offer highly differentiated solutions with a reduced total bill of materials (BOM) cost and improved performance and reliability. Our solutions also offer an integration level that enables functionality not available with competing solutions. These devices are still in the early stages of customer adoption.

**Broad-based Products**

*Microcontrollers*

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.

*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. Our Any-Rate Precision Clock product family offers the additional flexibility of generating any output frequency from any input frequency with 0.3 picosecond jitter performance. Leveraging our DSPLL® technology to offer frequency agile, extremely low jitter clock products, these devices replace traditional solutions implemented using expensive, bulky modules, numerous crystal sources, complicated discrete circuitry requiring numerous components, or hybrid IC/discrete solutions that offer limited functionality.

*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, manufacturability and performance.

**Applications**

Wireless access points (WAP)  
VoIP phones  
Radio frequency identification (RFID) tag readers  
POS terminals  
Networking routers and switches  
Security systems  
Cameras

Industrial automation and control  
Automotive sensors and controls  
Medical instrumentation  
Electronic test and measurement equipment  
Consumer electronics  
Computer peripherals  
White goods

Next-generation networking equipment  
Telecommunications  
Wireless base stations  
Test and measurement equipment  
HDTV video  
High-speed data acquisition  
SONET/SDH line cards

Networking equipment  
Base stations  
Test and measurement equipment  
Storage area networks  
Video systems

**Product Areas and Description**

**Applications**

*EZRadio® Short-Range Wireless Transceivers*

Our EZRadio family of fully integrated, low power, low data rate and low cost short range wireless ICs are designed to meet the needs of customers developing applications requiring a secure, point to point transmission such as industrial monitoring and control.

Remote keyless entry  
Home security monitors  
Automated Meter Readers  
Remote controls

*Isolators*

Our digital isolator product family leverages an innovative technology to enable up to four channels of isolation in a single device, simplifying design and reducing system cost. These products are still in the early stages of customer adoption.

Switch mode power supplies  
Isolated analog data acquisition  
Industrial networking  
Motor control

*Current Sensors*

Our low-loss, high-accuracy alternating current sensor family measures up to 20 amps of current for control and protection in power systems. Our current sensors integrate the functional equivalent of a current transformer circuit into a tiny package, including the current transformer, blocking diode, burden resistor and output RC filter, thereby decreasing board space and reducing enclosure volume requirements. These products are still in the early stages of customer adoption.

AC-DC switching power supplies  
Isolated DC-DC supplies  
Motor control  
Electronic ballasts for lighting

**Mature Products**

Our silicon DAA for PC modems provides the functionality of both a direct access arrangement and a codec in a single chipset. Our 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.

During fiscal 2009, 2008 and 2007, sales of our mixed-signal products accounted for substantially all of our revenue.

**Divestiture**

In March 2007, we sold our Aero® transceiver, AeroFONE single-chip phone and power amplifier product lines (the "Aero product lines") to NXP B.V. and NXP Semiconductors France SAS (collectively "NXP"). These products represented about one third of our quarterly revenue at the time of the divestiture. We intend to selectively compete in wireless applications and have retained a substantial portion of our core RF intellectual property.

**Customers, Sales and Marketing**

We market our products through our direct sales force and through a network of independent sales representatives and 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.



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Two of our distributors, Edom Technology and Avnet, represented 27% and 10% of our revenues during fiscal 2009. 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 2009.

During fiscal 2009, our ten largest end customers accounted for 43% of our revenues. We had one end customer, Samsung, whose purchases across a variety of product areas represented 16% of our total revenues during fiscal 2009. No other single end customer accounted for more than 10% of our revenues during this period. Our major customers include 2Wire, Apple, Huawei, LG Electronics, Nokia, Philips, Samsung, Sony Ericsson, Thomson and Varian Medical Systems.

We maintain numerous sales offices in North America, Europe and Asia. 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 88% in fiscal 2009. For further information regarding our revenues and long-lived assets by geographic area, see Note 17, *Segment Information*, to the Consolidated Financial Statements for additional information.

