CATALYST SEMICONDUCTOR INC
Form 10-K
July 17, 2003

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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

FOR ANNUAL AND TRANSITION REPORTS

PURSUANT TO SECTIONS 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

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

For the fiscal year ended April 27, 2003

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 0-21488

Catalyst Semiconductor, Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**77-0083129**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

1250 Borregas Avenue, Sunnyvale, California 94089

(Address of Principal Executive Offices)

Registrant s telephone number, including area code: (408) 542-1000

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

Securities registered pursuant to Section 12(g) of the Act: Common Stock, $.001 par value

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein and will not be contained to the best of Registrant s knowledge in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

As of October 25, 2002, the last business day of Registrant s most recently completed second fiscal quarter, there were 16,705,115 shares of Registrant s Common Stock outstanding and the aggregate market value of Common Stock held by non-affiliates of Registrant was approximately $29 million (based upon the closing bid for shares of Registrant s Common Stock as reported by the Nasdaq SmallCap Market on October 25, 2002). Shares of Common Stock held by each officer, director and holder of 5% or more of the outstanding Common Stock (including shares with respect to which a holder has the right to acquire beneficial ownership within 60 days) have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

Indicate by checkmark whether Registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). Yes o No þ

The number of shares of Registrant s Common Stock outstanding as of June 24, 2003 was 16,502,062.

DOCUMENTS INCORPORATED BY REFERENCE

The Registrant has incorporated by reference into Part III of this Annual Report on Form 10-K portions of its Proxy Statement for the 2003 Annual Meeting of Stockholders.

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CATALYST SEMICONDUCTOR, INC.

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CATALYST SEMICONDUCTOR, INC.

PART I

Item 1. ***Business***

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Words such as projected, expects, believes, intends and assumes and similar expressions are used to identify forward-looking statements. These statements are made based upon current expectations and projections about our business and the semiconductor industry and assumptions made by our management are not guarantees of future performance, nor do we assume any obligation to update such forward-looking statements after the date this report is filed. Our actual results could differ materially from those projected in the forward-looking statements for many reasons, including the risk factors listed in Part II, Item 7 Management s Discussion & Analysis of Financial Conditions and Results of Operations Certain Risks that May Affect Our Future Results and elsewhere in, or incorporated by reference into, this report.

Catalyst Semiconductor Inc. (Catalyst, we, us or Registrant) designs, develops and markets a broad range of programmable IC products serving the micro-controller applications market. These applications include communication, computing, industrial automation, consumer and automotive applications. Our product portfolio includes serial and parallel flash/ electrically erasable programmable read only memories (EEPROM), programmable micro-controller supervisory and voltage reference circuits and mixed signal devices.

We have sought to enhance our internal design and process technology expertise through strategic relationships with leading semiconductor manufacturers and we currently subcontract the fabrication of our semiconductor wafers through Oki Electric Industry Co., Ltd. (Oki) in Japan and X-Fab Texas, Inc. (Xfab) in Lubbock, Texas. These relationships enable us to draw upon our foundries expertise in high volume semiconductor manufacturing. For example, we have integrated the designs and processes for the manufacture of our Flash memory products with Oki s fine line-width, high density CMOS processes used for high volume Dynamic Random Access Memory (DRAM) manufacture.

Our business is highly cyclical and has been subject to significant downturns at various times which have been characterized by reduced product demand, production overcapacity and significant erosion of average selling prices. The market for certain Flash and EEPROM devices, which comprise the majority of our business, is currently experiencing an excess market supply relative to demand which is resulting in a significant downward pressure on the selling prices for our products. However, during the fiscal year ended April 30, 2000 (fiscal 2000) and the first half of the fiscal year ended April 30, 2001 (fiscal 2001), the results of our operations improved significantly, primarily due to an improvement in market conditions. During this period, the semiconductor market rebounded from a cyclical decline which had a favorable impact on our revenues and gross margins and we also realized reductions in product costs and operating expenses through a cost reduction program that had a favorable impact on profitability. During the last half of fiscal 2001 and the first half of the fiscal year ended April 30, 2002 (fiscal 2002), we experienced a twelve month period of declines in our revenues, gross profits and net income due to a resumption of the competitive factors that result in decreasing revenues and margins. During the last six months of fiscal 2002 and throughout the fiscal year ended April 30, 2003 (fiscal 2003), unit volumes shipped, revenues, gross profits and net income were comparatively steady although with lower revenues, margins and profits than experienced in fiscal 2000. We could experience a resumption of the downward trend in revenues, product pricing and unit volumes shipped which could adversely affect our future operating results.

