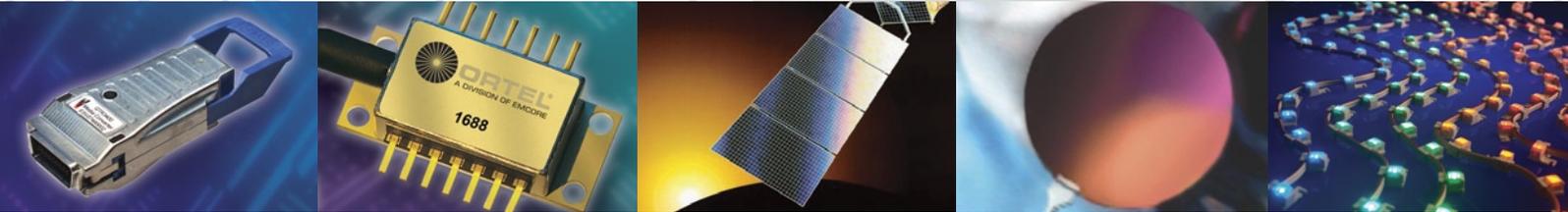


04

ANNUAL REPORT & PROXY



## TO OUR SHAREHOLDERS

Fiscal 2004 was a busy and successful year for EMCORE. We completed our business transition, commenced in the prior year, to the development and production of a broad portfolio of compound semiconductor-based components and subsystems for the broadband, fiber optic, satellite, and wireless communications markets.

We substantially replaced the revenues from our divested TurboDisc capital equipment business, streamlined our business operations, shifted certain production activities to overseas contract manufacturers, and continued our focus on improving operating profitability.

We also made fundamental changes to our capital structure through a debt exchange offer, which rebalanced our long-term debt load and reduced our near-term interest obligations.

### ENABLING COMMUNICATIONS AT EVERY LEVEL

EMCORE's leading-edge technologies help to enable voice, data, and video communications over every modern transmission modality: copper, hybrid fiber/coax (HFC), fiber, satellite, and wireless. Through leveraging our broad compound semiconductor materials and device expertise to provide cost-effective components and subsystems, we now are focused on five key communications markets:

- *High-speed Fiber Optics for Telephony and Internet Core and Metro Networks*
- *High-speed Fiber Optics for Large Enterprise Data Communications, Super Computing, and Storage Area Networks*
- *Next-generation Cable TV and Fiber-to-the-Premise "Triple Play" Networks*
- *Satellite Communications, in Space and on the Ground*
- *Advanced Transistors and Amplifiers Used in Wireless Handsets, Cell Phones, and Base Stations*

Through our GELcore joint venture (with General Electric Lighting), EMCORE participates in the development and commercialization of next-generation High-Brightness LED technology for use in commercial and industrial markets.

### EXPANDING PRODUCT PORTFOLIO

Powered by substantial R&D investments to date, EMCORE continues to expand its comprehensive product portfolio to enable the transport of voice, data, and video over the complete spectrum of communications networks. For example, we look forward in FY'05 to the full-scale commercial production of our extended reach 10G Ethernet optical transceiver, a triplexer transceiver for FTTP applications, GaN-based amplifiers for cell towers, and high-efficiency solar cells optimized for U.S. defense and homeland security applications.

We also continue to explore high-value opportunities to expand our technological advantages in key markets. During this past year, we

completed two strategic acquisitions to enhance our fiber optics portfolio: Molex's 10G Ethernet transceiver business, and Corona's ultra-small form factor parallel optics transceiver business. We believe that, with these moves, EMCORE now has the most advanced and complete optical transceiver portfolio in the industry. Combined with our legacy laser and photodiode expertise, we are now shipping our improved LX4 10G Ethernet modules as quickly as we can make them.

In addition, we invested \$1.0 million in K2 Optronics to strengthen our exclusive partnership in next-generation, long-wavelength components for the CATV and FTTP markets.

### FISCAL 2004 FINANCIAL RESULTS AND OTHER MAJOR EVENTS

EMCORE's consolidated revenues in FY'04 grew 54% over the prior year, with a 10.6 percentage point improvement in gross margins. All of our product lines experienced double-digit revenue growth. Moreover, given a strong emphasis on business streamlining, cost controls, and operational efficiencies, we were able to reduce operating expenses as a percentage of revenue to 49% in FY'04 (down from 64% in FY'03 and 152% in FY'02).

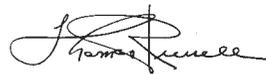
In February 2004, we exchanged \$146.0 million (or 90.2%) of our remaining 5% Convertible Subordinated Notes due in May 2006 for \$80.3 million aggregate principal amount of new 5% Convertible Senior Subordinated Notes due in May 2011, plus 7.7 million shares of EMCORE common stock. As a result, we decreased our annual interest expenses by \$3.3 million and reduced our long-term debt by \$65.7 million.

Finally, as part of the \$20 million earn-out from the TurboDisc sale, we expect to receive \$15-17 million in the second quarter of FY'05, with the balance expected in FY'06.

### FOCUS FOR FISCAL 2005

With our business transition behind us, we now have three top priorities for FY'05: drive profitable revenue growth based on our existing product lines, develop the next-generation technologies for our strategic markets, and continue our business optimization efforts to manage costs and enhance productivity. We believe that the rebound in global growth and a renewed drive for communications convergence will result in ever increasing demand for our products. Our objective is to deliver against that demand in the most cost-effective manner possible.

Sincerely yours,



Thomas J. Russell, Ph.D.  
Chairman



Reuben F. Richards, Jr.  
CEO and President



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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM 10-K**

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

For the fiscal year ended: September 30, 2004

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: 0-22175**



**EMCORE Corporation**

(Exact name of registrant as specified in its charter)

**NEW JERSEY**

**22-2746503**

(State or other jurisdiction of incorporation or organization)

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

**145 Belmont Drive, Somerset, NJ 08873**

(Address of principal executive offices, including zip code)

**(732) 271-9090**

(Registrant's telephone number, including area code)

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

**Securities registered pursuant to Section 12 (g) of the Act:** Common Stock, No Par Value

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act).

Yes  No

The aggregate market value of common stock held by non-affiliates of the registrant as of March 31, 2004 was approximately \$147,175,335 (based on the closing sale price of \$4.07 per share).

The number of shares outstanding of the registrant's no par value common stock as of December 6, 2004 was 47,038,012.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Definitive Proxy Statement to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held February 28, 2005 are incorporated by reference in Part III.

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**EMCORE Corporation**  
**Form 10-K for the fiscal year ended September 30, 2004**

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## Forward-Looking Statements

This Annual Report on Form 10-K includes forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements are based largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. These forward looking statements may be identified by the use of words such as “expects”, “anticipates”, “intends”, “plans”, “believes”, “estimate”, “target”, “may”, “will”, and variations of these words and similar expression. These forward-looking statements are subject to business, economic, and other risks and uncertainties, and actual results may differ materially from those discussed in these forward-looking statements. Factors that could contribute to these differences include, but are not limited to, those discussed under “Risk Factors”, “Forward-Looking Statements”, and elsewhere in this report. The cautionary statements made in this Annual Report on Form 10-K should be read as being applicable to all forward-looking statements wherever they appear in this report. This discussion should be read in conjunction with the consolidated financial statements, including any and all related notes.

These forward-looking statements include, without limitation, any and all statements or implications regarding:

- The ability of EMCORE Corporation (EMCORE) to remain competitive and a leader in its industry and the future growth of the company, the industry, and the economy in general;
- Difficulties arising from the separation of the TurboDisc capital equipment business from EMCORE’s ongoing business lines;
- Difficulties in integrating recent or future acquisitions into our operations;
- The expected level and timing of benefits to EMCORE from on-going cost reduction efforts, including (i) expected cost reductions and their impact on our financial performance, (ii) our continued leadership in technology and manufacturing in its markets, and (iii) our belief that the cost reduction efforts will not impact product development or manufacturing execution;
- Expected improvements in our product and technology development programs;
- Whether our products will (i) be successfully introduced or marketed, (ii) be qualified and purchased by our customers, or (iii) perform to any particular specifications or performance or reliability standards; and/or
- Guidance provided by EMCORE regarding our expected financial performance in current or future periods, including, without limitation, with respect to anticipated revenues, income, or cash flows for any period in fiscal 2005 and subsequent periods.

These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected, including, without limitation, the following:

- EMCORE’s cost reduction efforts may not be successful in achieving their expected benefits, or may negatively impact our operations;
- The failure of our products (i) to perform as expected without material defects, (ii) to be manufactured at acceptable volumes, yields, and cost, (iii) to be qualified and accepted by our customers, and (iv) to successfully compete with products offered by our competitors; and/or
- Other risks and uncertainties described in EMCORE's filings with the Securities and Exchange Commission (SEC) (including under the heading “Risk Factors” in this Annual Report on Form 10-K), such as: cancellations, rescheduling, or delays in product shipments;

manufacturing capacity constraints; lengthy sales and qualification cycles; difficulties in the production process; changes in semiconductor industry growth; increased competition; delays in developing and commercializing new products; and other factors.

We assume no obligation to update the matters discussed in this Annual Report on Form 10-K, except as required by applicable law or regulation.

## PART I

### Item 1. Business

For specific information about our Company, our products or the markets we serve, please visit our website at <http://www.emcore.com>. The information on EMCORE's website is not incorporated by reference into and is not made a part of this report. All of our SEC filings are available free of charge on our website.

#### Company Overview

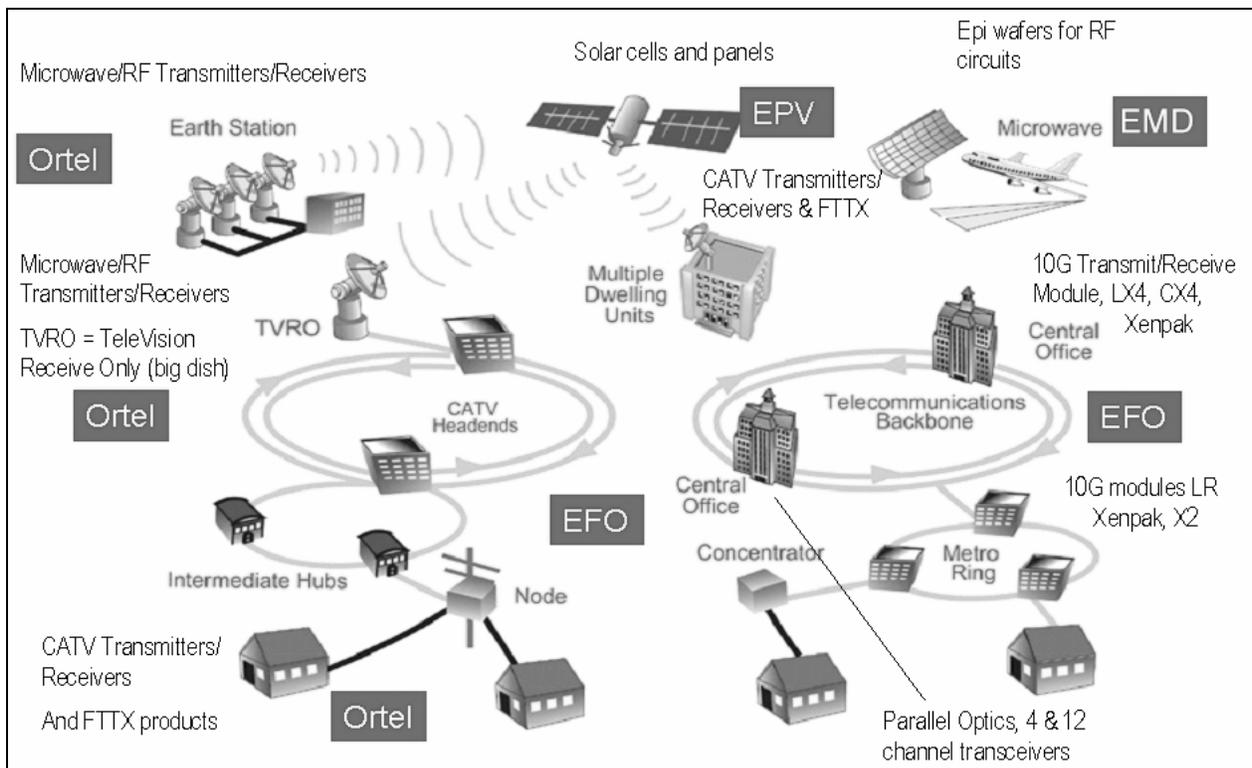
EMCORE Corporation (EMCORE), a New Jersey corporation established in 1984, offers a broad portfolio of compound semiconductor-based components and subsystems for the broadband, fiber optic, satellite, and wireless communications markets. EMCORE continues to expand its comprehensive product portfolio to enable the transport of voice, data, and video over copper, hybrid fiber/coax (HFC), fiber, satellite, and wireless networks. EMCORE is building upon its leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the cable television (CATV), fiber-to-the-premise, business, curb or home (FTTP), telecommunications, data and storage, satellite, and wireless communications markets.

- **CATV and FTTP Networks** - The communications industry in which we participate continues to be dynamic. Cable operators and telephone companies compete with each other to offer the lowest price for unlimited "triple play" (voice, data, and video) communications through a single network connection. As a market leader in radio frequency (RF) transmission over fiber products for the CATV industry, EMCORE is enabling cable companies to offer multiple forms of communications to meet the expanding demand for high-speed Internet, on-demand and interactive video, and other new services (such as Voice over IP, or VoIP). In response to this triple play strategy from the cable companies, the telephone companies also plan to offer competing voice, data, and video services through the deployment of new fiber-based systems. These growing applications should increase demand for EMCORE's FTTP products and subsystems. Our CATV and FTTP products include broadcast analog and digital fiber optic transmitters, Quadrature Amplitude Modulation (QAM) transmitters, video receivers, Passive Optical Network (PON) transceivers, avalanche photodetectors (APD), PIN (P-type, intrinsic, and N-type semiconductor materials) photodetectors, and Distributed Feedback (DFB) and Fabry-Perot (FP) 1310 nanometer (nm) and 1550 nm analog and digital lasers.
- **Telecommunications** - Our state-of-the-art optical components and modules enable high-speed (up to an aggregate 40 Gb/s) optical interconnections that drive architectures in next-generation carrier class switching and routing networks. Our parallel optical modules facilitate high channel count optical interconnects in multi-shelf central office equipment. These systems sit in the network core and in key metro nodes of voice telephony and Internet infrastructures, and are highly expandable with pay-as-you-grow capacity scaling. EMCORE sells its recently acquired OptoCube™ transceiver product and other 4- and 12-channel parallel optics products to the telecom equipment industry.
- **Data Communications** - EMCORE's leading-edge optical components and modules for data applications include 10G Ethernet LX4, 10G Ethernet CX4, SmartLink™ optical Infiniband, and parallel optical modules for enterprise Ethernet and High Performance Computing (HPC), also called "Super Computing," applications. These high speed modules enable switch-to-switch, router-to-router, and server-to-server backbone connections at aggregate speeds of 10 gigabits per second (Gb/s) and above. Pluggable LX4 modules in X2 or XENPAK form factors provide a "pay-as-you-populate" cost structure during installation. The LX4 can transmit data over both multi-mode and single-mode optical fiber, and currently is the only available option to transmit optical 10G Ethernet signals over 300 meters of legacy multi-mode fiber or 10 km of single-mode fiber. CX4 modules similarly allow the cost-effective transmission of Ethernet signals over legacy copper cable.

