

ANNUAL REPORT 2004



**Microsemi®**

# President's Message



I am delighted to report record-level achievements for Microsemi Corporation during Fiscal Year 2004. Once again our revenues grew each quarter, rising this year from \$54.9 million in our first quarter to \$68.0 million in the fourth quarter. Our pro forma earnings per share increased from \$0.05 in the first quarter to \$0.13 in the fourth. Shareholder stock prices rose 70% during this fiscal year, significantly outpacing the market and the majority of our peers.




James J. Peterson,  
President and CEO


For Microsemi, Fiscal 2004 was a year of growth that--combined with a continuation of operational enhancements--produced the most profits in the company's history.


Behind these impressive achievements were record sales of our high performance analog and mixed signal integrated circuits, record sales of our high reliability semiconductors and modules and the growing impact of facility consolidations and the shift to a fabless model for our new integrated circuit designs. Fiscal 2004 included many highlights for Microsemi, among the more significant:


 The advent of new application design wins in notebook computers and LCD TV products for our integrated circuits that are used to power CCFL lamps, complementing Microsemi's leadership position in lighting automotive telematics displays.

 The dramatic increases in demand for our world-class wireless LAN power amplifier circuits used in current IEEE 802.11a/b/g

applications and the launch of these power amplifiers into the emerging 802.11n and 802.16 WIMAX broadband system developments. Based upon our demonstrated performance edge, Microsemi now enjoys approximately 25% of this highly competitive market.

 Continued strength in our high reliability semiconductor business as the need for homeland security, radar and intelligence systems, including a boost in orders for both military and commercial satellite applications, led to record-level shipments of these components and modules.

 Positive market developments for implantable pacemakers and cardioverter defibrillators (ICD) that use Microsemi high reliability products. The September announcement from the Centers for Medicare & Medicaid Services to expand their coverage of ICD procedures, which is estimated to make an additional 500,000 Medicare beneficiaries eligible for these life-saving operations.

 The improved results from Microsemi's successful Factory Utilization Enhancement Program, in which we have consolidated under-utilized operations and shifted to a fabless model for our new integrated circuits.

Microsemi Corporation experienced another excellent year during 2004, consistently outperforming competition and exceeding analysts' expectations. Our outlook for Fiscal Year 2005 continues to be that Microsemi's performance should improve to the benefit of our stockholders once again.



## What's Next

Microsemi will continue to emphasize a strategy of addressing large markets with differentiated products. This should provide a more stable base than the overall semiconductor industry's more typical commodity environment. Within this strategy, we balance our product portfolio between our high performance analog and mixed signal integrated circuits aimed at growth markets and our high reliability semiconductors and modules targeting medical and aerospace markets.

In the current fiscal year, we feel Microsemi's integrated circuit business will be driven by the significant successful design in activity during fiscal year 2004 for our wireless LAN power amplifiers and our patented backlighting products in new LCD TV and notebook computer applications. Medical and aerospace markets for our high reliability semiconductors continue to look strong.

Our focus on Facility Utilization Enhancement will continue to sharpen Microsemi efficiencies, with the clear goal of achieving higher margins on all our products. We expect to complete the consolidation of the high reliability semiconductor products manufactured at our

Santa Ana, California facility into other domestic Microsemi plants early in calendar year 2005, as part of Phase Two in this program.

Once the Santa Ana consolidation is complete, Microsemi will have reduced 15 manufacturing operations into six since the launch of Phase One of our Facility Utilization Enhancement program in 2001. Through sale or consolidation, each of these moves was based upon extensive facility-by-facility analysis of their potential capabilities, equipment, and associated costs of doing business, including redundancies, under-utilization and opportunities for the greatest impact.

Our objective is to leverage the use of Microsemi assets, strengthening our competitive posture and increasing operating profits. Our strategic plan exiting Fiscal Year 2006 calls for 3-4 manufacturing facilities, with facility utilization projected to rise to 80% -- from the 25% utilization that existed when this program was started. We are targeting Microsemi gross profit margins to rise from less than 30% to 50% and operating profits from less than 5% to more than 25% from the fourth quarter of fiscal year 2004 to the fourth quarter of fiscal year 2006.