Total revenues for the quarter and the fiscal year ended April 30, 2003 were approximately $12.5 million and $48.2 million, respectively, compared to total revenues of approximately $12.5 million and $42.8 million for the quarter and fiscal year ended April 30, 2002. In addition, we earned net income for the quarter and for the year ended April 30, 2003 of approximately $4.0 million and $6.3 million respectively, compared to net income of approximately $1.2 million and $770,000 for the comparable periods in the prior year. During fiscal 2003, we had a net decrease in inventory reserves of approximately $495,000 primarily related to the sale of approximately $3.1 million in finished goods inventory that was over one year old and other inventory that we

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did not expect to be sold within a predictable period, generally one year, the effect of which on our cost of revenues was offset by the addition of approximately $2.7 million to our inventory reserves for other inventory that we do not expect to sell within a predictable period, generally one year. During fiscal 2002, we benefited from the sale of approximately $2.0 million of previously reserved inventory, the effect of which on our cost of revenues was reduced by the addition of approximately $2.1 million to our inventory reserves. During fiscal 2001, we recorded approximately $5.0 million of additional reserves for inventory that we did not expect to be sold within a predictable period. Additionally, in fiscal 2001, we benefited from the release of approximately $2.3 million of reserves caused by the sales of inventories we had previously reserved. We can provide no assurance that we will be able to sustain the profitability we have experienced in the most recent quarters.

Our number of full time equivalent employees increased to 108 in April 2003 from 67 in April 2002. The increase was principally due to the establishment in January 2003 of our wholly owned subsidiary in Romania which had 34 employees as of April 2003. Our manufacturing activities are also supported in part by our subcontracting of certain other operations and manufacturing activities to approximately 83 contract employees, as of April 30, 2003, located at Trio-Tech (Bangkok) Co. Ltd. (Trio-Tech) and NS Electronics Bangkok (1993) Ltd. (NSEB), both located in Bangkok, Thailand and ASE Holding Electronics (Phil.) Inc. (ASE), located in the Philippines.

In June 2001 we paid the balance owed to a bank and made the final payments to various equipment lessors when due in October 2000. Since that time, we have operated without incurring any debt other than standard trade obligations. At this time, we believe that we have sufficient cash on hand and will not immediately need to enter into another borrowing agreement for the near term. As of April 30, 2003, we were indebted to various creditors in the amount of approximately $3.7 million of which approximately $2.9 million related to wafer production and inventory processing and approximately $800,000 million related to other goods and services.

We market our products through a direct sales force and a worldwide network of independent distributors and sales representatives. For fiscal 2003, sales outside the United States represented 80% of our product sales. End user customers of our products include Hewlett Packard Inc., Jabil Circuit Inc., LG Electronics Inc., Samsung Asia Ltd. and VTech Communications Ltd.

Corporate Background

We were incorporated in California in October 1985. In May 1993, we reincorporated in Delaware. Our principal executive offices are located at 1250 Borregas Avenue, Sunnyvale, California 94089, our telephone number is (408) 542-1000 and our website address is: *www.catalyst-semiconductor.com*.

We make our annual report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to such reports, available free of charge through our web site as soon as reasonably practicable after we electronically file such material with, or furnish it to, the United States Securities and Exchange Commission, at the following address: *www.catalyst-semiconductor.com*. The information in, or that can be accessed through, our web site is not incorporated by reference into this Annual Report on Form 10-K.

Industry Background

Catalyst Semiconductor designs and, through third party foundries in Japan and Texas, manufactures a broad range of multi-industry non-volatile (NVM) memories and has, more recently, introduced a limited number of mixed-signal products.

Memory Products

There are two general classes of semiconductor memories incorporated into electronic systems, volatile memory and nonvolatile memory. The principal distinguishing characteristic between the two classes is that volatile memory devices require a continuous application of power to retain data, while nonvolatile memory devices do not. Among volatile memory devices, DRAM devices are the most prevalent because they are

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capable of high-speed data transfer, feature high density circuitry and can be manufactured at relatively low cost. DRAMs are used primarily as the main memory in computers for temporary storage of application program data while the system is operating. Nonvolatile memory (NVM) devices, in contrast, are used by computers and electronic systems primarily to store system-critical data when the power to the system is turned off. The continuous memory capability of NVM renders these devices well suited for a wide range of applications in the computer, consumer electronics, telecommunications, automotive, industrial control and instrumentation markets.

NVM devices are used to store essential data such as BIOS software for personal computers, which regulates the flow of data to and from system peripherals such as the keyboard and monitor and disk drives. In addition, NVM devices that can be programmed and reprogrammed in the system are used to store user-selected system configurations in consumer electronics devices such as preset stations in automobile radios and to store numbers in cellular telephones. NVM devices have generally not been used for computer main memory applications because historically they have been more expensive, provided slower performance and were more costly to produce than volatile memory such as DRAMs.

The following NVM devices are currently available from various suppliers in the industry:

EEPROMs. EEPROMs can be erased and reprogrammed electrically within the system, eliminating the need for physical removal, as required by erasable programmable read only memories (EPROMs). Full-featured EEPROMs, which have on-chip error correction capabilities that enhance system reliability, individual bytes or segments of the stored data can be erased and rewritten tens of thousands of times. These features generally offer greater flexibility to systems designers than EPROMs. EEPROMs are used to store system-critical information which needs to be updated on a periodic basis, including:

control panel settings and other user-configurable system parameters in consumer devices;

cache memory for disk drives;

system protocols; and

stored telephone numbers in cellular telephones, facsimile machines and other telecommunications devices.