EMCORE's parallel optical modules also are used in switched bus architectures that are needed for next-generation Super Computers and large servers.

- **Storage Area Networks** - Our optical components also are used in the high-end data storage market, and include high-speed, 850 nm vertical cavity surface emitting lasers (VCSELs) and PIN photodiode components, and 10 Gb/s transmit and receive optical subassemblies (TOSAs/ROSAs). In the future, EMCORE anticipates selling our integrated pluggable X2 or XENPAK form factor modules into the emerging 10G Fibre Channel segment. These products provide optical interfaces for switches and storage systems used in large enterprise mission-critical applications, such as inventory control or financial systems.
- **Satellite Communications** - We manufacture high-efficiency solar cells and solar panels for global satellite communications (satcom), and expect to see increased applications for solar cells in terrestrial power products in fiscal 2005. EMCORE also manufactures satellite communications fiber optics products, including transmitters, receivers, subsystems, and systems, that transport wideband microwave signals between satellite hub equipment and antenna dishes.
- **Wireless Communications** - EMCORE manufactures compound semiconductor RF materials for the wireless handset, cell phone, and base station markets. Our products include 4-inch and 6-inch InGaP Hetero-junction Bipolar Transistor (HBT), AlGaAs pseudomorphic high electron mobility transistors (pHEMT), and E-mode transistor wafers that are used for power amplifiers and switches within next-generation wireless networks. We also produce GaN high electron mobility transistors (HEMT) RF materials that are designed to meet future wireless base station infrastructure requirements for higher power and frequency, along with high temperature operation at industry-leading efficiencies.

The following illustration shows how EMCORE's products are deployed throughout the world's communications infrastructure, and how they interconnect with each other. The lower left side shows CATV and FTTP networks, the lower right side shows telecommunications and data networks, and the upper portion shows satcom and wireless networks.



## **GELcore (HB-LED) Joint Venture**

EMCORE also is involved in a joint venture with General Electric Lighting to address the solid-state lighting market with High Brightness Light Emitting Diode-based (HB-LED) lighting systems. Through its 49% ownership in GELcore, LLC (GELcore), EMCORE participates in the development and commercialization of next-generation LED technology for use in the general and specialty illumination markets. GELcore's products include traffic lights, channel letters, and other signage and display products that incorporate HB-LEDs. In the near term, GELcore expects to deploy its HB-LED products in the commercial and industrial markets, including medical, aerospace, commercial refrigeration, transportation, appliance, and general and specialty illumination applications. EMCORE's partner in the joint venture is General Electric Lighting, which owns the remaining 51% of GELcore.

## **Acquisitions and Divestiture**

In addition to using our internal capability to develop and manufacture products for target markets, EMCORE continues to expand its portfolio of communications products and technologies through acquisitions:

- In October 2003, EMCORE acquired Molex Inc.'s 10G Ethernet transceiver business (Molex) for an initial \$1.0 million in cash, \$1.5 million in cash earnout based upon initial LX4 unit shipments, and future cash earnout payments. This transaction included assets, products, and significant intellectual property in LX4 technology, as well as several Molex product designers. EMCORE's newly-formed design center in Downers Grove, IL designs and manufactures serial 10 Gb/s and coarse-wavelength division-multiplexing (CWDM) optical transceivers for the growing 10G Ethernet market. Management believes that the acquisition of Molex's 10G Ethernet transceiver business has provided us with a significant competitive advantage and the most complete 10G Ethernet transceiver product portfolio in the industry.
- In June 2004, EMCORE acquired Corona Optical Systems, Inc. (Corona) for \$1.2 million in a cash-for-stock merger. Corona is a market leader in parallel optics with its ultra-small form factor OptoCube™ transceiver, which is currently being deployed by Tier 1 customers for use in telecommunications switching and carrier-class routing applications. This acquisition further strengthens EMCORE's position as a leader in parallel optics technology. The unique OptoCube transceiver's ultra-small form factor design and manufacturing platform are well-suited for high-performance, low-cost, and high-volume manufacturing. The OptoCube transceiver can be used as part of high-density optical backplanes in a variety of defense, super-computing, and consumer applications.

As discussed in last year's Annual Report, EMCORE sold its TurboDisc capital equipment business in November 2003 to a subsidiary of Veeco Instruments Inc. (Veeco) in a transaction that is valued at up to \$80.0 million. The selling price was \$60.0 million in cash at closing, with an additional aggregate maximum payout of \$20.0 million over the next two years. EMCORE will receive in cash or stock 50% of all revenues from the TurboDisc capital equipment business that exceed \$40.0 million in each of the next two years, beginning January 1, 2004. EMCORE management expects to receive between \$15.0 and \$17.0 million during the second quarter of fiscal 2005 as part of the additional payout.

Furthermore, as part of EMCORE's business strategy, we are committed to the ongoing evaluation of strategic opportunities and, where appropriate, to the acquisition of additional products, technologies, or businesses that are complementary to, or broaden the markets for, our products.

## Compound Semiconductor Industry Overview

Advances in information technologies have created a growing need for efficient and high-performance electronic systems that operate at very high frequencies, provide higher transmission rates with increased storage capacities, have augmented computational and display capabilities, and can be produced cost-effectively in commercial volumes. In the past, manufacturers of electronic systems have relied on advances in silicon semiconductor technology to meet many of these demands. But the latest generation of high-performance electronic and optoelectronic applications require certain functionalities that are generally not achievable using silicon-based components. Advantages of compound semiconductor devices over traditional silicon devices include:

- **Higher operating speeds** to address 10 Gb/s and beyond applications;
- **Lower power consumption** to meet the demand for higher bandwidth density;
- **Reduced noise and distortion** for maximum signal-to-noise performance;
- **Higher temperature performance** for both commercial and military applications;
- **Light emitting and detecting** optoelectronic properties to power the optical interconnection market;
- **Higher detection efficiency** to maximize power conversion in satellite applications; and
- **Higher light emission efficiency** for converting electrical power in general and specialty illumination devices.

Compound semiconductor devices also can be combined into integrated circuits, such as transmitters, receivers and alphanumeric displays. Electronic manufacturers are increasingly integrating compound semiconductor devices into their products in order to achieve higher performance in applications targeted for a wide variety of communications markets. Examples of such applications enabled by compound semiconductor devices include:

- **High speed Internet** built upon optical devices that transport data cost-effectively over local and long distances;
- **Video-on-demand** over broadband cable modems using high-efficiency lasers and low-noise receivers;
- **Storage Area Networks** for the high-speed transfer of data between computer systems and storage elements;
- **Satellite communications** that utilize high-efficiency solar cells to power satellites and fiber optics components and subsystems to connect antennas to ground stations;
- **LED traffic lights**, signage, displays, automotive, and general illumination devices built upon high-brightness LEDs;
- **Cellular telephones and wireless networks** that utilize power-efficient RF devices;
- **DVD players** built upon short wavelength optical devices to maximize storage density; and
- **Laser mice** incorporating VCSELs for desktop computing.

The systems that enable these applications consist of many components and subsystems that incorporate individual compound semiconductor devices. Companies that own unique leading-edge technologies will be able to continue to provide value-added components, subsystems, and turnkey systems to meet the expanding communications requirements of the future.

The diagram below shows the individual building blocks that enable the final user application. The trend in the industry is for companies to supply more and more of the products within each layer in order to stay cost competitive and improve operating margins. EMCORE focuses its products in the materials, components, and subsystems layers.

<b>Consumer</b>
<b>Applications:</b> Internet, CATV, Telephony, FTTP, Satcom, Wi-Fi networks, Storage Area Networks
<b>Systems:</b> modems, cell phones, routers/switches, servers, computers, satellites, lighting
<b>Subsystems:</b> subassemblies, modules, transmitters/receivers, solar panels
<b>Components:</b> VCSELs, DFB lasers, PIN detectors, RF devices, solar cells, LEDs
<b>Compound Semiconductor Materials:</b> Gallium Arsenide, Indium Gallium Phosphide, Gallium Nitride

## **EMCORE's Strategy**

Our objective is to maximize shareholder value by capitalizing upon our leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the broadband, fiber optic, satellite, and wireless communications markets. The key elements of EMCORE's strategy include:

### **I. Leverage EMCORE's Leading-Edge Compound Semiconductor and Manufacturing Expertise Across Multiple Product Applications.**

The model of purchasing components from multiple vendors results in too many layers of margin stack-ups, such that the final integrated subsystem is no longer cost competitive. We believe the trend in our industry is towards a vertically integrated structure in which key technologies are produced internally. By having the know-how and intellectual property to internally produce and supply compound semiconductor products, EMCORE can stay ahead of the competition in both performance and cost effectiveness.

EMCORE continually leverages its proprietary core technologies to develop compound semiconductor products for multiple applications in a variety of markets. Our internally designed and manufactured VCSELs, digital DFB lasers, and PIN and APD photodiodes are the optical components used in our TOSA and ROSA products, as well as in our data and telecommunications transmitters, receivers, transceivers, and transponders. Similarly, our internally designed and manufactured analog and digital DFB and FP lasers and PIN photodiodes are the optical components used in our CATV and FTTP devices.

### **II. Target Potential High Growth Market Opportunities.**

We target potential high growth market opportunities, where performance characteristics and high volume production efficiencies can give compound semiconductors a competitive advantage over other devices. Historically, while technologically superior, compound semiconductors have not been widely deployed because they are more expensive to manufacture than silicon-based semiconductors and other existing solutions. EMCORE believes that as compound semiconductor production costs are reduced, new customers will be compelled to use these products because of their enhanced performance characteristics. For example, we are currently focused on high growth areas in communications

infrastructure by providing complete solutions for widely-accepted transmission platforms, such as 10G Ethernet, Synchronous Optical Network (SONET), Infiniband, and Fibre Channel.

With increased demand for high bandwidth services, such as Internet, enterprise data processing and storage, video-on-demand, on-line gaming, and high-definition television (HDTV), more and more systems are relying on optics to transmit the signals. EMCORE is well positioned to leverage its compound semiconductor expertise in the area of VCSELs, DFB lasers, PIN/APD detectors into value-added subsystems to meet this market demand.

### **III. Pursue Strategic Acquisitions and Partnerships with Industry Leading Companies.**

EMCORE seeks to identify and develop long-term relationships with leading companies in each of the industries that we serve. We develop these relationships through long-term, high-volume supply agreements, joint ventures, acquisitions, investments, and other arrangements. Significant transactions include:

*Strategic Commercial Relationships* - In June 2004, EMCORE announced that it had been selected by ANADIGICS, Inc., a leading supplier of wireless and broadband solutions, to be their primary supplier for all RF materials. EMCORE's six-inch GaAs RF transistor wafers will be used to produce power amplifiers and related devices for deployment in widespread wireless applications, such as cellular telephones, laptop computers, and wireless infrastructure networks;

*Technology Development* - EMCORE works closely with our customers to develop next-generation technology, based on our technical and manufacturing capabilities, to help our customers achieve their product roadmap objectives. In fiscal 2004, EMCORE achieved design wins with Cisco Systems, Inc. (10G XENPAK), Alcatel (FTTP video receiver), Scientific-Atlanta, Inc. (CATV HFC transmitter), and Aurora Networks (CATV HFC transmitter);

*Joint Venture* - In January 1999, General Electric Lighting and EMCORE formed GELcore, a joint venture to develop and market HB-LED lighting products. Since its inception, GELcore has had a compound annual revenue growth rate of 23%, with calendar 2003 revenue totaling \$53.7 million. EMCORE expects that GELcore's calendar 2004 revenue will approximate \$70.0 million. General Electric Lighting and EMCORE have agreed that this joint venture will be the exclusive vehicle for each party's participation in solid-state lighting;

*Acquisitions* - Recently, acquisitions have been a focus in order to enhance technologies. Over the past two years, the acquisitions listed below have expanded not only our materials expertise, but also our components and subsystems technologies:

- Alvesta's low-cost pluggable optical and electrical module technology leverages EMCORE's VCSEL and PIN expertise;
- Ortel's high-performance broadcast and QAM transmitters and subscriber-end receivers leverages EMCORE's DFB laser, APD detector, and analog and digital RF expertise;
- Molex's industry leading CWDM optical modules leverage EMCORE's multi-wavelength DFB laser and PIN detector expertise; and
- Corona's ultra-small form factor transceivers leverage EMCORE's position in the parallel optics market.

*Investment* - In October 2004, EMCORE invested \$1.0 million in K2 Optronics, Inc., a California-based company that specializes in the design and manufacture of external cavity lasers, to strengthen our partnership in designing next-generation, high-performance, long-wavelength components on an exclusive basis for the CATV and FTTP markets.

#### **IV. Continually Invest in Research and Development to Maintain Technology Leadership.**

Through substantial investment in research and development (R&D), EMCORE seeks to expand its leadership position in compound semiconductor-based communications products and subsystems. We work with our customers to enhance the performance of our processes, materials science, and fiber optic module design expertise, including the development of new low-cost, high-volume wafers, components, and subsystems for our customers. To remain a leader in our markets, EMCORE not only addresses our customers' current needs, but we respond to their evolving requirements to remain designed into their product lifecycles. In addition, EMCORE's development efforts are focused on continually lowering the production costs of its products. For example, in December 2003, we introduced the SmartLink™ optical Infiniband link, a low cost, 10 Gb/s media converter solution that uses fiber optics to extend the current copper socket throughout the data center or central office (CO). The SmartLink component replaces bulky, distance-limited Infiniband copper cable with a low cost, plug-and-play optical connection that provides improved performance, lighter weight, and extended reach (up to 300 meters), with low cross talk.