Our direct sales force includes regional sales managers in the field and area business managers to further support customer communications. 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 \$104.4 million, \$101.2 million and \$89.3 million in fiscal 2009, 2008 and 2007, respectively.

## Technology

Our product development process facilitates the design of highly-innovative, analog-intensive, mixed-signal ICs. 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 world-class analog design capability. Additionally, we strive to design substantially all of our ICs in standard 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. These finer line geometries can 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.

### **Digital Signal Processing Design Expertise**

We consider the partitioning of a circuit's functionality to be a proprietary and creative design technique. Our digital signal processing design expertise maximizes the price/performance characteristics of both the analog and digital functions and allows our ICs to work in an optimized manner to accomplish particular tasks. Generally, we surround core analog circuitry with digital CMOS transistors, which allow our ICs to perform the required analog functions with increased digital capabilities. For example, our broadcast audio products use a proven digital low-IF receiver and transmitter architecture to deliver superior RF performance and interference rejection compared to traditional, analog-only approaches. Digital signal processing is utilized to optimize sound quality under varying signal conditions, enabling a better consumer experience.

### **Microcontroller and System on a Chip Design Expertise**

We have expanded our system on a chip expertise to include the talent and circuit integration methodologies required to combine precision analog, high-speed digital, flash memory and in-system programmability into a single, monolithic CMOS integrated circuit. Our microcontroller products are designed to capture an external analog signal, convert it to a digital signal, compute digital functions on the stream of data and then communicate the results through a standard digital interface. The ability to develop standard products with the broadest possible customer application base while being cost efficient with the silicon area of the monolithic CMOS integrated circuit requires a keen sense of customer value and engineering capabilities. Additionally, to manage the wide variety of signals on a monolithic piece of silicon including electrical noise, harmonics and other electronic distortions requires a fundamental knowledge of device physics and accumulated design expertise.

### **Understanding of Systems Technology and Trends**

Our focused expertise in mixed-signal ICs is the result of the breadth of engineering talent we have assembled with experience working in analog-intensive CMOS design for a wide variety of applications. This expertise, which we consider a competitive advantage, is the foundation of our in-depth understanding of the technology and trends that impact electronic systems and markets. Our expertise includes:

Isolation, which is critical for existing and emerging telecom networks;

Frequency synthesis, which is core technology for wireless and clocking applications;

Integration, which enables third-party software with our ICs to create combined solutions; and

Signal processing and precision analog, which forms the heart of consumer, industrial, medical and automotive electronics applications.

Our understanding of the role of analog/digital interfaces within electronic systems, standards evolution, and end market drivers enables us to identify product development opportunities and capitalize on market trends.

## Manufacturing

As a fabless IC manufacturer, we conduct IC design and development in our facilities and electronically transfer our proprietary IC designs to third-party semiconductor fabricators who process silicon wafers to produce the ICs that we design. Our IC designs typically use industry-standard CMOS manufacturing process technology to achieve a level of performance normally associated with more expensive special-purpose IC fabrication technology. We believe the use of CMOS technology facilitates the rapid production of our ICs within a lower cost framework. Our IC production employs submicron process geometries which are readily available from leading foundry suppliers worldwide, thus increasing the likelihood that manufacturing capacity will be available throughout our products' life cycles. We currently partner principally with Taiwan Semiconductor Manufacturing Co. (TSMC) or its affiliates to manufacture our semiconductor wafers. We believe that our fabless manufacturing model significantly reduces our capital requirements and allows us to focus our resources on design, development and marketing of our ICs.

Once the silicon wafers have been produced, they are shipped directly to our third-party assembly subcontractors. The assembled ICs are then moved to the final testing stage. This operation can be performed by the same contractor that assembled the IC, other third-party test subcontractors or within our internal facilities prior to shipping to our customers. During fiscal 2009, the vast majority of our units shipped were tested by offshore third-party test subcontractors. We expect that our utilization of offshore third-party test subcontractors will remain at about this level during fiscal 2010.