EEPROMs are generally available in two configurations, serial EEPROM devices, which transmit data through a single input-output port, and parallel EEPROMs, which transmit data via multiple ports concurrently. Each cell of an EEPROM (the discrete area on the device in which one bit is stored) consists of two transistors, one to store data and one to permit the cell to be selected when erasing data, as compared to the single, storage transistor of an EPROM. EEPROMs can be modified to be utilized as programmable erasable read only memory (PEROM) devices for 5-volt FLASH applications involving sector-by-sector data read and write. EEPROMs are more expensive to produce than EPROMs, due to their more complex circuitry.

NVRAMs. NVRAMs consist of a Static Random Access Memory (SRAM) device and an EEPROM incorporated in a single semiconductor die. This enables the device to provide both the high speed data transfer rates and read/ write rates typical of volatile SRAMs and the memory retention of NVMs when the system power is off. However, the complexity of NVRAM devices, which typically utilize 8 transistors per cell, makes them too costly for most commercial applications. Accordingly, NVRAMs are generally limited in application to critical, high-performance systems, such as antilock braking systems.

Flash Memory. Flash EEPROMs, or Flash memories, combine the benefits of high-speed data alterability and data transfer rates and, potentially, the low cost manufacturability of volatile memory, with the flexibility and continuous data retention of NVM. Flash memory products can potentially be manufactured with storage densities as great as DRAM densities and thereby achieve manufacturing costs approaching the low cost of DRAMs. In addition, the architecture of Flash memory potentially permits data alterability and transfer rates as fast as DRAMs. Flash memory exhibits certain limitations as compared to DRAMs, including a finite life span of read/ write cycles, which limits its use in computer

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main memory applications. However, Flash memory is being designed into a wide variety of applications beyond the traditional application of NVM in fixed program and data storage and into applications in dynamic data storage due to its nonvolatility, high storage densities, rapid access speed and decreasing cost.

The different NVM semiconductor devices that we sell are reprogrammable NVM devices such as electrically erasable programmable memory (EEPROM), nonvolatile random access memory (NVRAM) and low density Flash memory. Each successive generation of NVM memory offers increasing functionality, flexibility and performance.

Non-Volatile Memory Products and Applications

Catalyst provides a broad range of NVM products, including serial and parallel EEPROMs, low density Flash memories, and NVRAMs products. Our principal memory product lines are as follows:

Serial EEPROM. We offer a broad range of serial EEPROM products compatible with the three popular industry standard bus interface protocols: the Inter-Integrated Circuit (I^2C) bus interface of Philips Electronics, the Microwire interface protocol of National Semiconductor and the Serial Peripheral Interface (SPI) bus protocol of Motorola. Additionally, we offer 4-wire bus interface protocol type products. We offer products in a wide variety of density (1 kilobit (Kbit) to 256 Kbit) and voltage (1.8 volt to 6.0 volt) ranges. Serial EEPROM products are used in many applications to store user reconfigurable data. Some of the more common applications are digital cameras, disk drives, cellular phones, DVD and CD players, hearing aids, cordless phones, laser printers, DIMM modules for computers, and various automotive applications.

Parallel EEPROM. We offer parallel EEPROM products for battery operated applications in a broad range of densities. We offer both standard 5 volt-only and 3.3 volt-only parallel EEPROMs to meet battery operated application requirements. We also offer products with 16 Kbit to 512 Kbit densities. Parallel EEPROMs transfer data in multiple bits, generally eight bits at a time. They provide faster transfer rates than serial EEPROMs, which transfer data through a single port. Parallel EEPROMs are more costly than serial EEPROMs and, accordingly, are used primarily in high performance applications. Parallel EEPROMs are primarily used in applications such as POS terminals, industrial controllers, LAN adapters, and telecommunication switches.

Flash Memory. We currently offer flash memory in a limited variety of densities. We offer Intel-licensed, 12 volt Flash memory devices in densities ranging from 512 Kbit to 2 megabit (Mb). This family includes Intel-licensed boot block and bulk erase technologies available in 1 Mb and 2 Mb densities.

NVRAMs. We offer NVRAMS in a variety of configurations. NVRAMs consist of an SRAM and an EEPROM incorporated onto a single semiconductor die. NVRAMs provide superior performance over other NVM products and are ideal for applications that require high speed read/ write operations with nonvolatile memories, including parallel processing controllers for LANs and antilock braking systems.

Mixed Signal Products (AE^2)

Building on its worldwide customer base, Catalyst Semiconductor has been developing a broad range of mixed-signal analog products to complement its memory families. As all of the applications for NVM incorporate microcontrollers or microprocessors, we have been developing products which would interface with the controllers in various applications such as power management, supervisory management and systems support.