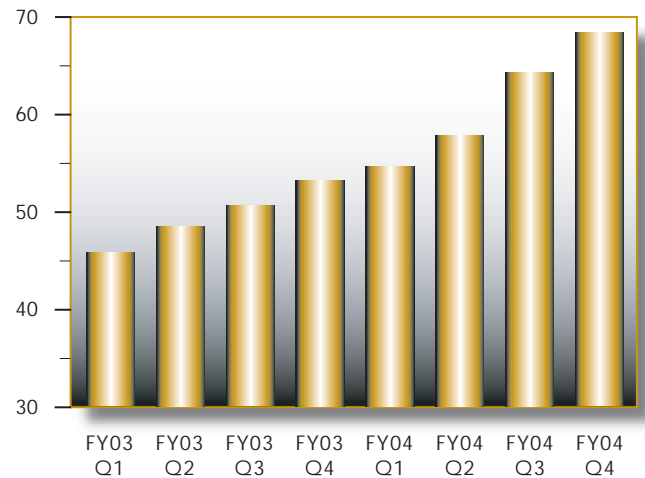
# Company Profile

Microsemi is a leading designer, manufacturer and marketer of high performance analog and mixed-signal integrated circuits and high reliability semiconductors and modules. The company's semiconductors manage and control or regulate power, protect against transient voltage spikes and transmit, receive and amplify signals.

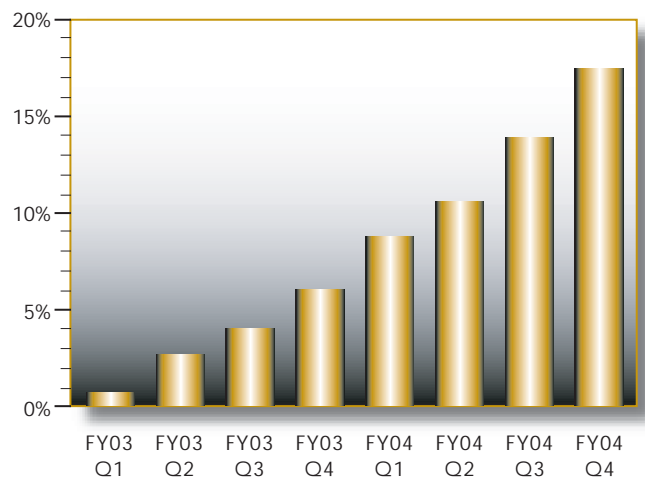
Microsemi's products include individual components as well as integrated circuit solutions that enhance customer designs by improving performance and reliability, battery optimization, reducing size or protecting circuits. The principal markets the company serves include implanted medical, defense/aerospace and satellite, notebook computers and monitors, automotive and mobile connectivity applications.

Microsemi differentiates its integrated circuit products with patented topologies that provide superior performance and unique functional capabilities. Our discrete semiconductors offer patented packaging designs that reduce component size while increasing their power handling capability.

Typical applications for Microsemi products include implantable pacemakers and cardio-defibrillators; MRI systems; wireless LAN client and mini-PCI cards; military aircraft, space and weapons systems; and the LCD displays found in notebook computers, monitors, LCD TVs, and automotive navigation and entertainment systems.



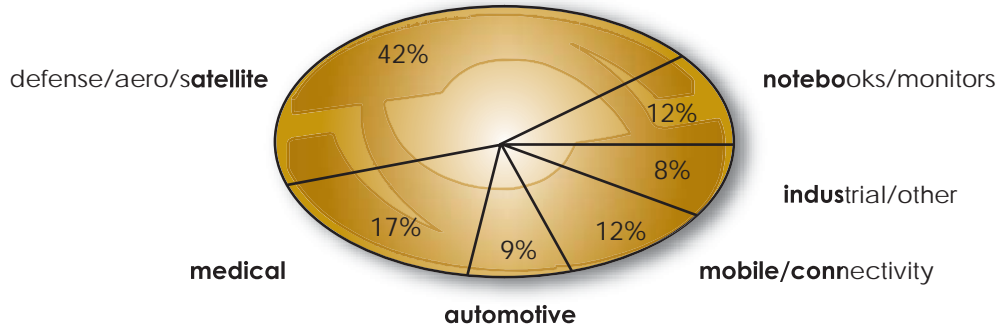
Shipments (\$ millions)



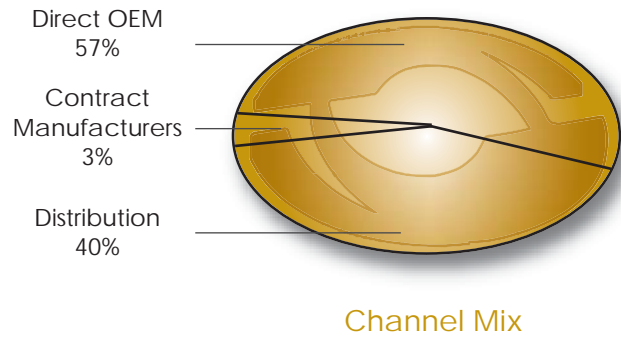
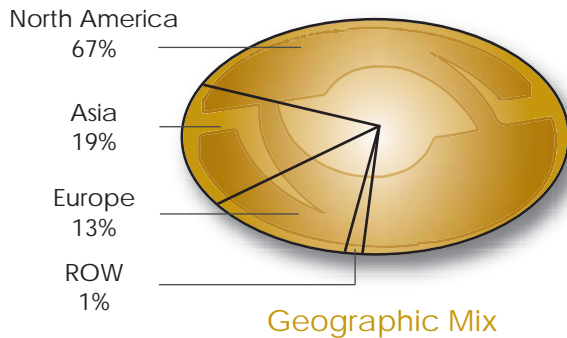
Pro Forma Operating Margin (%)