## Backlog

As of January 2, 2010, our backlog was approximately \$74.2 million, compared to approximately \$45.8 million as of January 3, 2009. We include in backlog accepted product purchase orders from customers and worldwide distributor stocking orders. We only include orders with an expected shipping date from us within six months. Product orders in our backlog are subject to changes in delivery schedules or cancellation at the option of the purchaser typically without penalty. Our backlog may fluctuate significantly depending upon customer order patterns which may, in turn, vary considerably based on rapidly changing business circumstances. Shipments to distributors are not recognized as revenue until the products are sold by the distributors. Additionally, our arrangements with distributors typically provide for price protection and stock rotation activities. Accordingly, we do not believe that our backlog at any time is necessarily representative of actual sales for any succeeding period.

## Competition

The markets for semiconductors generally, and for analog and mixed-signal ICs in particular, are intensely competitive. We anticipate that the market for our products will continually evolve and will be subject to rapid technological change. We believe the principal competitive factors in our industry are:

Product size;	Power requirement;
Level of integration;	Customer support;
Product capabilities;	Reputation;
Reliability;	Ability to rapidly introduce new products to market; and
Price;	Intellectual property.
Performance;	

We believe that we are competitive with respect to these factors, particularly because our ICs typically are smaller in size, are highly integrated, achieve high performance specifications at lower price points than competitive products and are manufactured in standard CMOS which generally enables us to supply them on a relatively rapid basis to customers to meet their product introduction schedules. However, disadvantages we face include our relatively short operating history in certain of

our markets and the need for customers to redesign their products and modify their software to implement our ICs in their products.

As we target and supply products to numerous markets and applications, we face competition from a relatively large number of competitors. We compete with Analog Devices, Atmel, Broadcom, Conexant, Cypress, Epson, Freescale, IDT, Lantiq, LSI, Maxim Integrated Products, Microchip, NXP Semiconductors, Renesas, Sony Semiconductor, ST-Ericsson, STMicroelectronics, Texas Instruments, Vectron International, Zarlink Semiconductor and others. We expect to face competition in the future from our current competitors, other manufacturers and designers of semiconductors and start-up semiconductor design companies. Our competitors may also offer bundled solutions offering a more complete product, which may negatively impact our competitive position despite the technical merits or advantages of our products. In addition, our customers could develop products or technologies internally that would replace their need for our products and would become a source of competition. As the markets for electronic products grow, we also may face competition from traditional electronic device companies. These companies may enter the mixed-signal semiconductor market by introducing their own products, including components within their products that would eliminate the need for our ICs, or by entering into strategic relationships with or acquiring other existing IC providers.

Many of our competitors and potential competitors have longer operating histories, greater name recognition, access to larger customer bases, complementary product offerings, and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources than us. Current and potential competitors have established or may establish financial and strategic relationships between themselves or with our existing or potential customers, resellers or other third parties. Accordingly, it is possible that new competitors or alliances among competitors could emerge and rapidly acquire significant market share.

### **Intellectual Property**

Our future success depends in part upon our proprietary technology. We seek to protect our technology through a combination of patents, copyrights, trade secrets, trademarks and confidentiality procedures. As of January 2, 2010, we had approximately 900 issued or pending United States patents in the IC field. We also frequently file for patent protection in a variety of international jurisdictions with respect to the proprietary technology covered by our U.S. patents and patent applications. There can be no assurance that patents will ever be issued with respect to these applications. Furthermore, it is possible that any patents held by us may be invalidated, circumvented, challenged or licensed to others. In addition, there can be no assurance that such patents will provide us with competitive advantages or adequately safeguard our proprietary rights. While we continue to file new patent applications with respect to our recent developments, existing patents are granted for prescribed time periods and will expire at various times in the future.

We claim copyright protection for proprietary documentation for our products. We have filed for registration, or are in the process of filing for registration, the visual images of certain ICs with the U.S. Copyright Office. We have registered the "Silicon Labs" logo and a variety of other product and product family names as trademarks in the United States and selected foreign jurisdictions. All other trademarks, service marks or trade names appearing in this report are the property of their respective owners. We also attempt to protect our trade secrets and other proprietary information through agreements with our customers, suppliers, employees and consultants, and through other customary security measures. We intend to protect our rights vigorously, but there can be no assurance that our efforts will be successful. In addition, the laws of other countries in which our products are sold may not protect our products and intellectual property rights to the same extent as the laws of the United States.