#### **V. Target Positive Cash Flows From Operations.**

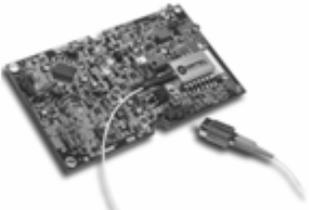
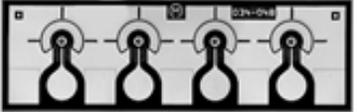
Management is committed to achieving profitability by reducing EMCORE's cost structure and lowering the breakeven points of every product line, with the goal of achieving cash flow breakeven from operations during fiscal 2005. In the past year, management has implemented a number of initiatives to help achieve this goal: (i) outsourced high volume product manufacturing to contract manufacturers overseas; (ii) consolidated various corporate functions; (iii) reduced outside contractors and temporary workers; (iv) implemented programs to improve manufacturing process yields; (v) focused R&D efforts on projects that are expected to generate returns within one year without, we believe, jeopardizing future revenue opportunities; and (vi) workforce reductions. Additional product manufacturing will be outsourced during fiscal 2005, and further consolidation of facilities is under review. Offsetting some of the savings, however, are costs to implement the Sarbanes-Oxley Act of 2002 and related increases in auditing fees.

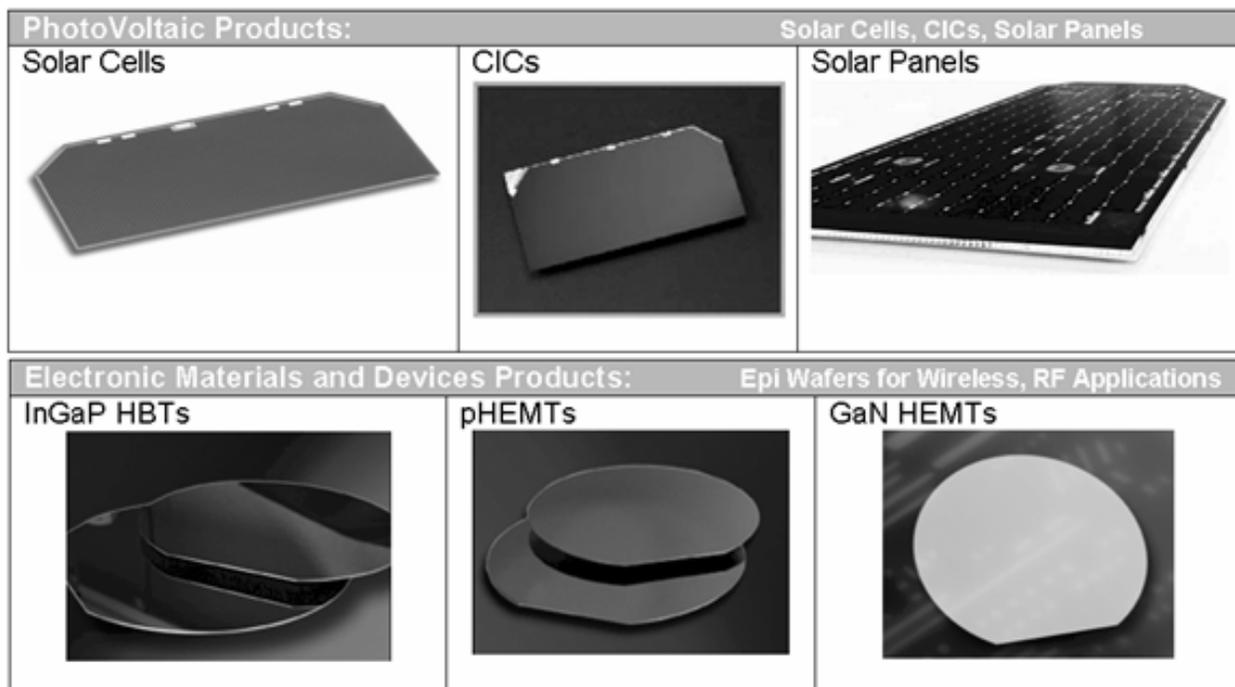
#### **EMCORE's Products**

The following chart summarizes (i) our products, (ii) the markets to which those products are directed, (iii) representative applications in which our products are used, and (iv) certain benefits and characteristics of compound semiconductor devices:

<b><u>Products</u></b>	<b><u>Market</u></b>	<b><u>Representative Applications</u></b>	<b><u>Benefits/Characteristics</u></b>
Analog & digital lasers (DFB, FP) Photodetectors and subassembly components Broadcast analog & digital fiber-optic transmitters QAM transmitters	<b>CATV</b>	Cable Television (CATV) Hybrid Fiber Coax (HFC) networks Digital overlay on HFC	Increased capacity to offer more cable services Increase data transmission speeds Increased bandwidth Lower power consumption Low noise video receive Increased transmission distance
Analog & digital lasers (DFB, FP) Photodetectors and subassembly components PIN and APD photodiodes and subassemblies Passive optical network (PON) transceivers Analog & digital video receivers Multi-Dwelling Unit video receivers	<b>FTTP</b>	Passive optical network (PON) in Fiber-to-the-Premise (FTTP) networks	High performance for both digital and analog characteristics Integrated infrastructure to support competitive costs Support for multiple standards
High-speed lasers (VCSEL, DFB, FP) and subassembly components High-speed photodetector (PIN, APD) and subassembly components RF devices and materials 10G Ethernet modules in XENPAK & X2 Parallel optical modules	<b>Data Communications (LAN, SAN, Infiniband)</b>	High-speed fiber optic networks and optical links (including Infiniband, Ethernet, Fibre Channel networks) Copper replacement in the data center/CO Supercomputing High performance computing (HPC) systems Storage Area Networks (SAN) Network Attached Storage (NAS)	Increased network capacity Increase data transmission speeds Increased bandwidth Lower power consumption Improved cable management over copper interconnects Increased transmission distance Lowest cost optical interconnections for massively parallel multi-processors
Solar cells and panels RF materials Fiber-optic transmitters and receivers	<b>Satellite Communications</b>	Power modules for satellites Satellite-to-ground communications Antenna to ground station communications	High radiation tolerance High light-to-power conversion efficiency for reduced size and launch costs Increased bandwidth
RF and electronic materials RF and electronic devices Optical transmitters for remoting	<b>Wireless Communications</b>	Cellular telephones Pagers PCS handsets Direct broadcast systems PDAs Remoting	Increased network capacity Lower power consumption Reduced network congestion Extended battery life Improved signal-to-noise performance
HB-LED lighting systems	<b>Solid-State Lighting</b>	Flat panel displays Solid-state lighting Outdoor signage and displays Traffic signals	Lower power consumption Lower temperature operation Longer life

The following charts depict some of our products:

Fiber Optic Products:		Digital Networks
<b>LX4 XENPAK &amp; X2</b> 	<b>Parallel Optical Modules</b> 	<b>CX4 XENPAK &amp; X2</b> 
<b>2, 4, 10 Gbps TOSAs</b> 	<b>2, 4, 10 Gbps ROSAs</b> 	<b>Surface mount 10G Rx</b> 
Fiber Optic Products:		CATV, FTTP, Satcom
<b>1310 &amp; 1550 nm CATV Tx</b> 	<b>CATV &amp; FTTP Tx Cards</b> 	<b>CATV Lasers &amp; Receivers</b> 
<b>ONT PON Transceivers</b> 	<b>20 GHz Tx and Rx</b> 	<b>Satcom Systems</b> 
Fiber Optic Products:		Chips and Die
<b>DFB, FP Lasers</b> 	<b>VCSEL Singlets, Arrays</b> 	<b>PIN, APD Detectors</b> 



## EMCORE's Product Lines

### *Fiber Optics*

Over the past several years, communications networks have experienced dramatic growth in data transmission traffic due to worldwide Internet access, e-mail, and e-commerce. As Internet content expands to include full motion video on-demand (including HDTV), multi-channel high quality audio, online video conferencing, image transfer, online gaming, and other broadband applications, the delivery of such data will place a greater demand on available bandwidth. The bulk of this traffic is already routed through the optical networking infrastructure used by local and long distance carriers, as well as Internet service providers. Optical fiber offers substantially greater bandwidth capacity, is less error prone, and is easier to administer than older copper wire technologies.

EMCORE's fiber optics group manufactures high-speed optical transmitter, receiver, and transceiver modules that utilize our leading-edge laser and photodiode components for the data communications and telecommunications markets. EMCORE's modules are designed to help solve data bottleneck problems for short and intermediate distance applications in central office, enterprise, and point-of-presence (POP) environments. Growing segments, such as 10G Ethernet, Infiniband, Fibre Channel, and SONET, benefit from these cost-effective products. As summarized in the table below, EMCORE has positioned itself as a component and subsystem manufacturer that services a significant portion of the digital and analog communications market:

	Digital (Datacom & Telecom)					Video	
	Serial 2.5-4G		Serial 10G			Parallel	CATV/FTTX
	850nm	1310-1550nm	850nm	1310-1550nm	Copper		
MODULES			SR X2	LX4 Xepak LX4 X2 LR X2	CX4 Xepak CX4 X2	SNAP12 Optocube Smartlink	Subsystems Transmitters PON Transceivers Receivers Tx Engine Rx video card
OSA	TO - cans LC/SC TOSA LC/SC ROSA	TO - cans LC/SC TOSA LC/SC ROSA	LC/SC TOSA LC/SC ROSA	DML laser LC/SC ROSA			Laser Modules Rx modules
CHIPS	VCSELs PDs	FP, DFBs PINs, APDs	VCSELs PDs	FP, DFBs PINs, APDs		VCSEL arrays PD arrays	DFBs PDs

### Short Wavelength (850 nm) VCSELs

EMCORE designs, develops, and manufactures high-speed VCSELs and PIN photodiode components and subassemblies for the data communications (including local and storage area networks) and telecommunications markets. We offer a broad product line of VCSEL and PIN photodiode solutions, including bare die, packaged components, and optical subassemblies for integration into 1G-10G Ethernet, Fibre Channel, Infiniband, CWDM, SONET, and other high-speed telecom applications.

VCSELs are revolutionary compound semiconductor micro laser diodes that emit light vertically from the surface of a fabricated wafer. They combine the ability of batch process and on-wafer tests like LEDs with the superior electro-optical performance of traditional edge-emitting lasers. In addition, the cylindrical laser beam profile allows an easy and efficient coupling of light into a multi-mode fiber. This enhanced manufacturability for both wafer processing and packaging enables a cost-effective, high-bandwidth fiber optic communications solution.

VCSELs have many advantages, including ultra-high modulation rates for advanced information signaling, extremely low power consumption, high fiber optic coupling efficiencies, circular output beams, and photolithography-defined geometries. We capitalize on our oxide-confined VCSEL manufacturing platform and expertise to provide the industry with 1 Gb/s, 2 Gb/s, 2.5 Gb/s, 4 Gb/s, 10 Gb/s (OC-192), and 40 Gb/s (OC-768) solutions through single-channel serial, multi-channel parallel, or CWDM approaches. Our customers combine this VCSEL technology with custom integrated circuits (IC) and module level designs for the final transceiver package, which usually consists of a VCSEL, photodiode, laser driver circuit, receiver circuit, and various other electronic components that are all connected via a printed circuit board. This circuit board is then mounted into a mechanical housing with an electrical connection to the user's system and an optical connection to fiber cabling. Leading electronic systems manufacturers are integrating VCSELs into a broad array of end-market applications, including Internet backbone, telephony, and computing. Specific network elements include Ethernet

switches, digital cross-connects, grooming switches, clustered servers with Infiniband interfaces, supercomputers, and carrier class routers.

#### *Long Wavelength (1310 nm and 1550 nm) DFB and FP Lasers*

EMCORE's Ortel division designs, develops, and manufactures high-speed, long-wavelength edge emitters, which are based on DFB or FP technologies and enhanced with predistortion technology invented by Ortel for highest fidelity applications. These devices are packaged into subsystems and used to transmit CATV or FTTP signals from the service provider to the subscriber, and back. The primary advantage of the longer wavelength (i.e., 1310 nm, 1490 nm, and 1550 nm) and narrow spectral width (in the case of the DFB laser) is the reduced absorption and dispersion within the optical fiber. This results in increased distances between repeaters or amplifiers, which reduces deployment costs for the service providers.

#### *Photodetectors (PIN and APD)*

Photodetectors are discrete semiconductor devices that detect light in order to convert an optical signal into an electrical signal. Similar to VCSELs, photodetectors combine the ability of batch processing and on-wafer testing with superior electro-optical performance. The large aperture size readily permits efficient coupling of light from a multi-mode or single-mode fiber. EMCORE has developed 850 nm, 1310 nm, and 1550 nm photodetectors to cover most speed and distance applications. In addition, 1x4 and 1x12 arrays of 850 nm photodetectors can be incorporated into our parallel optical modules. The addition of photodetector products completes our line of optical devices, and provides an internal supply for all of our optical subsystems.

#### *Optical Subsystems (Transmitters, Receivers, Transceivers, and Transponders)*

EMCORE's optical subsystem products are built using our internally produced optical devices, which allows us to provide highly cost-effective subsystems in our key markets. By creating additional value at the subsystem level, and leveraging our compound semiconductor expertise and growing know-how in subsystem design and manufacturing, we can further improve margins and increase our overall revenue. Our subsystem products are becoming quite intelligent, with functions that re-time and clean up the signals passing through them. Many of these subsystems have been widely adopted in Ethernet, SONET, Infiniband, and Fibre Channel equipment. Most widely available is the XENPAK form factor (for more information see [www.xenpak.org](http://www.xenpak.org)). In 2004, EMCORE added customers, expanded production, and began high volume commercial shipments of two key value-added subsystems in the XENPAK form factor (the LX4 and CX4) to vendors shipping 10G Ethernet systems. EMCORE's family of subsystem products includes:

- Broadcast transmitters and QAM overlay systems for CATV and FTTP applications based on 1550 nm laser technology;
- Subscriber-end video receivers for CATV and FTTP applications based on 1310 nm and 1550 nm PIN detectors and video receive technology;
- XENPAK and X2 transceivers using optical LX4 (CWDM) and copper CX4 technology for the 10G Ethernet market;
- 4- and 12-channel parallel optical transceiver modules for HPCs, supercomputers, and high-end servers, data communications switches, and telecommunications switch applications based on 850 nm VCSEL and PIN array technology; and
- 10G transmit and receive optical subassemblies for Storage Area Networks.

## ***Photovoltaics***

EMCORE serves the global satellite communications market by providing advanced solar cell products and solar panels. Compound semiconductor solar cells are used to power satellites because they are more resistant to radiation levels in space and convert substantially more power from light, therefore weighing less per unit of power than silicon-based solar cells. These characteristics increase satellite useful life, increase payload capacity, and reduce launch costs.

A solar cell works as follows: the "photovoltaic effect" is the basic physical process through which a solar cell converts sunlight into electricity. Sunlight is composed of photons, or particles of energy. These photons contain various amounts of energy corresponding to the different wavelengths of the solar spectrum. When photons strike a solar cell, they may be reflected or absorbed, or they may pass right through the cell. Only the absorbed photons generate electricity. When this happens, the energy of the photon is transformed into an electric current. Special electrical properties of the solar cell provide the voltage needed to drive the current through an external load (such as a transponder or transmitter aboard a spacecraft).