These development programs have been underway for the past three years, and are now beginning to be released to the market, with some initial design-in successes. The product families are summarized below:

Supervisory Products with EEPROM Memory. We have introduced a family of micro-controller supervisory products, which combine serial EEPROM with the reset and watchdog functions required by many micro-controllers to ensure safe sustained operation. These products of ours combine in the same

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chip, two functions which are typically offered in two separate products, to provide a saving in critical printed circuit board space along with a component cost saving. Initial design-ins have been in the automotive industry and in power metering. Currently the family offers 2Kbit and 16Kbit of EEPROM with the supervisory functions. Higher memory density products are under development.

Supervisory Products without Memory. We are also introducing the first of several families of multi-industry supervisory products without EEPROM memory, but based on using a floating gate EEPROM technology which allows very low standby power, and the ability to program the critical threshold voltage after packaging, which reduces our inventory costs while providing higher precision to the customer at lower cost. We are one of the few analog semiconductor companies with floating gate EEPROM technology.

Digitally Programmable Potentiometers (DPP™). We have introduced a number of solid state digital potentiometers (DPP) integrated circuits (ICs) which are targeted at replacing mechanical potentiometers used in a variety of applications for the purpose of fine tuning and trimming electronic circuitry. DPP ICs are built using the same processes as our EEPROM products. We have released 17 digital potentiometers to the market thus far, with more in development. Several of these products are pin-compatible with potentiometers from other suppliers. Early design-ins have been in digital cameras and optical transceivers. As a result of the agreement with Xicor Corporation to settle a patent issue, we pay royalties to Xicor on the digital potentiometers sold by us. See Patents and Licenses.

White LED Drivers. We have under development several products intended to drive the white light emitting diodes (LEDs), used as backlights in color LCD screens in cell phones, digital cameras, MP3 music players, personal digital assistants, industrial instrumentation, and domestic white goods. The transition from mono-tone displays to color is irreversible as the costs of color displays continue to decline, and consumers demand it. Our initial products will drive up to four LEDs in series, using boost converter designs, and six LEDs in parallel, using regulated charge pumps. Our ICs tightly regulate the current to the LEDs to ensure the uniform brightness and color purity necessary for the greatest clarity in viewing the color displays. Demonstration boards populated with our parts and using industry standard white LEDs have already been sampled by our customers in Asia, Europe and the US.

DC-DC Converters. Converting one DC voltage to another within a system is a common requirement, particularly in battery-powered applications where the power available from the batteries will decline over time and use. Using various circuit design techniques, including our patented technology, our designs allow continued unimpaired operation of a system down to the end of the life of the batteries in the system. Our initial offering is a family of industry standard converters which can either invert the positive voltage input to a corresponding negative (useful for contrast control in LCD displays), or to double the input voltage. The converters will operate at selectable frequencies from 10 to 135 kilohertz, with synchronized operation up to 1 megahertz (MHz).

Precision Voltage References. A tight voltage reference stable over temperature is required for the operation of virtually any electronic system. We will introduce a family of 0.5% accuracy thermally stable voltage references at 1.24 volts and 0.6 volts for applications in low voltage switching power supplies, microcontroller support and other applications. Our references are stable over the Industrial temperature range, -40C to +85C.

Sales and Distribution

We market our products through a direct sales force and a network of independent distributors and sales representatives. As of April 30, 2003, we employed 21 people in our sales organization, compared to 23 and 24 as of April 30, 2002 and April 30, 2001, respectively. In addition to our Sunnyvale headquarters facility, we have domestic sales employees in Southern California, Illinois and Texas and international sales employees in China, England, South Korea and Taiwan. Our sales offices support both original equipment manufacturers (OEM) and distributors. In addition, Nippon Catalyst K.K., our subsidiary in Japan, works closely with our principal foundry and our Japanese distributors and OEM customers.

We seek to develop strategic relationships with major OEMs and other customers. We offer a broad range of NVM devices compatible with the most common industry standards and we also work closely with

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our customers to provide semi-custom solutions to address individual customers needs. In fiscal 2003, we shipped products directly or through our distribution network to customers in the computer, consumer electronics, telecommunications, automotive, data communication and other industries. OEM customers purchasing our products include Hewlett Packard Inc., Jabil Circuit Inc., LG Electronics Inc., Samsung Asia Ltd. and VTech Communications Ltd.

During fiscal 2003, sales to no customer exceeded 10% of our revenues. During fiscal 2002, sales to Future Electronics, Inc. (Future), a distributor which sells principally in North America and Europe represented 11% of our revenues and 14% of our revenues in fiscal 2001. Product revenues from sales to customers outside the United States represented approximately 80%, 71% and 61% of our total product revenues in fiscal 2003, 2002 and 2001, respectively. The increase in percentage of international revenues in fiscal 2003 was primarily attributable to increased sales to Japan and Europe while sales in the US diminished. The increase in percentage of international revenues in fiscal 2003 was primarily attributable to our increased sales in Japan and Europe due to our increased sales efforts in those regions. All sales of our products are billed in U.S. dollars, minimizing the effects of currency fluctuations. Due to the magnitude of our international sales, we are subject to the risks of conducting business internationally, including unexpected changes in regulatory requirements and fluctuations in the value of the U.S. dollar, which among other conditions could increase the sales price of our products in local currencies, tariffs and other barriers and restrictions and the burdens of complying with a variety of foreign laws.