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While our ability to effectively compete depends in large part on our ability to protect our intellectual property, we believe that our technical expertise and ability to introduce new products in a timely manner will be an important factor in maintaining our competitive position.

Many participants in the semiconductor and electronics industries have a significant number of patents and have frequently demonstrated a readiness to commence litigation based on allegations of patent and other intellectual property infringement. From time to time, third parties may assert infringement claims against us. We may not prevail in any such litigation or may not be able to license any valid and infringed patents from third parties on commercially reasonable terms, if at all. Litigation, regardless of the outcome, is likely to result in substantial cost and diversion of our resources, including our management's time. Any such litigation could materially adversely affect us. For further information regarding patent litigation, please see *Part I, Item 3. Legal Proceedings*.

Our licenses include industry standard licenses with our vendors, such as wafer fabrication tool libraries, third party core libraries, computer-aided design applications and business software applications.

### **Employees**

As of January 2, 2010, we employed 736 people. Our success depends on the continued service of our key technical and senior management personnel and on our ability to continue to attract, retain and motivate highly skilled analog and mixed-signal engineers. The competition for such personnel is intense. We have never had a work stoppage and none of our U.S. employees are represented by a labor organization. We consider our employee relations to be good.

### **Environmental Regulation**

Federal, state and local regulations impose various environmental controls on the storage, use, discharge and disposal of certain chemicals and gases used in the semiconductor industry. Our compliance with these laws and regulations has not had a material impact on our financial position or results of operations.

### **Available Information**

Our website address is [www.silabs.com](http://www.silabs.com). Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 are available through the investor relations page of our internet website free of charge as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (SEC). Our website and the information contained therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K.

**Item 1A. Risk Factors**

**Risks Related to our Business**

**We may not be able to maintain our historical growth and may experience significant period-to-period fluctuations in our revenues and operating results, which may result in volatility in our stock price**

Although we have generally experienced revenue growth in our history, we may not be able to sustain this growth. We may also experience significant period-to-period fluctuations in our revenues and operating results in the future due to a number of factors, and any such variations may cause our stock price to fluctuate. In some future period our revenues or operating results may be below the expectations of public market analysts or investors. If this occurs, our stock price may drop, perhaps significantly.

A number of factors, in addition to those cited in other risk factors applicable to our business, may contribute to fluctuations in our revenues and operating results, including:

The timing and volume of orders received from our customers;

The timeliness of our new product introductions and the rate at which our new products may cannibalize our older products;

The rate of acceptance of our products by our customers, including the acceptance of new products we may develop for integration in the products manufactured by such customers, which we refer to as "design wins";

The time lag and realization rate between "design wins" and production orders;

The demand for, and life cycles of, the products incorporating our ICs;

The rate of adoption of mixed-signal ICs in the markets we target;

Deferrals or reductions of customer orders in anticipation of new products or product enhancements from us or our competitors or other providers of ICs;

Changes in product mix;

The average selling prices for our products could drop suddenly due to competitive offerings or competitive predatory pricing, especially with respect to our mobile handset and modem products;

The average selling prices for our products generally decline over time;

Changes in market standards;

Impairment charges related to inventory, equipment or other long-lived assets;

The software used in our products, including software provided by third-parties, may not meet the needs of our customers;

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Significant legal costs to defend our intellectual property rights or respond to claims against us; and

The rate at which new markets emerge for products we are currently developing or for which our design expertise can be utilized to develop products for these new markets.

The markets for mobile handsets, consumer electronics, satellite set-top boxes and VoIP applications are characterized by rapid fluctuations in demand and seasonality that result in corresponding fluctuations in the demand for our products that are incorporated in such devices. Additionally, the rate of technology acceptance by our customers results in fluctuating demand for our products as customers are reluctant to incorporate a new IC into their products until the new IC has



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achieved market acceptance. Once a new IC achieves market acceptance, demand for the new IC can quickly accelerate to a point and then level off such that rapid historical growth in sales of a product should not be viewed as indicative of continued future growth. In addition, demand can quickly decline for a product when a new IC product is introduced and receives market acceptance. Due to the various factors mentioned above, the results of any prior quarterly or annual periods should not be relied upon as an indication of our future operating performance.