EMCORE designs and manufactures multi-junction compound semiconductor solar cells for military and commercial satellite applications. Our Albuquerque, New Mexico facility is a state-of-the-art, highly automated factory that includes a computer-aided manufacturing system to monitor production processes, generate electronic run cards, and provide real-time production and yield metrics. We currently manufacture one of the most efficient and reliable commercially available, radiation resistant advanced triple-junction solar cells in the world, with an average "beginning of life" efficiency of 27.5%. A satellite's broadcast success and corresponding revenue depend on its power efficiency and its capacity to transmit data.

EMCORE also provides covered interconnect solar cells (CICs) and solar panel lay-down services, giving us the capacity to manufacture complete solar panels. We can provide satellite manufacturers with proven integrated satellite power solutions that considerably improve satellite economics. Satellite manufacturers and solar array integrators rely on EMCORE to meet their satellite power needs with proven flight heritage. Through well-established partnerships with major satellite manufacturers and a proven qualification process, we play a vital role in the evolution of satellite communications around the world.

We also recently have begun an active R&D effort in terrestrial solar cell applications. EMCORE is conducting a National Renewable Energy Laboratory-funded effort to adapt our space-qualified advanced triple-junction solar cell technology for the terrestrial photovoltaic market. Because of its higher device cost when compared to silicon-based terrestrial solar cells, we also are developing solar concentrator systems to lower the cost per watt generated by our compound semiconductor-based terrestrial solar cells. Major terrestrial solar power manufacturers have expressed interest in incorporating EMCORE's photovoltaics technology into their commercial products.

Through its Ortel division, EMCORE also manufactures and sells a line of fiber optic satellite communications transmitters, subsystems, and systems to transport wideband microwave signals between satellite base stations and antenna dishes.

## ***Electronic Materials and Devices***

RF materials are compound semiconductor materials used in wireless communications. These materials have a broader bandwidth and superior performance at higher frequencies compared to silicon-based materials. EMCORE currently produces 4-inch and 6-inch InGaP HBT and AlGaAs pHEMT materials and E-mode transistor wafers that are used for power amplifiers and switches in GSM, CDMA multiband wireless handsets, cell phones, and in wireless LAN applications. InGaP HBT materials provide higher linearity, higher power-added efficiency, as well as greater reliability than first generation

AlGaAs HBT technologies. In addition, our recently-developed enhanced mode pHEMT technologies have demonstrated in production their continued competitiveness for handset applications. EMCORE also makes GaN HEMT RF materials that are designed to meet future wireless base station infrastructure requirements for higher power and frequency, along with temperature operation at industry leading efficiencies. We believe that our ability to produce high volumes of RF materials at a low cost will encourage their adoption in new applications and products.

EMCORE's Somerset, New Jersey manufacturing facility has seven GaAs-based MOCVD production systems, two GaN production systems, and two GaN development systems dedicated to electronic materials manufacturing. EMCORE also equipped its wafer fabrication area with state-of-the-art cassette-to-cassette characterization equipment. As mentioned above, in June 2004, EMCORE announced that it had been selected by ANADIGICS to be their primary supplier for all RF materials. Our six-inch GaAs RF transistor wafers will be used to produce power amplifiers and related devices that are used in widespread wireless applications, such as cellular telephones, laptop computers, and wireless infrastructure networks.

We also manufacture magneto-resistive (MR) sensors that are compound semiconductor devices used in position sensing applications. MR sensors improve vehicle performance through the more accurate control of engine and crank shaft timing, which allows for improved spark plug efficiency and reduced emissions. EMCORE sells MR sensors using technology licensed from General Motors.

#### ***GELcore (HB-LED) Joint Venture***

HB-LEDs are solid-state compound semiconductor devices that emit light. They are used in miniature packages in everyday applications, including commercial displays, transportation, general and specialty illumination, computers, and other consumer electronics. HB-LEDs offer substantial advantages over small incandescent bulbs, including longer life, lower maintenance costs and energy consumption, and smaller space requirements. Groups of HB-LEDs can make up single or full-color electronic displays. Presently, HB-LED chips are used for backlighting applications, including wireless handsets, cell phones, computer monitors, and automotive dashboard lighting. In addition, they are used in consumer products, office equipment, full color displays, message advertising, informational signs, landscape lighting, and traffic signals. While growing its business in commercial applications, GELcore is focused on the general illumination market as its ultimate goal.

HB-LEDs have the potential to significantly reduce overall U.S. lighting energy consumption. Energy savings to date from HB-LEDs have been estimated to exceed the power produced from one large electric power plant -- more than 8 billion kilowatt-hours. If solid-state lighting achieves anticipated price and performance targets, over the next two decades U.S. lighting energy consumption could be reduced by over 30 percent. HB-LED traffic signals use only 10 percent of the electricity consumed by the incandescent lamps they replace. Moreover, LED signals last several times longer, allowing for additional savings through reduced maintenance costs. HB-LEDs also have made inroads into mobile applications, such as brake and signal lights on trucks, buses, and automobiles. In 2002, an estimated 41 million gallons of gasoline and 142 million gallons of diesel fuel were saved because of HB-LED use on these vehicles. If our nation's entire fleet of automobiles, trucks, and buses were converted to HB-LED lighting, an estimated 1.4 billion gallons of gasoline and 1.1 billion gallons of diesel fuel could have been saved. (The information in this paragraph is based on published reports prepared by Navigant Consulting for the US Department of Energy.)

As mentioned above, in January 1999, EMCORE and General Electric Lighting formed GELcore, a joint venture to develop and market HB-LED lighting products. EMCORE has a 49% non-controlling interest in this joint venture, and both owners have agreed that this joint venture will be the exclusive vehicle for their participation in solid-state lighting. GELcore combines EMCORE's materials science and device design expertise with General Electric Lighting's brand name recognition, phosphor

technology, and extensive marketing and distribution capabilities. GELcore's current product line includes traffic lights, channel letters, and other signage and display products incorporating HB-LEDs. In the near term, GELcore expects to be deploying its HB-LED products in the commercial refrigeration market. GELcore's long-term goal is to develop products that replace traditional lighting in the general illumination market.

### Revenues by Product Line

The table below sets forth the revenues and percentage of total revenues attributable to each of EMCORE's product lines for each of the past three fiscal years:

	For the fiscal years ended September 30, (in thousands)					
	FY 2004	% of revenue	FY 2003	% of revenue	FY 2002	% of revenue
<b>Product Revenue</b>						
Fiber Optics.....	\$ 56,169	60.4%	\$ 32,658	54.2%	\$ 9,077	17.7%
Photovoltaics.....	25,716	27.6	18,196	30.2	23,621	46.1
Electronic Materials and Devices ...	11,184	12.0	9,430	15.6	18,538	36.2
Total revenues.....	<u>\$ 93,069</u>	<u>100.0%</u>	<u>\$ 60,284</u>	<u>100.0%</u>	<u>\$ 51,236</u>	<u>100.0%</u>

### Government Research Contract Funding

EMCORE derives a portion of its revenue from funding of research contracts with the U.S. Government (Government). These contracts typically cover work performed from over several months up to several years. These contracts may be modified or terminated at the convenience of the Government and therefore, these programs may be subject to Government budgetary fluctuations. In fiscal 2004, 2003, and 2002, Government research contract funding represented 5%, 9%, and 6% of total EMCORE revenue, respectively.

### Customers and Geographic Region

EMCORE works closely with its customers to design and develop (i) process technology, (ii) material science expertise, (iii) optical sub-assemblies, and/or (iv) integrated module level products for use in its customers' end-use applications. EMCORE's customer base includes many of the largest semiconductor, telecommunications, data communications, and computer manufacturing companies in the world. In fiscal 2004, Motorola, Inc. (Motorola) and Cisco Systems, Inc. (Cisco) accounted for 13% and 8% of our total revenue, respectively. In fiscal 2003, Motorola accounted for 14% of total revenue. In fiscal 2002, revenues from Motorola, Boeing Satellite Systems, Inc. (Boeing), and Space Systems/Loral, Inc. (SS/L) accounted for 22%, 15%, and 14% of total revenue, respectively.

The following chart contains a breakdown of EMCORE's consolidated revenues by geographic region. North American sales include sales to Canada, which historically have not been material.

<b>For the fiscal years ended September 30,</b>						
<i>(in thousands)</i>						
	<u>FY</u>	<u>% of</u>	<u>FY</u>	<u>% of</u>	<u>FY</u>	<u>% of</u>
	<u>2004</u>	<u>revenue</u>	<u>2003</u>	<u>revenue</u>	<u>2002</u>	<u>revenue</u>
<b>Revenue by Region</b>						
North America.....	\$ 66,485	71.4%	\$ 44,136	73.2%	\$ 42,983	83.9%
South America.....	416	0.5	-	-	-	-
AsiaPac.....	15,496	16.6	9,018	15.0	3,638	7.1
Europe.....	10,672	11.5	7,130	11.8	4,615	9.0
Total revenues.....	<u>\$ 93,069</u>	<u>100.0%</u>	<u>\$ 60,284</u>	<u>100.0%</u>	<u>\$ 51,236</u>	<u>100.0%</u>

### **Marketing and Sales**

EMCORE actively markets its products through its dedicated sales force, external sales agents, marketing staff, applications engineers, select advertising, and participation at trade shows. Our customers work directly with our internal sales force, external sales agents, and senior management. EMCORE's strategy is to use its dedicated sales force for marketing and selling to key accounts. EMCORE plans to expand its external sales agent program for increased coverage in international markets and some domestic segments.

During fiscal 2004, EMCORE relied on Hakuto Co., Ltd. (Hakuto) pursuant to various distributorship and sales representative agreements to market and sell certain products in Japan and China. Hakuto primarily marketed and serviced EMCORE's reactor products until the sale of the capital equipment division to Veeco. Following such sale, EMCORE and Hakuto agreed in October 2004 to terminate their distributorship and sales representative agreements. Hakuto owns approximately 4% of EMCORE's common stock, and Shigeo Takayama, the Chairman of Hakuto, was a member of EMCORE's Board of Directors from 1997 until he retired in 2002.

EMCORE uses a variety of external sales agents, such as UR Group in Europe, BUPT and MilliTech in China, and M-RF in Japan. We also have an established distribution and value added reseller channel to sell our satcom products worldwide.

EMCORE's sales cycle for component and subsystem products is usually three months to in excess of a year. During this time, we work closely with our customers to qualify our products in their product lines. As a result, EMCORE develops strategic and long lasting customer relationships with products and services that we believe are uniquely tailored to our customers' requirements.

### **Backlog**

As of September 30, 2004, EMCORE had a backlog it believes to be firm of approximately \$28.8 million. This compares to a backlog of \$33.1 million as reported at September 30, 2003. Backlog principally consists of EMCORE's longer lead-time products, such as satellite communications. Our other product lines, including fiber optics and RF, typically ship within the same quarter as the purchase order is received. We believe that substantially all of our backlog can be filled during the next 12 months. But given the current market environment, customers may delay shipment of certain orders. Backlog also could be adversely affected if customers unexpectedly cancel purchase orders accepted by us.

## Manufacturing

EMCORE's operations include wafer fabrication, design and device production, solar panel engineering and assembly, and fiber optic module design and manufacture. Many of EMCORE's manufacturing operations are computer monitored or controlled to enhance reliability and yield. EMCORE employs a strategy of minimizing ongoing capital investments, while maximizing the variable nature of its cost structure. EMCORE maintains a commercially advantageous contract supply agreement with Veeco for MOCVD systems, components, and spare parts. Where EMCORE can gain significant cost advantages while maintaining strict quality and intellectual property control, EMCORE outsources to overseas contract manufacturers (CMs) the production of certain components and sub-assemblies. Our contract manufacturing supply chain is an integral part of enabling this strategy. EMCORE develops assembly and testing procedures, and then transfers these procedures overseas. Our CMs must maintain comprehensive quality and delivery systems, and we continuously monitor them for compliance. As of September 30, 2004, EMCORE had 330 employees involved in manufacturing. The location of and products manufactured at EMCORE's facilities are summarized below:

<b><u>Location</u></b>	<b><u>EMCORE Product Line</u></b>
Somerset, New Jersey ( <i>headquarters</i> )	Electronic materials (InGaP HBTs, AlGaAs pHEMTs, and GaN HEMTs) Electronic devices (MR Sensors)
Albuquerque, New Mexico	Photovoltaics (solar cells) Fiber Optics (VCSEL and photodiode die, parallel optical modules)
City of Industry, California	Photovoltaics (CICs and solar panels)
Alhambra, California	Fiber Optics (CATV, FTTP, lasers, modules, and subsystems)
Santa Clara, California	Fiber Optics (parallel optical modules, design center for 10G Ethernet modules)
Downers Grove, Illinois	Fiber Optics (10G Ethernet fiber optical modules )
Eau Claire, Wisconsin	Fiber Optics (design center for parallel optical modules)

EMCORE has combined clean room area totaling approximately 88,000 square feet. Unlike silicon semiconductor technology, which could involve up to a 100-step manufacturing process, our electronic materials and devices products are manufactured in a four-part process: epitaxial deposition, fabrication, testing, and packaging. The epitaxial deposition process represents the growth of thin layers of GaAs, GaN, or other materials on a polished wafer, depending on the nature of the device being produced. Following epitaxy, chips are fabricated in a clean room environment. The final steps involve testing and packaging prior to shipment to the customer, or further integration into a module or subsystem within EMCORE's manufacturing infrastructure. EMCORE also maintains the capability to transfer and monitor our ongoing processes to CMs.

Our various manufacturing processes involve extensive quality assurance systems and performance testing. All of EMCORE's facilities have acquired and maintain certification status for their quality management systems. The New Jersey facility, which is used for EMCORE's electronic materials and devices products, is registered to both ISO 9001 and QS 9000-1998. Both the New Mexico and California facilities, which are used for EMCORE's photovoltaics and fiber optics products, are registered to ISO 9001.

## Sources of Raw Materials

Outside contractors and vendors are used to supply raw materials and standard components, as well as to assemble portions of end subsystems, components, and modules from EMCORE specifications. EMCORE continually reviews our vendor relationships to mitigate risks and improve costs, especially where we depend on one or two vendors for critical components or raw materials. While maintaining inventories that we believe are sufficient to meet our near term needs, we generally do not carry significant inventories of raw materials. Accordingly, EMCORE maintains ongoing communications with our vendors to work to prevent any interruptions in supply, and have implemented a supply-chain management program to maintain quality and improve prices through standardized purchasing efficiencies and design requirements. To date, we generally have been able to obtain sufficient quantities of quality supplies in a timely manner.