Manufacturing

We subcontract the manufacture of all of our products through independent semiconductor manufacturers, primarily through Oki and Xfab, our semiconductor fabricators and NSEB, our principal provider of assembly and test services. We also subcontract certain production planning, product engineering, shipping and tape and reel activities to Trio-Tech, NSEB and ASE, which in the aggregate, utilized the services of approximately 83 people in performing these services for us as of April 30, 2003. We have designed our proprietary circuit designs and fabrication processes to operate within the overall semiconductor manufacturing processes of our contract manufacturers. Our designs are manufactured utilizing Oki s processes developed for high volume and high yield production of DRAMs. We also endeavor to develop our processes in a manner that permits the manufacture of our products in the fabrication facilities of different semiconductor manufacturing suppliers. During the fourth quarter of fiscal 2000, we made the first volume shipments of products fabricated at Xfab. Xfab is owned and operated by Elex NV, the Belgian holding company that owns 28% of our outstanding shares as of June 20, 2003. If we were forced to switch more of our manufacturing from Oki or Xfab, our production and delivery of products would be delayed and our cost for such products might be materially increased, which could adversely affect our business, financial condition and results of operations.

Manufacturing semiconductor products is a highly complex process that is sensitive to a wide variety of factors including the level of contaminants in the manufacturing environment, impurities in the materials used and the performance of personnel and equipment. While we believe that we have suppliers willing to provide an adequate wafer supply to meet our currently anticipated needs, we may not receive sufficient quantities of wafers at favorable prices on a timely basis, if at all. As is typical in the semiconductor industry, our outside foundries have from time to time experienced lower than anticipated production yields. We can provide no assurance that manufacturing problems will not occur in the future. The loss of Oki or Xfab as a supplier, any prolonged inability to obtain adequate yields or deliveries from Oki or other subcontractors or manufacturers, or any other circumstance that would require us to seek alternative sources of supply, could increase our cost for such supplies, delay shipments and have a material adverse effect on our operating results. We currently purchase wafer supplies on a purchase order basis from Oki and Xfab. We also have a purchase agreement with UMC for certain Flash products which runs through February 2006. Due to declining Flash bookings and other circumstances, we have not ordered any wafers from UMC since December 1997. See Item 7. Management s Discussion and Analyses of Financial Condition and Results of Operations Results of Operations and Liquidity and Capital Resources.

To address our wafer supply concerns, we plan to continue working with Oki, our primary wafer supplier, to qualify our products in multiple fabrication plants owned by Oki. Once this qualification process is complete

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we will not only have potential access to greater quantities of wafers, but we shall also have a redundant source of wafer capacity in the event that one of Oki s fabrication plants is damaged or destroyed by fire, earthquake or some other catastrophic event. We are also in the process of qualifying certain of our large volume products with Xfab, our secondary wafer supplier, which should further reduce the risks of quantity, quality and sourcing for a portion of our wafer supply. To further alleviate our concerns of wafer supply, we have significantly increased the quantity of wafers in our inventory, through die banking rather than more expensive finished goods, and intend to maintain such increased levels of wafer inventory throughout fiscal 2004.

We have wafer sorting operations at our headquarters facility in Sunnyvale and we also utilize a subcontractor in Japan for this purpose. We perform circuit assembly and testing primarily through our subcontractors located in Southeast Asia. In the assembly process, the wafers are separated into individual die, which are then assembled into packages and tested in accordance with our own internally-developed procedures. Following assembly, the packaged devices are further tested and inspected pursuant to our quality assurance program prior to shipment to our customers. The majority of such assembly and test services are provided by NSEB and Millennium Microtech Holding Corp. in Bangkok, Thailand, Orient Semiconductor Electronics, Inc. and ASE Holdings Electronics (Phil) Inc. in the Philippines and ChipPAC Limited in China and Korea. While the timeliness, yield and quality of semiconductor deliveries from our suppliers have been acceptable to date, we can provide no assurance that manufacturing problems will not occur in the future. Any prolonged inability to obtain adequate yields or deliveries from these manufacturers, or any other circumstance that would require us to seek alternate sources of supply, could delay shipments. Any significant delays would have an adverse effect on our operating results. Failure to have such services available would have a material adverse effect on our business, financial condition and results of operations.

As a result of our dependence on foreign subcontractors and test facilities, our business is subject to the risks generally associated with doing business abroad, such as fluctuations in currency exchange rates, foreign government regulations, political unrest, disruptions or delays in shipments and changes in economic conditions in countries in which our manufacturing and assembly and test sources are located.

Research and Development

We continue to invest significant sums in research and development to improve our fabrication processes and develop additional products with the following characteristics:

higher performance and reliability;

lower voltage requirements;

smaller die sizes; and

improved manufacturability.