### **If we are unable to develop or acquire new and enhanced products that achieve market acceptance in a timely manner, our operating results and competitive position could be harmed**

Our future success will depend on our ability to reduce our dependence on a few products by developing or acquiring new ICs and product enhancements that achieve market acceptance in a timely and cost-effective manner. The development of mixed-signal ICs is highly complex, and we have at times experienced delays in completing the development and introduction of new products and product enhancements. Successful product development and market acceptance of our products depend on a number of factors, including:

Requirements of customers;

Accurate prediction of market and technical requirements;

Timely completion and introduction of new designs;

Timely qualification and certification of our ICs for use in our customers' products;

Commercial acceptance and volume production of the products into which our ICs will be incorporated;

Availability of foundry, assembly and test capacity;

Achievement of high manufacturing yields;

Quality, price, performance, power use and size of our products;

Availability, quality, price and performance of competing products and technologies;

Our customer service, application support capabilities and responsiveness;

Successful development of our relationships with existing and potential customers;

Technology, industry standards or end-user preferences; and

Cooperation of third-party software providers and our semiconductor vendors to support our chips within a system.

We cannot provide any assurance that products which we recently have developed or may develop in the future will achieve market acceptance. We have introduced to market or are in development of many ICs. If our ICs fail to achieve market acceptance, or if we fail to develop new products on a timely basis that achieve market acceptance, our growth prospects, operating results and competitive position could be adversely affected.

**Our research and development efforts are focused on a limited number of new technologies and products, and any delay in the development, or abandonment, of these technologies or products by industry participants, or their failure to achieve market acceptance, could compromise our competitive position**

Our ICs are used as components in electronic devices in various markets. As a result, we have devoted and expect to continue to devote a large amount of resources to develop products based on new and emerging technologies and standards that will be commercially introduced in the future.

Research and development expense in fiscal 2009 was \$104.4 million, or 23.7% of revenues. A number of large companies are actively involved in the development of these new technologies and standards. Should any of these companies delay or abandon their efforts to develop commercially available products based on new technologies and standards, our research and development efforts with respect to these technologies and standards likely would have no appreciable value. In addition, if we do not correctly anticipate new technologies and standards, or if the products that we develop based on these new technologies and standards fail to achieve market acceptance, our competitors may be better able to address market demand than we would. Furthermore, if markets for these new technologies and standards develop later than we anticipate, or do not develop at all, demand for our products that are currently in development would suffer, resulting in lower sales of these products than we currently anticipate.

**We depend on a limited number of customers for a substantial portion of our revenues, and the loss of, or a significant reduction in orders from, any key customer could significantly reduce our revenues**

The loss of any of our key customers, or a significant reduction in sales to any one of them, would significantly reduce our revenues and adversely affect our business. During fiscal 2009, our ten largest customers accounted for 43% of our revenues. During fiscal 2009, Samsung's purchases across a variety of product areas represented 16% of our total revenues. Some of the markets for our products are dominated by a small number of potential customers. Therefore, our operating results in the foreseeable future will continue to depend on our ability to sell to these dominant customers, as well as the ability of these customers to sell products that incorporate our IC products. In the future, these customers may decide not to purchase our ICs at all, purchase fewer ICs than they did in the past or alter their purchasing patterns, particularly because:

We do not have material long-term purchase contracts with our customers;

Substantially all of our sales to date have been made on a purchase order basis, which permits our customers to cancel, change or delay product purchase commitments with little or no notice to us and without penalty;

Some of our customers may have efforts underway to actively diversify their vendor base which could reduce purchases of our ICs; and

Some of our customers have developed or acquired products that compete directly with products these customers purchase from us, which could affect our customers' purchasing decisions in the future.

While we have been a significant supplier of ICs used in many of our customers' products, our customers regularly evaluate alternative sources of supply in order to diversify their supplier base, which increases their negotiating leverage with us and protects their ability to secure these components. We believe that any expansion of our customers' supplier bases could have an adverse effect on the prices we are able to charge and volume of product that we are able to sell to our customers, which would negatively affect our revenues and operating results.