## Research and Development

The scope of EMCORE's business is in the areas of semiconductor processes and communications components and subsystems. Our R&D efforts have been sharply focused to maintain the technology leading position of various product lines, and to grow into new product areas and market opportunities by leveraging the existing technology base and infrastructure. The semiconductor industry is characterized by rapid changes in process technologies with increasing levels of functional integration. To maintain and improve its competitive position, EMCORE invests significant resources in R&D. Our efforts are focused on designing new proprietary processes and products, on improving the performance of our existing materials, devices, modules, and systems, and on reducing costs in the product manufacturing process. EMCORE has dedicated 22 MOCVD systems and five device fabrication facilities for both research and production, which are capable of processing virtually all compound semiconductor materials and devices. Nine of those MOCVD systems and three device fabrication areas are dedicated fully to R&D efforts and are used by a staff of over 94 scientists, engineers, technicians, and staff, of whom 32 have a Ph.D. degree. The R&D staff utilizes x-ray, optical, and electrical characterization equipment, as well as device and module fabrication and testing, that generates data rapidly, which allows for shortened development cycles and rapid customer response.

During fiscal years 2004, 2003, and 2002, EMCORE invested \$23.6 million, \$17.0 million, and \$30.6 million towards our product R&D activities. As a percentage of revenues, R&D represented 25%, 28%, and 60% for the fiscal years 2004, 2003, and 2002, respectively. As part of the ongoing effort to cut costs, we implemented a program to focus research and product development efforts on projects that we expect to generate returns within one year. As a result, EMCORE reduced overall R&D costs as a percentage of revenue without, we believe, jeopardizing future revenue opportunities.

EMCORE's most recent and successful R&D project was the XENPAK LX4 module that began in August 2003. Within twelve months, the LX4 module was developed by EMCORE and qualified by the customer, and is being manufactured in full production. Revenues from LX4 module sales represented a significant area of growth in our total fiscal 2004 revenues.

We believe that several other R&D projects have the potential to greatly improve our competitive position and drive revenue growth in the next few years. Listed below are several examples:

- In the FTTP market, EMCORE is developing an integrated PON transceiver utilizing Ortel's industry leading video technology. EMCORE is currently in qualification and expects production of this PON transceiver to commence by the end of the second quarter of fiscal 2005.
- EMCORE is currently developing the next generation LX4 module using the smaller X2 form factor. This X2 LX4 module is expected to begin ramping in the second half of fiscal 2005, and

to exceed total sales of the current XENPAK form factor. As with the current XENPAK LX4 module, EMCORE plans to be a leading supplier and one of the first to market with this product.

- In the photovoltaics market, EMCORE is developing a high efficiency solar cell product for terrestrial applications. Intended for use in concentrated sunlight, these cells already have been measured at 34% efficiency at 400 suns, close to our goal of 35% efficiency at 500 suns.
- EMCORE has developed GaN HEMT wafers for use in base stations for wireless and cellular networks, and is continuing to work with its customers to optimize their performance, improve yields, and increase wafer size.

EMCORE also competes for R&D funds. In view of the high cost of development, EMCORE solicits research contracts that provide opportunities to enhance its core technology base and promote the commercialization of targeted EMCORE products. Internal R&D funding is used for the development of products that will be released within 12 months, and external funding is used for longer-range R&D efforts.

### **Intellectual Property and Licensing**

The success and competitive position of our product lines depend significantly on our ability to obtain intellectual property protection for our R&D efforts. EMCORE's strategy is to rely on both patents and trade secrets to protect its intellectual property. A patent is the grant of a property right, which allows its holder to exclude others from, among other things, selling the subject invention in, or importing such invention into, the jurisdiction that granted the patent. In the United States, patents expire twenty years from the date of application. EMCORE has 46 U.S. patents and 8 foreign patents. Also, over 100 patent applications have been filed in the U.S. and internationally. Our U.S. patents will expire between 2009 and 2022. These patents and patent applications claim various aspects of current or planned commercial versions of EMCORE's wafers, devices, and modules.

EMCORE relies on trade secrets to protect its intellectual property when it believes that publishing patents would make it easier for others to reverse engineer EMCORE's proprietary processes. A "trade secret" is information that has value to the extent it is not generally known, not readily ascertainable by others through legitimate means, and protected in a way that maintains its secrecy. Reliance on trade secrets is only an effective business practice insofar as trade secrets remain undisclosed and a proprietary product or process is not reverse engineered or independently developed. To protect our trade secrets, we take certain measures to ensure their secrecy, such as partitioning the non-essential flow of information between our different groups and executing non-disclosure agreements with our employees, joint venture partners, customers, and suppliers.

As is typical in our industry, from time to time, we have sent letters to, and received letters from, third parties regarding the assertion of patent or other intellectual property rights in connection with certain of our products and processes. To date, we have not engaged in any litigation regarding the intellectual property rights of our products and processes.

In connection with our sale of the TurboDisc capital equipment business, EMCORE retained a license to all MOCVD system-related technology. EMCORE intends to use this license to further optimize the performance of its own reactors and develop improvements to its hardware that will increase yields on existing products and enable the fabrication of advanced, wide bandgap materials.

### **Environmental Regulations**

EMCORE is subject to federal, state, and local laws and regulations concerning the use, storage, handling, generation, treatment, emission, release, discharge, and disposal of certain materials used in its

R&D and production operations, as well as laws and regulations concerning environmental remediation and employee health and safety. The production of wafers and devices involves the use of certain hazardous raw materials, including, but not limited to, ammonia, phosphine, and arsine. EMCORE has in-house professionals to address compliance with applicable environmental and health and safety laws and regulations.

If our control systems are unsuccessful in preventing release of these or other hazardous materials, we could experience a substantial interruption of operations and could be subject to significant liability for clean-up and other claims. We believe that EMCORE is currently in compliance with all applicable environmental laws, including the Resource Conservation and Recovery Act, except such violations as could not reasonably be expected to have a material effect on our financial condition or results of operations.

## **Competition**

The semiconductor industry is intensely competitive and is characterized by rapid technological change, price erosion, and substantial foreign competition. EMCORE faces actual and potential competition from a number of established domestic and international compound semiconductor companies. Many of these companies have greater engineering, manufacturing, marketing, and financial resources than we have.

*CATV.* Competitors in the CATV market include JDS Uniphase Corporation (JDSU), Optium Corporation, Mitsubishi, and Fujitsu.

*Telecommunications.* For telecommunications and FTTP components, the market competitors include JDSU, MRV Communications, Fujitsu, Mitsubishi, and Summitomo. For 10G transceivers and parallel optical modules, our competitors include Agilent Technologies, Inc. (Agilent), Finisar Corporation (Finisar), Eudyna Devices, Inc., Picolight, Inc., and Opnext, Inc. (Opnext).

*Data and Storage.* EMCORE's principal competitor for VCSEL devices and components is Finisar (through its Advanced Optical Component division, which was acquired from Honeywell Corporation). There also are numerous smaller VCSEL vendors located throughout the world. For 10G LX4 and CX4 products, our primary competitor is Opnext.

*Satellite Communications.* For photovoltaics products, EMCORE primarily competes with the Spectrolab, Inc. subsidiary of The Boeing Company, Sharp Electronics Corporation, RWE SCHOTT Solar GmbH, and Mitsubishi Electric. For satcom products, our primary competitors are Foxcom and MITEQ, Inc.

*Wireless Communications.* The primary competitors in the electronic materials and wireless communications markets include Kopin Corporation, Visual Photonics Epitaxy Co., Ltd., Hitachi Cable, Sumika, APA Enterprise, Inc., and IQE plc, as well as integrated circuit manufacturers with in-house transistor growth capabilities.

*Solid State Lighting.* The principal competitors for HB-LED applications and EMCORE's joint venture with General Electric Lighting include LumiLeds Lighting, a joint venture between Agilent and Philips Lighting, Siemens AG's Osram GmbH subsidiary, Cree, Nichia Corporation, and Toyoda Gosei Co., Ltd. In addition, Epistar Corporation, Arima Computer Corporation, and other Asia-based companies in recent years have begun production of LEDs.

In addition to the companies listed above, EMCORE competes with many research institutions and universities for research contract funding. EMCORE also sells its products to current competitors and companies with the capability of becoming competitors. As the markets for EMCORE's products grow,

new competitors are likely to emerge and current competitors may increase their market share. In the EU, political and legal requirements encourage the purchase of EU-produced goods, which may put EMCORE at a competitive disadvantage against its European competitors.

There are substantial barriers to entry by new competitors across EMCORE's product lines. These barriers include: the large number of existing patents; the time and costs to be incurred to develop products; the technical difficulty in manufacturing semiconductor products; the lengthy sales and qualification cycles; and the difficulties in hiring and retaining skilled employees with the required scientific and technical backgrounds. EMCORE believes that the primary competitive factors within EMCORE's current markets are yield, throughput, performance, breadth of product line, product heritage, customer satisfaction, and customer commitment to competing technologies. Competitors may develop enhancements to or future generations of competitive products that offer superior price and performance factors. We believe that in order to remain competitive, we must invest significant financial resources in developing new product features and enhancements and in maintaining customer satisfaction worldwide.

## **Investments**

In addition to the GELcore joint venture mentioned above, in February 2002, EMCORE purchased \$1.0 million of preferred stock of Archcom Technology, Inc. (Archcom), a venture-funded, start-up optical networking components company that designs, manufactures, and markets a series of high performance lasers and photodiodes for the datacom and telecom industries. EMCORE does not exercise significant influence over financial and operating policies, and the investment represents less than 20% of ownership. Therefore, EMCORE accounts for this investment under the cost method of accounting. During fiscal 2004, Archcom raised additional capital, but EMCORE did not participate in the latest round. As a result, we have reduced the carrying value of our investment in Archcom by 50%, or \$0.5 million.

Subsequent to our fiscal 2004 year end, in October 2004, EMCORE invested \$1.0 million in K2 Optronics, Inc., a California-based company specializing in the design and manufacture of external cavity lasers, to strengthen our partnership in designing next-generation, high-performance, long-wavelength components on an exclusive basis for the CATV and FTTP markets. EMCORE does not exercise significant influence over financial and operating policies, and the investment represents approximately 6.6% ownership. Therefore, EMCORE accounts for this investment under the cost method of accounting.

## **Employees**

At September 30, 2004, EMCORE had 588 employees, including 330 employees in manufacturing operations, 94 employees in R&D, 136 employees in sales, general and administration (SG&A), and 28 temporary employees. This represented a decrease of 161 employees or 21% from September 30, 2003. This decrease was primarily attributable to our divestiture of the TurboDisc capital equipment business. Our ability to attract and retain qualified personnel is essential to our continued success. None of EMCORE's employees are covered by a collective bargaining agreement, nor have we ever experienced any labor-related work stoppage. We believe that our employee relations are good.

## **Risk Factors**

YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW. IF ANY OF THE FOLLOWING RISKS ACTUALLY OCCURS, OUR BUSINESS, FINANCIAL CONDITION OR RESULTS OF OPERATIONS COULD BE MATERIALLY AND ADVERSELY AFFECTED. WE CAUTION THE READER THAT THESE RISK FACTORS MAY NOT BE EXHAUSTIVE. WE OPERATE IN A CONTINUALLY CHANGING BUSINESS ENVIRONMENT AND NEW RISK

FACTORS EMERGE FROM TIME TO TIME. WE CANNOT PREDICT SUCH NEW RISK FACTORS, AND WE CANNOT ASSESS THE EFFECT, IF ANY, OF SUCH NEW RISK FACTORS ON OUR BUSINESSES OR THE EXTENT TO WHICH ANY FACTOR, OR COMBINATION OF FACTORS, MAY CAUSE ACTUAL RESULTS TO DIFFER MATERIALLY FROM THOSE PROJECTED IN ANY FORWARD-LOOKING STATEMENTS CONTAINED IN THIS REPORT. ACCORDINGLY, FORWARD-LOOKING STATEMENTS SHOULD NOT BE RELIED UPON AS A PREDICTION OF ACTUAL RESULTS. IN ADDITION, OUR MANAGEMENT'S ESTIMATES OF FUTURE OPERATING RESULTS ARE BASED ON THE CURRENT COMPLEMENT OF BUSINESSES, WHICH IS CONSTANTLY SUBJECT TO CHANGE AS MANAGEMENT UPDATES AND IMPLEMENTS ITS BUSINESS STRATEGY.

*We May Continue To Incur Operating Losses.*

We started operations in 1984 and as of September 30, 2004, we had an accumulated deficit of \$302.9 million. We incurred net losses of \$13.4 million in fiscal 2004, \$38.5 million in fiscal 2003, and \$129.8 million in fiscal 2002. While we have reduced our cost structure substantially, and are focused on profitability, we may continue to lose money. Many of our expenses, particularly those relating to capital equipment, debt service, and manufacturing overhead are fixed. Accordingly, lower revenue causes our fixed production costs to be allocated across reduced production volumes, which adversely affects our gross margin and profitability. While our business strategy is to achieve operational profitability in 2005, if we are unable to achieve target revenues or to contain our cost structures, we will continue to incur operating losses.

*Our Cost Reduction Programs May Be Insufficient To Achieve Long-Term Profitability.*

We are undertaking cost reduction measures intended to reduce our expense structure at both the cost of goods sold and the operating expense levels. We believe these measures are a necessary response to, among other things, declining average sales prices across our product lines. These measures may be unsuccessful in creating profit margins sufficient to sustain our current operating structure and business.

*Reduced Customer Lead Times Means We Are Less Able To Forecast Revenues And, As A Result, We May Be Unable To Accurately Predict Growth And Manage Our Cost Structure.*

Several of our customers have reduced the lead times they give us when ordering product from us. While this trend has enabled us to reduce inventory, it also restricts our ability to forecast revenues. If our sales and profit margins do not increase to support the higher levels of operating expenses, and if our new product offerings are not successful, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

*We Have Substantial Long-Term Debt Which We May Be Unable To Repay If We Cannot Generate Sufficient Funds To Do So Or Restructure The Terms Of The Debt.*

In May 2001, we sold \$175.0 million of 5% Convertible Subordinated Notes due May 15, 2006 (2006 Notes) in a private placement for resale to qualified institutional buyers. In December 2002, EMCORE purchased \$13.2 million principal amount of the notes at prevailing market prices for an aggregate of approximately \$6.3 million. In February 2004, EMCORE exchanged approximately \$146.0 million, or 90.2%, of these remaining 2006 Notes for approximately \$80.3 million aggregate principal amount of new 5% Convertible Senior Subordinated Notes due May 15, 2011 (2011 Notes) and approximately 7.7 million shares of EMCORE common stock. The notes are convertible into EMCORE common stock at a conversion price of \$8.06 per share, subject to adjustment under customary anti-dilutive provisions. They also are redeemable should EMCORE's common stock price reach \$12.09 per share. Approximately \$15.7 million of the 2006 notes, and approximately \$80.3 million of the 2011 notes, are currently outstanding, for a combined long-term debt of approximately \$96.0 million. In

addition, we may incur additional debt in the future. This significant amount of debt could, among other things:

- make it difficult for us to make payments on the notes and any other debt we may have;
- make it difficult for us to obtain any necessary future financing for working capital, capital expenditures, debt service requirements or other purposes;
- require us to dedicate a substantial portion of our cash flow from operations to service our debt, which would reduce the amount of our cash flow available for other purposes, including working capital and capital expenditures;
- limit our flexibility in planning for, or reacting to, changes in our business; and
- make us more vulnerable in the event of a further or continued downturn in our business.