Our efforts include the development of successive generations of our EEPROM and Flash memory products scaled to smaller geometries, as well as mixed signal and micro-controller supervisory circuits with embedded EEPROM technologies. As of April 30, 2003, we employed 55 people in research and development activities, compared to 24 and 22 as of April 30, 2002 and 2001, respectively. The increase of 31 employees in fiscal 2003 is primarily attributable to our establishment and staffing of a research and development subsidiary in Romania in January 2003. The engineers at our subsidiary in Romania were hired to replace and expand the outsourced services from Lxi Corporation that had supplied the full-time equivalent of approximately 15 engineers as of April 30, 2002. We invested $5.2 million, $4.4 million and $4.5 million in research and development activities in fiscal 2003, 2002 and 2001, respectively.

We had an informal arrangement from 1995 through January 2003 to obtain engineering services from Lxi Corporation, a California corporation (Lxi), a provider of engineering services through Essex com SRL (Essex), Lxi s wholly owned subsidiary in Romania. The number of full-time engineers we used was dependent upon the scope and number of research and development projects in process at a given time. For example, during January 2003, Essex employed the equivalent of approximately 12 full-time engineers to perform services on our behalf. These services related to our key development projects including development, design, layout and test program development services. We believe that we received these engineering services from Lxi on terms and at rates that were at least as favorable, if not more favorable, than we could obtain from

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unaffiliated third parties. Two of our officers, Messrs. Voicu and Gay, owned approximately 3% and 1%, respectively, of Lxi until February 2003. Mr. Gay, who had served as a director of Lxi, resigned from that position in January 2003. Messrs. Voicu and Gay received no payments from Lxi during fiscal 2003 and fiscal 2002 other than $40,000 and $12,000, respectively, from the repurchase of their shares at net book value by Lxi in February 2003. Additionally, we believe that our former CEO, Mr. Radu Vanco, continues to own a majority of the outstanding shares of Lxi. In January 2003, we formed a wholly owned subsidiary in Romania, Catalyst Semiconductor, Romania com SRL (CSR), to perform these engineering design services on our behalf and discontinued our use of the engineering services of Lxi in January 2003. During fiscal 2003, 2002 and 2001 we recorded $605,000, $852,000 and $714,000, respectively, of engineering fees from Lxi for engineering design services provided by Essex. As of April 30, 2003, there was no amount owed to Lxi.

Patents and Licenses

Our success and ability to generate future revenues will depend, in part, on our ability to protect our intellectual property. We rely on a combination of patents, copyrights, trademarks and trade secrets, as well as nondisclosure agreements and other methods to protect various aspects of our products.

As of April 30, 2003, we owned 17 U.S. patents and one international patent. The term of patent protection in the United States is generally the greater of 17 years from the issue date or 20 years from the earliest effective filing date of the patent application. The expiration dates of our patents range from January 2008 to September 2021. The process of seeking patent protection can be expensive and time consuming. We can provide no assurance that patents will be issued from our pending or future applications and, if patents are issued, they will provide meaningful protection or other commercial advantage to us. Moreover, our patent rights may not be upheld in the future and we may not be able to preserve our other intellectual property rights. We also occasionally enter into licenses with third parties to provide additional functionality for our products or to offer our technology to third parties for integration into their products on an original equipment or other basis. The continued production of certain of our products and a portion of our revenues are dependent upon these licenses. In fiscal 2003, less than one percent of our revenues was subject to a royalty-bearing licensing agreement.

In April 2001, Xicor, a competitor in the nonvolatile memory and mixed signal markets, served us with a suit alleging that some of our recently announced digital potentiometer products infringed on a patent that Xicor obtained in 1988. In June 2002, we entered into a settlement agreement with Xicor according to which we received a license to manufacture the disputed products in exchange for certain royalty payments based upon shipments after July 22, 2002. This license expires in 2020. As a result of this agreement, we will be able to further develop such products and market them to our customers. The complaint was dismissed on July 22, 2002.

In 1989, we entered into a license agreement with Philips Export B.V. and U.S. Philips Corporation (Philips) to license technology pertinent to their I^2C bus technology patent which expires in 2004. Catalyst paid royalties under this license through 1993, at which point we believed that the license became fully paid-up and no further royalties were owing. In May 2001, the Company received a written communication from Philips suggesting that royalties under this license were still owing on certain products. In January 2003, Philips again stated that it did not believe that the license was paid-up and that royalties had continued to accrue. The Company does not believe that Philips position is meritorious and that, even if a current royalty obligation is demonstrated, it does not extend retroactively back as far as Philips contends. Nonetheless, if Philips position is ultimately demonstrated to be correct, the Company may owe Philips an amount estimated to range from zero to $2.9 million in back royalty payments and an estimated amount ranging from zero to $1.5 million in interest payments.

In the semiconductor industry it is typical for companies to receive notices from time to time alleging infringement of patents or other intellectual property rights of others. We can provide no assurance that we will not receive additional notices alleging infringement and no additional proceedings alleging infringement of intellectual property rights will be commenced against us in the future. If either or both of these events occur, we may not be able to obtain any required licenses of third party intellectual property rights or obtain such licenses on commercially reasonable terms. Failure to obtain a license in either or both events could require us

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to cease production of our products until we develop a non-infringing design or process. Moreover, the cost of litigation of any claim or damages resulting from either or both events could be substantial and could materially and adversely affect our business, financial condition and results of operations.