# Our Markets



Microsemi serves diverse markets and customers, which achieves greater stability with less concentration of any potential for impact due to intermittent market fluctuations and other risks in one market



# Our Customers

- Automotive**
  - BMW
  - Delphi
  - Ford
  - Honda
  - Mercedes

- Notebooks/Monitors**
  - Dell
  - Fujitsu
  - HP/Compaq
  - IBM
  - Seagate

- Mobile/Connectivity**
  - Atheros
  - Ericsson
  - Fujitsu
  - Research in Motion
  - Samsung
  - Sanyo
  - Sony

- Industrial/Other**
  - Coleman
  - Lincoln Electric
  - Panasonic
  - PowerOne
  - Sharp

- Medical**
  - GE Medical
  - Guidant
  - Medtronic
  - Siemens
  - St.Jude
  - Toshiba

- Defense/Aero/Satellite**
  - Astrium
  - BAE Systems
  - Boeing
  - Honeywell
  - Lockheed Martin
  - Northrop Grumman
  - Raytheon





# High Reliability Semiconductor Products

Our dedicated high-reliability products organization achieved record sales again during the 2004 fiscal year. Microsemi is a world leader in defense and aerospace semiconductors, as well as high reliability products for implantable medical devices and MRI equipment.

Our defense/aerospace history spans more than 40 years, to the earliest days of the company. Typical defense and commercial aircraft system applications include motor controls for wings, flaps, fuel pumps, generators, radar switching, fire control, avionic and flight control. Aerospace/satellite system applications include battery protection and bypass, charge and discharge, solar array shunt, booster nacelles, docking systems and power distribution units.

Microsemi's experience in developing high reliability protection, charging and switching products for implantable medical devices extends more than 20 years. From this expertise we are able to drive additional functionality into the latest pacemakers and cardio-defibrillators. In addition, our breakthrough low-magnetic diodes designed for advanced MRI scanning systems eliminate artifact interference, which improves accuracy in identifying and measuring tumors.



# High Performance Analog/Mixed Signal Integrated Circuits



Microsemi develops application specific standard integrated circuits that manage light, power and sound for such growth applications as desktop and portable computing, automotive telematics, wireless and wired communications, home entertainment systems, data storage and other commercial products.

Size reduction and superior performance have earned significant design wins for Microsemi's advanced InGaP HBT wireless LAN power amplifiers. Microsemi is now a leading supplier of wireless LAN power amplifiers for IEEE 802.11a/b/g products that are being forecast to dominate this market. Our LX55XX™ circuits have appeared on every major chipset platform to date, either through wireless LAN reference designs or through direct specification by the OEMs who manufacture client cards, mini PCI products and the many new consumer applications found in the wireless LAN market today.

Microsemi's patented RangeMax® lighting technology has become the performance standard for power management and dimming solutions in luxury automotive navigation and entertainment displays, called telematics. These RangeMax-lit systems continue to migrate from optional to standard among luxury brands and to become available options in midrange-priced vehicles.



## Directors and Corporate Officers

Dennis R. Leibel	Chairman of the Board; Private Investor
James J. Peterson	Director; President and Chief Executive Officer
Thomas R. Anderson	Director; Former Vice President and CFO, QLogic Corporation
Harold A. Blomquist	Director
William E. Bendush	Director
William L. Healey	Director; President and CEO, Cal Quality Electronics, Inc.
Paul F. Folino	Director; President and CEO, Emulex Corporation
David R. Sonksen	Executive Vice President, Chief Financial Officer, Treasurer and Secretary
Ralph Brandi	Executive Vice President, Chief Operating Officer
Steven G. Litchfield	Vice President, Marketing and Business Development
John W. Costello	Vice President, High Reliability Sales
James H. Gentile	Vice President, Worldwide Sales
John M. Holtrust	Vice President, Human Resources
John J. Petersen	Vice President, Quality
Michael G. Sivetts III	Vice President, Distribution Sales

## Registered Independent Accountants

PricewaterhouseCoopers LLP  
Irvine, California

## General Counsel

Yocca Patch & Yocca LLP  
19900 MacArthur Boulevard, Suite 650  
Irvine, California 92612

## Registrar and Transfer Agent

Mellon Investor Services LLC  
400 South Hope Street  
Los Angeles, California 90017

## Annual Meeting

The annual shareholders' meeting will be held at the Hyatt Regency Hotel, 17900 Jamboree Road, Irvine, California, on Wednesday, February 23, 2005 at 10:00 a.m. PST.

## Investor Relations

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