If our cash flow is inadequate to meet our obligations or we are unable to generate sufficient cash flow or otherwise obtain funds necessary to make required payments on the notes or our other obligations, we would be in default under the terms thereof. Default under one or both of the note indentures would permit the holders of the notes to accelerate the maturity of the notes and could cause defaults under future indebtedness we may incur. Any such default would have a material adverse effect on our business, prospects, financial condition, results of operations and cash flows. In addition, we cannot assure you that we would be able to repay amounts due in respect of the notes if payment of either or both of the notes were to be accelerated following the occurrence of an event of default as defined in the respective note indentures.

*Our Success Depends On Our Ability To Introduce New Products On A Timely Basis.*

We compete in markets characterized by rapid technological change, evolving industry standards and continuous improvements in products. Due to constant changes in these markets, our future success depends on our ability to improve our manufacturing processes, systems and products. To remain competitive we must continually introduce new and improved products. Our business, financial condition, results of operations and cash flows may be materially and adversely affected if:

- we are unable to improve our existing products on a timely basis;
- our new products are not introduced on a timely basis or do not achieve sufficient market penetration; or
- our new pour new products experience reliability or quality problems.

*If The Internet Does Not Continue To Grow As Expected And Demand Does Not Increase For Our Communications Products, Our Business Will Suffer.*

Our future success as a manufacturer of optical components, modules, and subsystems ultimately depends on the continued growth of the communications industry, and, in particular, the growth of the Internet as a global communications system. As part of that growth, we are relying on increasing demand for high-content voice, text, video and other data delivered over high-speed connections (i.e., high bandwidth communications). As Internet usage and bandwidth demand increase, so does the need for advanced optical networks to provide the required bandwidth. Without Internet and bandwidth growth, the need for our advanced communications products, and hence our future growth as a manufacturer of these products, is jeopardized. Currently, while generally increasing demand for Internet access is apparent, less evident is when order capacity will be absorbed. Moreover, multiple service providers compete to supply the existing demand. Also, fiberoptic networks currently have significant excess capacity. The combination of a large number of service providers and excess network capacity has resulted in severe downward pressure on bandwidth prices and associated profit margins, and this is expected to continue in the foreseeable future. Until industry margins recover, service providers have less incentive to install new equipment, including many of our communications products. Ultimately, should

long-term expectations for Internet growth and bandwidth demand not be realized, our business would be significantly harmed.

*Shifts In Industry-wide Demands And Inventories Could Result In Significant Inventory Write-downs.*

The life cycles of some of our products depend heavily upon the life cycles of the end products into which our products are designed. Products with short life cycles require us to manage production and inventory levels closely. We evaluate our ending inventories on a quarterly basis for excess quantities, impairment of value and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand based upon input received from our customers, sales team and management estimates. If inventories on hand are in excess of demand, or if they are greater than 12-months old, appropriate reserves are provided. In addition, we write off inventories that are considered obsolete based upon changes in customer demand, manufacturing process changes that result in existing inventory obsolescence or new product introductions, which eliminate demand for existing products. Remaining inventory balances are adjusted to approximate the lower of our manufacturing cost or market value.

In fiscal 2002, EMCORE recorded a \$7.7 million inventory charge for excess raw material and finished goods inventory that EMCORE believed it was carrying as a result of market conditions. In fiscal 2003, EMCORE recorded a \$2.0 million inventory charge related to certain transceiver devices that were later determined to be non-saleable because of design modifications. If future demand or market conditions are less favorable than our estimates, additional inventory write-downs may be required. We cannot assure investors that obsolete or excess inventories, which may result from unanticipated changes in the estimated total demand for our products and/or the estimated life cycles of the end products into which our products are designed, will not affect us beyond the inventory charges that we have already taken.

*The Time And Costs Of Developing New Products May Exceed Our Budget And Our Products May Not Be Commercially Successful.*

We continue to introduce a number of new products, and expect to be introducing additional new products in the future. The commercialization of our new products involves substantial expenditures in R&D, production, and marketing. We may be unable to successfully design or manufacture these new products and may have difficulty penetrating new markets.

Because it is generally not possible to predict the amount of time required and the costs involved in achieving certain research, development, and engineering objectives, actual development costs may exceed budgeted amounts and estimated product development schedules may be extended. Our business, financial condition, results of operations, and cash flows could suffer if we incur budget overruns or delays in our R&D efforts.

*We May Engage In Acquisitions That May Effect Our Operating Results, Dilute Our Shareholders, and/or Cause Us To Incur Debt.*

We may pursue acquisitions to acquire new technologies, products or service offerings. Future acquisitions by us may involve the following:

- use of significant amounts of cash;
- potentially dilutive issuances of equity securities on potentially unfavorable items; and
- incurrence of debt on potentially unfavorable terms, as well as amortization expense related to other intangible assets.

In addition, acquisitions involve numerous risks, including:

- inability to achieve anticipated synergies;

- difficulties in the integration of the operations, technologies, products and personnel of the acquired company;
- diversion of management's attention from other business concerns;
- risks of entering markets in which we have no or limited prior experience; and
- potential loss of key employees of the acquired company or of EMCORE.

From time to time, we have engaged in discussions with acquisition candidates regarding potential acquisitions of product lines, technologies and businesses. If acquisitions occur, we cannot be certain that our business, operating results and financial condition will not be materially and adversely affected.

In the past several years we have completed several major acquisitions, which have reoriented EMCORE's strategy and broadened our product lines within our target markets. However, if customer demand in these markets does not meet current expectations, our revenues could be significantly reduced, and we could suffer a material adverse effect on our financial condition, results of operations and cash flows.

*Our Acquisitions Place A Strain On Our Resources.*

We are in a dynamic business and certain of our larger acquisitions over the past several years have presented many challenges. These acquisitions have placed, and will continue to place, a significant strain on our management, financial, sales, and other employees, as well as on our internal systems and controls. If we are unable to effectively manage multiple facilities and a joint venture in geographically distant locations, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

*Our Industry Is Rapidly Changing.*

The compound semiconductor industry is rapidly changing due to, among other things, continuous technological improvements in products and evolving industry standards. This industry is marked by the continuous introduction of new products and increased capacity for services similar to those provided by us. Future technological advances in the compound semiconductor industry may result in the availability of new products or increase the efficiency of existing products. If a technology becomes available that is more cost effective or creates a superior product, we may be unable to access such technology or its use may involve substantial capital expenditures, which we may be unable to finance. There can be no assurance that existing, proposed or as yet undeveloped technologies will not render our technology less profitable or that we will have available the financial and other resources necessary to compete effectively against companies possessing such technologies. There can be no assurance that we will be able to adapt to technological changes or offer competitive products on a timely or cost effective basis.

*The Markets In Which We Compete Are Highly Competitive. An Increase In Competition Would Limit Our Ability To Maintain Or Increase Our Market Share.*

We face substantial competition from a number of companies, many of which have greater financial, marketing, manufacturing and technical resources. Larger-sized competitors could spend more on R&D, which could give those competitors an advantage in meeting customer demand. We expect that existing and new competitors will improve the design of their existing products and will introduce new products with enhanced performance characteristics. The introduction of new products or more efficient production of existing products by our competitors could result in price reductions and increases in expenses, and reduce market acceptance of our products, which could diminish our market share and gross margins.

*We Face Intense and Predatory Competition in Certain Markets.*

The compound semiconductor industry has been undergoing a period of significant consolidation, and we believe that some of our competitors have engaged in below-cost sales and other predatory conduct in

order to preserve revenues and/or drive their competitors out of business. As part of our strategy to achieve profitable growth, we may be unable to win future business from customers who elect to buy from such predatory companies. As a result, our revenues may decline as we focus on profitable business opportunities (by not choosing to bid on orders with negative gross margins), and our business, financial condition, results of operations, and cash flows may be materially and adversely impacted.

*We May Not Respond Effectively to Increased Competition Caused by Industry Volatility and Consolidation.*

Our business could be seriously harmed if we do not compete effectively. We face competitive challenges, especially from Asia, that are likely to arise from a number of factors, including industry volatility resulting from rapid product development cycles; increasing price competition due to maturation of technologies; industry consolidation resulting in competitors with greater financial, marketing, and technical resources; the emergence of new competitors in Asia with lower cost structures and competitive offerings; and greater competition for fewer customers as a result of consolidation in our sales channels.

*Fluctuations In Our Quarterly Operating Results May Negatively Impact Our Stock Price.*

Our revenues and operating results may vary significantly from quarter to quarter due to a number of factors particular to EMCORE and the compound semiconductor industry. Not all of these factors are in our control. They can include:

- the volume and timing of orders and payments for our products;
- the timing of our announcements and introduction of new products and of similar announcements by our competitors;
- downturns in the market for our customers' products;
- regional economic conditions, particularly in locations (such as the United States and Asia) where we derive a significant portion of our revenues;
- price volatility in the compound semiconductor industry; and
- changes in product mix.

These factors may cause our operating results for future periods to be below the expectations of analysts and investors. This may cause a decline in the price of our common stock.

*General Electric Lighting, Our Joint Venture Partner, Who Has Majority Ownership and Control Of GELcore, May Make Decisions That We Do Not Agree With And That Adversely Affect Our Net Income.*

We have a 49% minority interest in our GELcore joint venture with General Electric Lighting. A board of managers governs GELcore with representatives from both General Electric Lighting and EMCORE. Many fundamental decisions must be approved by both parties, which means we will be unable to direct the operation and direction of GELcore without the agreement of General Electric Lighting. If we are unable to agree on important issues with General Electric Lighting, GELcore's business may be delayed or interrupted, which may, in turn, materially and adversely affect our business, financial condition, results of operations and cash flows.

We have devoted and may be required to continue to devote significant funds and technologies to GELcore to develop and enhance its products. In addition, GELcore requires that some of our employees devote much of their time to its projects. This places a strain on our management, scientific, financial, and sales employees. If GELcore is unsuccessful in developing and marketing their products, our business, financial condition, results of operations and cash flows may be materially and adversely affected.

General Electric Lighting and EMCORE have agreed that our joint venture will be the sole vehicle for each party's participation in the solid state lighting market. General Electric Lighting and EMCORE have also agreed to several limitations during the life of the venture and thereafter relating how each of us

can make use of the joint venture's technology. One consequence of these limitations is that in certain circumstances, such as a material default by us or certain sales of our interest in the joint venture, we would not be permitted to use the joint venture's technology to compete in the solid state lighting market.

*Since an Increasing Percentage of Our Revenues Are From Foreign Sales, Various International Commercial Risks May Disproportionately Affect Our Revenues.*

Sales to customers located outside the U.S. accounted for approximately 29% of our revenues in fiscal 2004, 27% of our revenues in fiscal 2003, and 16% of our revenues in fiscal 2002. Sales to customers in Asia represent the majority of our international sales. We believe that international sales will continue to account for a significant percentage of our revenues. Because of this, the following international commercial risks may disproportionately affect our revenues:

- political and economic instability may inhibit export of our devices and limit potential customers' access to U.S. dollars in a country or region in which our customers are located;
- we may experience difficulties in the timeliness of collection of foreign accounts receivable and be forced to write off receivables from foreign customers;
- tariffs and other barriers may make our devices less cost competitive;
- the laws of certain foreign countries may not adequately protect our trade secrets and intellectual property or may be burdensome to comply with;
- potentially adverse tax consequences to our customers may make our devices not cost competitive; and
- currency fluctuations may impact foreign investment in U.S. companies, including EMCORE, or affect overseas demand for our products.

*We Will Lose Sales If We Are Unable To Obtain Government Authorization To Export Our Products.*

Exports of our products to certain international destinations (such as the People's Republic of China, Argentina, Brazil, India, Russia, Malaysia, and Taiwan) may require pre-shipment authorization from U.S. export control authorities, including the U.S. Departments of Commerce and State. Authorization may be conditioned on end-use restrictions. Failure to receive these authorizations may materially and adversely affect our revenues and in turn our business, financial condition, results of operations and cash flows from international sales.

Our communications satellite business is particularly sensitive to export control issues. All of our commercially-available solar cell products are export-controlled, and are currently subject to the jurisdiction of the U.S. Department of Commerce. Many of our customers are located in countries (such as Russia, India, Argentina and Brazil) for which export licenses are required. Given the current global political climate, obtaining export licenses can be difficult and time-consuming. Failure to obtain export licenses for these shipments could significantly reduce our revenue, and could have a material adverse effect on our financial condition, results of operations and cash flows.

*Our Operating Results Could Be Harmed If We Lose Access To Sole Or Limited Sources Of Materials Or Services.*

We currently obtain some components and services for our products from limited or single sources. We generally do not carry significant inventories of any raw materials. Because we often do not account for a significant part of our vendors' business, we may not have access to sufficient capacity from these vendors in periods of high demand. In addition, we risk having important suppliers terminate product lines, change business focus, or even go out of business. If we were to change any of our limited or sole source vendors, we would be required to re-qualify each new vendor. Re-qualification could prevent or delay product shipments that could negatively affect our results of operations. In addition, our reliance on these vendors may negatively affect our production if the components vary in quality or quantity. If we

are unable to obtain timely deliveries of sufficient components of acceptable quality or if the prices of components for which we do not have alternative sources increase, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

*Our Products Are Difficult To Manufacture And Our Production Could Be Disrupted If We Are Unable To Avoid Manufacturing Difficulties.*

We manufacture many of our wafers and devices in our production facilities. Difficulties in the production process can cause a substantial percentage of wafers and devices to be rejected. Lower-than-expected production yields may delay shipments or result in unexpected levels of warranty claims, either of which can materially and adversely affect our operating results. We have experienced difficulties in achieving planned yields in the past, particularly in pre-production and upon initial commencement of full production volumes, which have adversely affected our gross margins. Because the majority of our manufacturing costs are relatively fixed, our production yields are critical to our financial results. Because we manufacture many of our products internally, any interruption in manufacturing resulting from fire, natural disaster, equipment failures, or otherwise could materially and adversely affect our business, financial condition, results of operations and cash flows.