Competition

The semiconductor industry is intensely competitive and has been characterized by price erosion, rapid technological change and product obsolescence. We compete with major domestic and international semiconductor companies, many of whom have substantially greater financial, technical, marketing, distribution and other resources.

Our more mature products, such as EEPROM devices, compete on the basis of product performance, price and customer service. We believe that we compete successfully with respect to each of these competitive factors. Price competition is significant and expected to continue. Principal competitors with respect to our EEPROM products currently include Atmel Corporation, STMicroelectronics N.V., Microchip Technology Inc., Information Storage Devices Inc. and Fairchild Semiconductor International, Inc., most of which have substantially greater resources than we do.

The limited market for the low density Flash memory products that Catalyst manufactures has been characterized by long production cycles, irregular yields, competing technologies and a shrinking market due to the shift by most customers to the larger Flash memory sizes that we do not offer. We can provide no assurance that we will be able to compete successfully in the future against our competitors for Flash products business.

Employees

As of April 30, 2003, we had 108 full time employees, of whom 55 were engaged in research and development. Our employees are also supported in part by our subcontracting of certain other operations and manufacturing activities to approximately 83 contract employees located in Thailand and the Philippines. Our future success will depend on our ability to attract, train, retain and motivate highly qualified employees, who are in great demand. Our employees are not represented by any collective bargaining organization and we have never experienced any work stoppage. We believe that our employee relations are good.

Executive Officers and Key Personnel

Our executive officers and certain key personnel and their ages as of June 20, 2003 are as follows:

Name	Age	Position(s)
Gelu Voicu	53	President and Chief Executive Officer
Thomas E. Gay III	54	Vice President of Finance and Administration and Chief Financial Officer
Sorin Georgescu	51	Vice President of Technology Development
Irvin W. Kovalik	66	Vice President of Sales
George Smarandoiu	57	Vice President of Design
Barry Wiley	66	Vice President of Corporate Marketing

Mr. Voicu has served as our President, Chief Executive Officer and as a director since October 2002. From August 2002 to October 2002, he served as our Executive Vice President and Chief Operating Officer. From April 1998 to August 2002, he served as our Vice President, Product Engineering and Manufacturing. From July 1995 to April 1998 he was our Director of Flash Product Lines. From October 1993 to July 1995 he was our Manager of Product Engineering. From June 1991 to October 1993 he served with Cypress Semiconductor, Inc., a semiconductor company, most recently as Senior Product Engineer. Mr. Voicu holds a MS in Electrical Engineering from the Polytechnical Institute, Bucharest, Romania.

Mr. Gay has served as our Vice President of Finance and Administration and Chief Financial Officer since May 1998. From August 1997 to May 1998 he was the Controller of Wireless Access, Inc., a communications device manufacturing company. From April 1993 to May 1994 he was our Controller and from July 1994 to November 1996 he was a contract accountant for us. From July 1988 to July 1992 he was

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Controller of Sanmina Corporation, a contract manufacturing company. Mr. Gay holds a BS in Accounting from San Diego State University.

Mr. Georgescu has served as our Vice President of Technology Development since October 2001. From October 1998 to October 2001, he was Director of Process Development at Tripath Technology, Inc., a semiconductor manufacturer. From April 1998 to October 1998, he was our Vice President of Technology. From October 1997 to April 1998 he was an engineering manager at Sandisk Corporation, a semiconductor manufacturer. From August 1994 to October 1997, he was our Director of Process Development. Mr. Georgescu holds a MS in Electrical Engineering from the Polytechnical Institute, Bucharest, Romania.

Mr. Kovalik has served as our Vice President, Sales since October 1998. From January 1998 to October 1998, he was Director of Strategic Sales for Alliance Semiconductor, Inc., a semiconductor company. From January 1997 to January 1998, he was Vice President of Sales for NovaWeb Technologies, Inc., a modem manufacturer. From September 1995 to January 1997, he was Director of Strategic Sales for Sequel, Inc., a semiconductor company. From June 1992 to June 1995, he was our Vice President, Sales. Mr. Kovalik holds a BS in Electrical Engineering for the University of Illinois.

Dr. Smarandoiu has served as our Vice President of Design since December 2002. From July 1990 to December 2002 he served in a variety of roles at Atmel Corporation, a semiconductor company, most recently as Director of Mixed-Mode Product Development. Mr. Smarandoiu holds Master of Engineering and Doctor of Engineering degrees from the University of California, Berkeley.

Mr. Wiley has served as our Vice President, Corporate Marketing since November 2000. From September 1999 to November 2000, he was our Vice President, Programmable Analog Business Unit. From July 1997 to September 1999 he was Vice President Marketing and Sales for IMP, Inc., a manufacturer of semiconductors. Mr. Wiley holds a MBA from the Harvard School of Business Administration and a MA in Physics from the University of Southern California.