**Significant litigation over intellectual property in our industry may cause us to become involved in costly and lengthy litigation which could seriously harm our business**

In recent years, there has been significant litigation in the United States involving patents and other intellectual property rights. From time to time, we receive letters from various industry participants alleging infringement of patents, trademarks or misappropriation of trade secrets or from customers requesting indemnification for claims brought against them by third parties. The exploratory nature of these inquiries has become relatively common in the semiconductor industry. We respond when we deem appropriate and as advised by legal counsel. We have been involved in litigation to

protect our intellectual property rights in the past and may become involved in such litigation again in the future. In the future, we may become involved in additional litigation to defend allegations of infringement asserted by others, both directly and indirectly as a result of certain industry-standard indemnities we may offer to our customers. Legal proceedings could subject us to significant liability for damages or invalidate our proprietary rights. Legal proceedings initiated by us to protect our intellectual property rights could also result in counterclaims or countersuits against us. Any litigation, regardless of its outcome, would likely be time-consuming and expensive to resolve and would divert our management's time and attention. Most intellectual property litigation also could force us to take specific actions, including:

Cease selling products that use the challenged intellectual property;

Obtain from the owner of the infringed intellectual property a right to a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all;

Redesign those products that use infringing intellectual property; or

Pursue legal remedies with third parties to enforce our indemnification rights, which may not adequately protect our interests.

**We may be unable to protect our intellectual property, which would negatively affect our ability to compete**

Our products rely on our proprietary technology, and we expect that future technological advances made by us will be critical to sustain market acceptance of our products. Therefore, we believe that the protection of our intellectual property rights is and will continue to be important to the success of our business. We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. We also enter into confidentiality or license agreements with our employees, consultants, intellectual property providers and business partners, and control access to and distribution of our documentation and other proprietary information. Despite these efforts, unauthorized parties may attempt to copy or otherwise obtain and use our proprietary technology. Monitoring unauthorized use of our technology is difficult, and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. We cannot be certain that patents will be issued as a result of our pending applications nor can we be certain that any issued patents would protect or benefit us or give us adequate protection from competing products. For example, issued patents may be circumvented or challenged and declared invalid or unenforceable. We also cannot be certain that others will not develop effective competing technologies on their own.

**Failure to manage our distribution channel relationships could impede our future growth**

The future growth of our business will depend in large part on our ability to manage our relationships with current and future distributors and sales representatives, develop additional channels for the distribution and sale of our products and manage these relationships. As we execute our indirect sales strategy, we must manage the potential conflicts that may arise with our direct sales efforts. For example, conflicts with a distributor may arise when a customer begins purchasing directly from us rather than through the distributor. The inability to successfully execute or manage a multi-channel sales strategy could impede our future growth. In addition, relationships with our distributors often involve the use of price protection and inventory return rights. This often requires a significant amount of sales management's time and system resources to manage properly.

**We are subject to increased inventory risks and costs because we build our products based on forecasts provided by customers before receiving purchase orders for the products**

In order to ensure availability of our products for some of our largest customers, we start the manufacturing of our products in advance of receiving purchase orders based on forecasts provided by these customers. However, these forecasts do not represent binding purchase commitments and we do not recognize sales for these products until they are shipped to the customer. As a result, we incur inventory and manufacturing costs in advance of anticipated sales. Because demand for our products may not materialize, manufacturing based on forecasts subjects us to increased risks of high inventory carrying costs, increased obsolescence and increased operating costs. These inventory risks are exacerbated when our customers purchase indirectly through contract manufacturers or hold component inventory levels greater than their consumption rate because this causes us to have less visibility regarding the accumulated levels of inventory for such customers. A resulting write-off of unusable or excess inventories would adversely affect our operating results.

**Our products are complex and may contain errors which could lead to product liability, an increase in our costs and/or a reduction in our revenues**

Our products are complex and may contain errors, particularly when first introduced or as new versions are released. Our new products are increasingly being des