*We Face Lengthy Sales And Qualifications Cycles For Our Products And, In Many Cases, Must Invest A Substantial Amount Of Time And Funds Before We Receive Orders.*

Nearly all of our products are tested by current and potential customers to determine whether they meet customer or industry specifications. During a given qualification period, we invest significant resources and allocate substantial production capacity to the manufacture of these new products, prior to any commitment to purchase by customers and without generating significant revenues from the qualification process. If we are unable to meet applicable specifications, or do not receive sufficient orders to profitably use the allocated production capacity, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Our historical and future budgets for operating expenses, capital expenditures, operating leases, and service contracts are based upon our assumptions as to the anticipated market acceptance of our products. Because of the lengthy lead time required for product development and the changes in technology that typically occur during such period, it is difficult to accurately estimate customer demand for a given product. If our products do not achieve expected customer demand, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

*If Our Contract Manufacturers Fail To Deliver Quality Products At Reasonable Prices And On A Timely Basis, Our Results Of Operations And Financial Condition Could Be Materially Affected.*

We are increasing our use of contract manufacturers located outside of the U.S. as a less-expensive alternative to performing our own manufacturing of certain products. If these contract manufacturers do not fulfill their obligations to us, or if we do not properly manage these relationships and the transition of production to these contract manufacturers, our existing customer relationships may suffer. In addition, by undertaking these activities, we run the risk that the reputation and competitiveness of our products and services may deteriorate as a result of the reduction of our control over quality and delivery schedules. We also may experience supply interruptions, import/export controls, cost escalations and competitive disadvantages if our contract manufacturers fail to develop, implement or maintain manufacturing methods appropriate for our products and customers.

Our supply chain and manufacturing process relies on accurate forecasting to provide us with optimal margins and profitability. Because of market uncertainties, forecasting is becoming much more difficult. In addition, as we come to rely more heavily on contract manufacturers, we may have fewer personnel with expertise to manage these third-party arrangements.

*We Have Continuing Concerns Regarding The Manufacture, Profitability Quality, And Distribution Of Our Products.*

EMCORE's success depends upon our ability to timely deliver high quality products to our customers at acceptable cost. As a technology company, we constantly encounter quality, volume, price and cost concerns. These factors have caused considerable strain on our execution capabilities and our customer relations. Currently, we are (a) having difficulty responding to customer delivery expectations for some of our products, (b) unable to fulfill customer demand for some of our products, (c) experiencing yield and quality problems, and (d) expending additional funds and other resources to respond to these execution challenges. We are currently losing additional revenue opportunities due to these concerns. We are also, in the short-term, diverting resources from R&D and other functions to assist with resolving these matters. If we do not improve our performance in all of these areas, our operating results will be harmed, the commercial viability of new products may be challenged and our customers may choose to reduce their orders of our products and purchase additional products from our competitors. Our business, financial condition, results of operations, and cash flows may be materially and adversely affected by these factors.

*We Could Incur Significant Costs To Correct Defective Products.*

Our products are rigorously tested for quality both internally and by our customers. Nevertheless, our products do, and may continue to, fail to meet customer expectations from time-to-time. Also, not all defects are immediately detectible. Failures could result from faulty design or problems in manufacturing. In either case, we could incur significant costs to repair and/or replace defective products under warranty, particularly when such failures occur in installed systems. We have experienced such failures in the past and remain exposed to such failures. In some cases, product redesigns and/or rework may be required to correct a defect, and such occurrences could adversely impact future business with effected customers. Our business, financial condition, results of operations and cash flows may be materially and adversely affected by any unexpected warranty costs.

*Industry Demand For Skilled Employees (Particularly Scientific And Technical Personnel With Compound Semiconductor Experience) Exceeds The Number Of Skilled Personnel Available.*

Our future success depends, in part, on our ability to attract and retain certain key personnel, including scientific, operational and management personnel. The competition for attracting and retaining these employees (especially scientists and technical personnel) is intense. Because of this competition for skilled employees, we may be unable to retain our existing personnel or attract additional qualified employees in the future. If we are unable to retain our skilled employees and attract additional qualified employees to the extent necessary to keep up with our business demands and changes, our financial condition, results of operations and cash flows may be materially and adversely affected.

*Protecting Our Trade Secrets And Obtaining Patent Protection Is Critical To Our Ability To Effectively Compete For Business.*

Our success and competitive position depend on protecting our trade secrets and other intellectual property. Our strategy is to rely both on trade secrets and patents to protect our manufacturing and sales processes and products. Reliance on trade secrets is only an effective business practice insofar as trade secrets remain undisclosed and a proprietary product or process is not reverse engineered or independently developed. We take certain measures to protect our trade secrets, including executing non-disclosure agreements with our employees, our joint venture partner, customers, and suppliers. If parties breach these agreements or the measures we take are not properly implemented, we may not have an adequate remedy. Disclosure of our trade secrets or reverse engineering of our proprietary products, processes, or devices could materially and adversely affect our business, financial condition, results of operations and cash flows.

There is also no assurance that any patents will afford us commercially significant protection of our technologies or that we will have adequate resources to enforce our patents. We are actively pursuing patents on some of our recent inventions. In addition, the laws of certain other countries may not protect our intellectual property to the same extent as U.S. laws.

*Our Failure To Obtain Or Maintain The Right To Use Certain Intellectual Property May Adversely Affect Our Financial Results.*

The compound semiconductor, optoelectronics and fiber optic communications industries are characterized by frequent litigation regarding patent and other intellectual property rights. From time to time we have received, and may receive in the future, notice of claims of infringement of other parties' proprietary rights and licensing offers to commercialize third party patent rights. Although we are not currently involved in any litigation relating to our intellectual property, there can be no assurance that:

- infringement claims (or claims for indemnification resulting from infringement claims) will not be asserted against us or that such claims will not be successful;
- future assertions will not result in an injunction against the sale of infringing products or otherwise significantly impair our business and results of operations;
- any patent owned by us will not be invalidated, circumvented or challenged; or
- we will not be required to obtain licenses, the expense of which may adversely affect our results of operations and profitability.

In addition, effective copyright and trade secret protection may be unavailable or limited in certain foreign countries. Litigation, which could result in substantial cost to us and diversion of our resources, may be necessary to defend our rights or defend us against claimed infringement of the rights of others.

*Our Management's Stock Ownership Gives Them The Power To Control Business Affairs And Prevent A Takeover That Could Be Beneficial To Unaffiliated Shareholders.*

Certain members of our management, specifically Thomas J. Russell, Chairman of our Board, Reuben F. Richards, Jr., President, Chief Executive Officer and a director, and Robert Louis-Dreyfus, a director, are former members of Jesup & Lamont Merchant Partners, L.L.C. They collectively beneficially own more than 20% of our common stock. Accordingly, such persons will continue to hold sufficient voting power to control our business and affairs for the foreseeable future. This concentration of ownership may also have the effect of delaying, deferring or preventing a change in control of our company, which could have a material adverse effect on our stock price.

*Unsuccessful Control Of The Hazardous Raw Materials Used In Our Manufacturing Process Could Result In Costly Remediation Fees, Penalties Or Damages Under Environmental And Safety Regulations.*

Some of our production activities involve the use of certain hazardous raw materials, including, but not limited to, ammonia, gallium, phosphine and arsine. If our control systems are unsuccessful in preventing a release of these materials into the environment or other adverse environmental conditions occur, we could experience interruptions in our operations and incur substantial remediation and other costs. Failure to comply with environmental and health and safety laws and regulations may materially and adversely affect our business, financial condition, results of operations and cash flows.

*Compliance Obligations Will Cause Us To Incur Increased Costs.*

Changes in the laws and regulations affecting public companies over the past several years, including certain provisions of the Sarbanes-Oxley Act of 2002, have resulted in additional internal and external expenses required to respond to these new requirements. In particular, we will incur additional SG&A expense as we implement Section 404 of the Sarbanes-Oxley Act, which requires management to report on, and our independent auditors to attest to, our internal controls. Compliance with these new rules

requires management to devote substantial time and attention to accounting and other compliance matters, which can be disruptive to product development, marketing and other business activities. Furthermore, these new requirements may make it more difficult for us to attract and retain qualified persons to serve on our board of directors or as executive officers, which could harm our business.

We are currently performing the system and process evaluation required to ensure compliance as of September 30, 2005 with the management certification and auditor attestation requirements of Section 404 of the Sarbanes Oxley Act. While we currently anticipate that we will timely complete all such actions, we cannot at this time provide absolute assurance that all such actions will be timely completed, although possible consequences of failure include, sanction or investigation by regulatory authorities, such as the Securities Exchange Commission or the Nasdaq National Market (on which our common stock trades), and inability to timely file our Annual Report on Form 10-K for fiscal 2005. Any such action could effect our stock price.

*We May Have Difficulty Obtaining Director And Officer Liability Insurance In Acceptable Amounts For Acceptable Rates Which Could Impair Our Ability To Recruit and Retain Qualified Officers and Directors.*

Like most other public companies, we carry insurance protecting our officers and directors against claims relating to the conduct of our business. Historically, this insurance covered, among other things, the costs incurred by companies and their management to defend against and resolve claims relating to management conduct and results of operations, such as securities class action claims. These claims typically are extremely expensive to defend against and resolve. Hence, as is customary, we purchase and maintain insurance to cover some of these costs. We pay significant premiums to acquire and maintain this insurance, which is provided by third-party insurers, and we agree to underwrite a portion of such exposures under the terms of the insurance coverage. Over the last several years, the premiums we have paid for this insurance have increased substantially. One consequence of the current economic environment and decline in stock prices has been a substantial increase in the number of securities class actions and similar claims brought against public corporations and their management. Consequently, insurers providing director and officer liability insurance have in recent periods sharply increased the premiums they charge for this insurance, raised retentions (that is, the amount of liability that a company is required to pay to defend and resolve a claim before any applicable insurance is provided), and limited the amount of insurance they will provide. Moreover, insurers typically provide only one-year policies.

Each year we negotiate with insurers to renew our director and officer insurance. Particularly in the current economic environment, we cannot be certain that we will be able to obtain sufficient director and officer liability insurance coverage in the future at acceptable rates and with acceptable deductibles and other limitations. Failure to obtain such insurance could materially harm our financial condition in the event that we are required to defend against and resolve any future securities class actions or other claims made against us or our management arising from the conduct of our operations. Further, the inability to obtain such insurance in adequate amounts may impair our future ability to retain and recruit qualified officers and directors.

*Our Business Or Our Stock Price Could Be Adversely Affected By Issuance Of Preferred Stock.*

Our board of directors is authorized to issue up to 5,882,352 shares of preferred stock with such dividend rates, liquidation preferences, voting rights, redemption and conversion terms and privileges as our board of directors, in its sole discretion, may determine. The issuance of shares of preferred stock may result in a decrease in the value or market price of our common stock, or our board of directors could use the preferred stock to delay or discourage hostile bids for control of us in which shareholders may receive premiums for their common stock or to make the possible sale of EMCORE or the removal of our management more difficult. The issuance of shares of preferred stock could adversely affect the voting and other rights of the holders of common stock and may depress the price of our common stock.

*Certain Provisions Of New Jersey Law And Our Charter May Make A Takeover Of EMCORE Difficult Even If Such Takeover Could Be Beneficial To Some Of Our Shareholders.*

New Jersey law and our certificate of incorporation, as amended, contain certain provisions that could delay or prevent a takeover attempt that our shareholders may consider in their best interests. Our board of directors is divided into three classes. Directors are elected to serve staggered three-year terms and are not subject to removal except for cause by the vote of the holders of at least 80% of our capital stock. In addition, approval by the holders of 80% of our voting stock is required for certain business combinations unless these transactions meet certain fair price criteria and procedural requirements or are approved by two-thirds of our continuing directors. We may in the future adopt other measures that may have the effect of delaying or discouraging an unsolicited takeover, even if the takeover were at a premium price or favored by a majority of unaffiliated shareholders. Certain of these measures may be adopted without any further vote or action by our shareholders and this could depress the price of our common stock.

*The Price Of Our Common Stock May Fluctuate Widely In The Future.*

EMCORE's stock price has experienced large swings over the last year, and may continue to fluctuate widely in the future. In fiscal 2004, our stock price was as high as \$7.93 per share and as low as \$1.90 per share. Volatility in the price of our common stock may be caused by other factors outside of our control, and may be unrelated or disproportionate to our operating results.

Factors such as quarterly fluctuations in financial results, the estimates and projections of industry analysts, and financial performance and other activities of other publicly traded companies in the semiconductor industry could cause the price of our common stock to fluctuate substantially. Similarly, the NASDAQ National Market has experienced and may continue to experience significant price and volume fluctuations, which could adversely affect the market price of our common stock without regard to our operating performance.

## Item 2. Properties.

The following chart contains certain information regarding each of EMCORE's principal facilities. Except for the storage facility located in Somerset, NJ, each of these facilities contains office, marketing, sales, and R&D space.

<u>Location</u>	<u>Function</u>	<u>Sq. Feet</u>	<u>Terms (in fiscal year)</u>
Somerset	Corporate Headquarters	18,716	Lease expires in 2007 <sup>(1) (5)</sup>
New Jersey	Manufacturing of RF materials & MR sensors	19,500	Lease expires in 2005 <sup>(2)</sup>
	Storage facility	47,000	Lease expires in 2006 <sup>(1) (3)</sup>
Albuquerque, New Mexico	Manufacturing of solar cells, VSCELS, and fiber optic components	145,000	Owned by EMCORE <sup>(4)</sup>
City of Industry, California	Manufacturing of solar panels	71,699	Lease expires in 2007
Alhambra, California	Manufacturing of CATV, FTTP, and satcom products	75,000	Lease expires in 2005 <sup>(1)</sup>
Santa Clara, California	Sales and R&D facility	4,000	Lease expires in 2006
Lombard, Illinois	Sales and R&D facility	7,925	Lease expired in 2005 <sup>(6)</sup>
Eau Claire, Wisconsin	R&D Facility	3,178	Lease expires in 2005 <sup>(1)</sup>
Downers Grove, Illinois	Manufacturing of LX4 modules; R&D facility	11,700	Month to month

- (1) Leases have the option to be renewed by EMCORE, subject to inflation adjustments.
- (2) EMCORE has the option to renew the lease from month to month, and also has the right of first offer to purchase the building in which the lease property is located.
- (3) EMCORE subleases this space to a third party.
- (4) EMCORE subleases approximately 20,000 square feet of this facility to third parties.
- (5) Renewal lease, effective March 2005 (or earlier, depending on certain trigger events). Existing lease for 40,000 sq. feet expires upon the commencement of the renewal lease.
- (6) Lease expired on October 31, 2004 and EMCORE vacated this facility.