Item 2. ***Properties***

We rent our 42,500 square foot principal facility in Sunnyvale, California, pursuant to a lease that expires in July 2006. We also lease space for our research and development facility in Romania, domestic sales offices located in Southern California, Illinois and Texas and international sales offices in China, England, Japan, Korea and Taiwan. We believe that our existing facilities are adequate to meet our current needs and that additional or alternative space will be available in the future on commercially reasonable terms.

Item 3. ***Legal Proceedings***

In 1989, we entered into a license agreement with Philips Export B.V. and U.S. Philips Corporation (Philips) to license technology pertinent to their I^2C bus technology patent which expires in 2004. The Company paid royalties under this license through 1993, at which point the Company believed that the license became fully paid-up and no further royalties were owing. In May 2001, the Company received a written communication from Philips suggesting that royalties under this license were still owing on certain products. In January 2003, Philips again stated that it did not believe that the license was paid-up and that royalties had continued to accrue. The Company does not believe that Philips position is meritorious and that, even if a current royalty obligation is demonstrated, it does not extend retroactively back as far as Philips contends. Nonetheless, if Philips position is ultimately demonstrated to be correct, the Company may owe Philips an amount estimated to range from zero to $2.9 million in back royalty payments and an estimated amount ranging from zero to $1.5 million in interest payments.

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

No matters were submitted to a vote of security holders during the fourth quarter of the fiscal year ended April 30, 2003.

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PART II

Item 5. ***Market for Registrant s Common Stock and Related Stockholder Matters***

Common Stock Market Prices and Dividends

Our Common Stock is currently traded on the Nasdaq SmallCap Market under the symbol CATS. During fiscal 2000 and part of fiscal 2001, our Common Stock was traded on the over-the-counter bulletin board. The following table sets forth the high and low closing sales price for the Common Stock as reported on the Nasdaq SmallCap Market for each calendar quarter of the last two fiscal years.

	High	Low
Fiscal Year Ended April 30, 2002		
Quarter ended July 31, 2001	$5.97	$3.55
Quarter ended October 31, 2001	4.35	1.73
Quarter ended January 31, 2002	3.30	2.23
Quarter ended April 30, 2002	3.95	2.67
Fiscal Year Ended April 30, 2003		
Quarter ended July 31, 2002	2.63	2.34
Quarter ended October 31, 2002	2.71	2.00
Quarter ended January 31, 2003	2.77	2.17
Quarter ended April 30, 2003	3.36	2.08

As of June 24, 2003, there were approximately 175 registered holders of record of our Common Stock including one holder who is the nominee for an undetermined number of beneficial holders. This number also does not include stockholders whose shares are held in trust by other entities. The actual number of our stockholders is greater than this number of holders of record. Based on the number of annual reports requested by brokers, we estimate that we have approximately 5,200 beneficial owners of our Common Stock.

No cash dividends have been declared or paid by us on the Common Stock.

During certain portions of fiscal 2003 and 2002, we repurchased a total of 1,276,400 and 193,700 shares of our Common Stock, respectively, pursuant to an open market repurchase program and in fiscal 2002 also repurchased a block of 1.5 million shares of our common stock in a separately authorized private transaction. Please refer to Note 7 Stockholders Equity in the Notes to Consolidated Financial Statements for additional information regarding our repurchase program.

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Item 6. ***Selected Consolidated Financial Data***

The following table presents our selected consolidated financial data. This historical data should be read in conjunction with the attached consolidated Financial Statements and the related notes thereto and Management s Discussion and Analysis of Financial Condition and Results of Operations appearing in Item 7 of this Form 10-K including the information under the caption Certain Factors that May Affect Our Future Results .

	Year Ended April 30,				
	2003	2002	2001	2000	1999
	(In thousands, except per share data)				
Statement of Operations Data:					
Net revenues	$48,221	$42,791	$98,015	$49,527	$31,987
Cost of revenues	28,396	27,158	50,863	26,837	20,909
Gross profit (loss)	19,825	15,633	47,152	22,690	11,078
Operating expenses:					
Research and development	5,223	4,380	4,543	2,846	2,335
Selling, general and administrative	10,020	10,652	13,490	9,042	7,718
Income (loss) from operations	4,582	601	29,119	10,802	1,025
Interest income (expense), net	382	663	793	(492)	(802)
Income (loss) before income taxes	4,964	1,264	29,912	10,310	223
Income tax provision (benefit)	(1,354)	494	2,560	300	
Net income (loss)	$ 6,318	$ 770	$27,352	$10,010	$ 223
Net income (loss) per share: Basic	$ 0.38	$ 0.04	$ 1.63	$ 0.69	$ 0.02
Diluted	$ 0.34	$ 0.04	$ 1.36	$ 0.50	$ 0.02
Weighted average common shares: Basic	16,721	17,829	16,744	14,552	12,189
Diluted	18,339	20,439	20,169	19,974	13,678

	As of April 30,				
	2003	2002	2001	2000	1999
	(In thousands)				
Balance Sheet Data:					