## Item 3. Legal Proceedings.

As discussed more fully in our last Annual Report, in fiscal 2003 we discovered that we had failed to obtain export licenses for certain shipments involving our TurboDisc capital equipment business, which has since been divested by EMCORE. We entered into a settlement with the U.S. Department of Commerce in December 2003, under which EMCORE agreed to pay \$400,000 in two installments. The first installment was made in fiscal 2004, and the final installment was made in December 2004.

From time to time, we are involved in other lawsuits, claims, investigations, and proceedings that arise in the ordinary course of business. There are no matters pending that we expect to be material in relation to our business, consolidated financial condition, results of operations, or cash flows.

## 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 fiscal 2004.

## PART II

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

EMCORE's common stock is traded on the NASDAQ National Market and is quoted under the symbol "EMKR". The following table sets forth the quarterly high and low sale prices for EMCORE's common stock during the two most recent fiscal years:

	<b>High</b>	<b>Low</b>
<b>Fiscal year ended September 30, 2003</b>		
First Quarter .....	\$3.38	\$0.98
Second Quarter.....	\$2.50	\$1.65
Third Quarter .....	\$3.98	\$1.66
Fourth Quarter.....	\$3.90	\$2.40
<b>Fiscal year ended September 30, 2004</b>		
First Quarter .....	\$6.13	\$2.75
Second Quarter.....	\$7.93	\$3.01
Third Quarter .....	\$5.15	\$2.46
Fourth Quarter.....	\$3.89	\$1.90

The reported closing sale price of EMCORE's common stock on December 6, 2004 was \$2.75 per share. As of December 6, 2004, EMCORE had approximately 4,950 shareholders of record.

EMCORE has never declared or paid dividends on its common stock since the company's formation. EMCORE currently does not intend to pay dividends on its common stock in the foreseeable future, so that it may reinvest any earnings in its business. The payment of dividends, if any, in the future is at the discretion of the Board of Directors.

### **Equity Compensation Plan Information**

The following table sets forth, as of September 30, 2004, the number of securities outstanding under each of EMCORE's stock option plans, the weighted average exercise price of such options, and the number of options available for grant under such plans:

<b>Plan Category</b>	<b>(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights</b>	<b>(b) Weighted average exercise price of outstanding options, warrants and rights</b>	<b>(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</b>
Equity compensation plans approved by security holders .....	5,499,393	\$4.21	1,597,766
Equity compensation plans not approved by security holders .....	1,920	0.23	-
<b>Totals .....</b>	<b>5,501,313</b>	<b>\$4.21</b>	<b>1,597,766</b>

## **Item 6. Selected Financial Data.**

The following selected consolidated financial data for EMCORE's five most recent fiscal years ended September 30, 2004 is qualified by reference to, and should be read in conjunction with, the Financial Statements and the accompanying notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this Annual Report on Form 10-K. The Statement of Operations data set forth below with respect to fiscal years 2004, 2003, and 2002, and the Balance Sheet data as of September 30, 2004 and 2003, are derived from EMCORE's audited financial statements included elsewhere in this document. The Statement of Operations data for fiscal years 2001 and 2000, and the Balance Sheet data as of September 30, 2002, 2001, and 2000, are derived from audited financial statements not included herein. All share amounts have been restated to reflect EMCORE's two-for-one (2:1) common stock split that was effective on September 18, 2000.

Significant transactions that affect the comparability of EMCORE's operating results and financial condition include:

### *Fiscal 2001*

1. In May 2001, EMCORE issued \$175.0 million aggregate principal amount of its 5% convertible subordinated notes due in May 2006 (2006 Notes).
2. In March 2001, EMCORE recorded a net gain of \$5.9 million related to the settlement of litigation.
3. In August 2001, EMCORE recorded a net gain of \$10.0 million upon receipt of UTCI common stock in connection with the sale of a joint venture.
4. Effective October 1, 2000, EMCORE changed its revenue recognition policy to defer the portion of revenue related to the installation of TurboDisc MOCVD systems until final acceptance. The net effect of this change was \$3.6 million, and is reported as a cumulative effect of a change in accounting principle in the fiscal year ended September 30, 2001.

### *Fiscal 2002*

1. UTCI and its subsidiaries filed voluntary petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code. As a result, EMCORE wrote off its investment in UTCI totaling \$14.0 million.
2. EMCORE wrote off its \$0.4 million investment in Qusion Technologies, a Princeton, New Jersey start-up specializing in monolithic integration of optical components.
3. In March 2002, EMCORE acquired Tecstar for a total cash purchase price, including related acquisition costs, of approximately \$25.1 million. The results of operations from this acquisition have been included in EMCORE's consolidated results of operations from the acquisition closing date.
4. EMCORE recorded pre-tax charges to income totaling \$40.7 million, which included a severance charge of \$0.8 million related to employee termination costs, a non-cash impairment charge of \$30.8 million related to fixed assets, an inventory write-down expense of \$7.7 million charged to cost of revenue, and an additional reserve for doubtful accounts of \$1.4 million.

### *Fiscal 2003*

1. In January 2003, EMCORE purchased Ortel for \$26.2 million in cash. The results of operations from this acquisition have been included in EMCORE's consolidated results of operations from the acquisition closing date.

- In December 2002, EMCORE purchased \$13.2 million principal amount of the 2006 Notes at prevailing market prices for an aggregate of approximately \$6.3 million. Total gain from debt extinguishment was \$6.6 million after netting unamortized debt issuance costs of approximately \$0.3 million.

*Fiscal 2004*

- In November 2003, EMCORE sold its TurboDisc capital equipment business to Veeco in a transaction that is valued at up to \$80.0 million. The selling price was \$60.0 million in cash at closing, with an additional aggregate maximum payout of \$20.0 million over the next two years. EMCORE will receive in cash or stock 50% of all revenues from this business that exceed \$40.0 million in each of the next two years, beginning January 1, 2004. EMCORE management expects to receive between \$15.0 and \$17.0 million during the second quarter of fiscal 2005 as part of the additional payout.
- In February 2004, EMCORE exchanged approximately \$146.0 million, or 90.2%, of the remaining 2006 Notes for approximately \$80.3 million aggregate principal amount of new 5% Convertible Senior Subordinated Notes due May 15, 2011 (2011 Notes) and approximately 7.7 million shares of EMCORE common stock. Total gain from debt extinguishment was \$12.3 million.

	<b>As of September 30,</b> <i>(in thousands)</i>				
	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
<b>Balance Sheet Data</b>					
Cash, cash equivalents and marketable securities..	\$ 51,572	\$ 28,439	\$ 84,181	\$147,661	\$ 101,745
Working capital .....	58,541	77,464	111,825	201,215	111,575
Total assets .....	213,243	232,439	285,943	403,553	243,902
Long-term liabilities .....	96,078	161,791	175,087	175,046	1,284
Shareholders' equity .....	\$ 85,809	\$ 44,772	\$ 81,950	\$197,127	\$ 199,322

**For the fiscal years ended September 30,  
(in thousands)**

	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
<b>Statements of Operations Data</b>					
Revenue .....	\$ 93,069	\$ 60,284	\$ 51,236	\$ 53,473	\$ 38,718
Cost of revenue .....	<u>85,780</u>	<u>61,959</u>	<u>62,385</u>	<u>41,784</u>	<u>23,526</u>
Gross profit (loss) .....	7,289	(1,675)	(11,149)	11,689	15,192
Operating expenses:					
Selling, general and administrative .....	20,771	21,637	15,659	15,714	12,115
Research and development .....	23,555	17,002	30,580	42,204	27,200
Severance charges .....	1,156	-	832	-	-
Goodwill amortization .....	-	-	-	1,147	4,392
Impairment charges .....	<u>-</u>	<u>-</u>	<u>30,804</u>	<u>-</u>	<u>-</u>
Total operating expenses .....	<u>45,482</u>	<u>38,639</u>	<u>77,875</u>	<u>59,065</u>	<u>43,707</u>
Operating loss .....	(38,193)	(40,314)	(89,024)	(47,376)	(28,515)
Other (income) expenses:					
Interest income .....	(783)	(1,009)	(2,865)	(5,222)	(4,925)
Interest expense .....	6,156	8,288	8,936	3,240	346
Gain from debt extinguishment .....	(12,312)	(6,614)	-	-	-
Other expense (income) .....	500	-	14,388	(15,920)	-
Imputed warrant interest expense .....	-	-	-	-	843
Equity in net (income) loss unconsolidated affiliate .....	<u>(789)</u>	<u>1,228</u>	<u>2,706</u>	<u>12,326</u>	<u>13,265</u>
Total other (income) expenses .....	<u>(7,228)</u>	<u>1,893</u>	<u>23,165</u>	<u>(5,576)</u>	<u>9,529</u>
Loss from continuing operations .....	(30,965)	(42,207)	(112,189)	(41,800)	(38,044)
Discontinued operations:					
(Loss) income from discontinued operations .....	(2,045)	3,682	(17,572)	33,158	12,559
Gain on disposal of discontinued operations .....	<u>19,584</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Income (loss) from discontinued operations .....	<u>17,539</u>	<u>3,682</u>	<u>(17,572)</u>	<u>33,158</u>	<u>12,559</u>
Net loss before cumulative effect of a change in accounting principle .....	(13,426)	(38,525)	(129,761)	(8,642)	(25,485)
Cumulative effect of a change in accounting principle .....	<u>-</u>	<u>-</u>	<u>-</u>	<u>(3,646)</u>	<u>-</u>
Net loss .....	<u>\$ (13,426)</u>	<u>\$ (38,525)</u>	<u>\$ (129,761)</u>	<u>\$ (12,288)</u>	<u>\$ (25,485)</u>
<b>Per share data:</b>					
Weighted average number of basic and diluted shares outstanding used in per share calculations .....	<u>43,303</u>	<u>36,999</u>	<u>36,539</u>	<u>34,438</u>	<u>31,156</u>
Loss from continuing operations per basic and diluted share .....	\$ (0.72)	\$ (1.14)	\$ (3.07)	\$ (1.21)	\$ (1.22)
Income (loss) from discontinued operations per basic and diluted share .....	\$ 0.41	\$ 0.1	\$ (0.48)	\$ 0.96	\$ 0.4
Cumulative effect of a change in accounting principle per basic and diluted share .....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (0.11)</u>	<u>\$ -</u>
Net loss per basic and diluted share .....	<u>\$ (0.31)</u>	<u>\$ (1.04)</u>	<u>\$ (3.55)</u>	<u>\$ (0.36)</u>	<u>\$ (0.82)</u>

## **Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operation.**

*This report includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Exchange Act of 1934. These forward-looking statements are based largely on our current expectations and projections as they relate to our future results, prospects, developments and business strategies. These forward-looking statements are identifiable by their use of terms and phrases such as “expects”, “anticipates”, “intends”, “plans”, “believes”, “estimate”, “predict”, “target”, “may”, “could”, “will”, and variations of these terms and phrases including references to assumptions. These forward-looking statements are subject to known and unknown risks, business, economic, and other risks and uncertainties, that may cause actual results to be materially different from those discussed in these forward-looking statements. Factors that could also contribute to these differences include, but are not limited to, those discussed under “Risk Factors”, “Forward-Looking Statements” and elsewhere in this report. The cautionary statements made in this report should be read as being applicable to all forward-looking statements wherever they appear in this report. This discussion should be read in conjunction with the consolidated financial statements, including the related notes. If one or more of these risks or uncertainties materialize, or if underlying assumptions prove incorrect, our actual results may vary materially from those expected, estimated, or projected.*

### **Company & Business Overview**

During fiscal 2004, EMCORE Corporation (EMCORE) completed its transition from a capital equipment manufacturer to a leading provider of compound semiconductor solutions for the broadband, fiber optic, satellite, and wireless communications markets. We sell products that enable our customers to transport voice, data, and video over any medium -- wireless, satellite, fiber, copper, or hybrid-fiber coaxial (HFC). Prior to our divestiture of the TurboDisc capital equipment business, EMCORE had two reportable operating segments: (i) the systems segment; and (ii) the components and subsystems segment. As a result of this divestiture, EMCORE now reports only one operating segment: the components and subsystems segment. EMCORE is building upon its leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the cable television (CATV), fiber-to-the-premise, business, curb or home (FTTP), telecommunications, data and storage, satellite, and wireless communications markets.

- **CATV and FTTP Networks** - The communications industry in which we participate continues to be dynamic. Cable operators and telephone companies compete with each other to offer the lowest price for unlimited "triple play" (voice, data, and video) communications through a single network connection. As a market leader in radio frequency (RF) transmission over fiber products for the CATV industry, EMCORE is enabling cable companies to offer multiple forms of communications to meet the expanding demand for high speed Internet, on demand and interactive video, and other new services (such as Voice over IP, or VoIP). In response to this triple play strategy from the cable companies, the telephone companies also plan to offer competing voice, data, and video services through the deployment of new fiber based systems. These growing applications should increase demand for EMCORE’s FTTP products and subsystems. Our CATV and FTTP products include broadcast analog and digital fiber optic transmitters, Quadrature Amplitude Modulation (QAM) transmitters, video receivers, Passive Optical Network (PON) transceivers, avalanche photodetectors (APD), PIN (P-type, intrinsic, and N-type semiconductor materials) photodetectors, and Distributed Feedback (DFB) and Fabry-Perot (FP) 1310 nanometer (nm) and 1550 nm analog and digital lasers.
- **Telecommunications** - Our state-of-the-art optical components and modules enable high speed (up to an aggregate 40 Gb/s) optical interconnections that drive architectures in next generation

carrier class switching and routing networks. Our parallel optical modules facilitate high channel count optical interconnects in multi-shelf central office equipment. These systems sit in the network core and in key metro nodes of voice telephony and Internet infrastructures, and are highly expandable with pay-as-you-grow capacity scaling. EMCORE sells its recently acquired OptoCube™ transceiver product and other 4- and 12 channel parallel optics products to the telecom equipment industry.

- **Data Communications** - EMCORE's leading-edge optical components and modules for data applications include 10G Ethernet LX4, 10G Ethernet CX4, SmartLink™ optical Infiniband, and parallel optical modules for enterprise Ethernet and High Performance Computing (HPC), also called "Super Computing," applications. These high speed modules enable switch-to-switch, router-to-router, and server-to-server backbone connections at aggregate speeds of 10 gigabits per second (Gb/s) and above. Pluggable LX4 modules in X2 or XENPAK form factors provide a "pay-as-you-populate" cost structure during installation. The LX4 can transmit data over both multi-mode and single-mode optical fiber, and currently is the only available option to transmit optical 10G Ethernet signals over 300 meters of legacy multi-mode fiber or 10 km of single-mode fiber. CX4 modules similarly allow the cost-effective transmission of Ethernet signals over legacy copper cable. EMCORE's parallel optical modules also are used in switched bus architectures that are needed for next-generation Super Computers and large servers.
- **Storage Area Networks** - Our optical components also are used in the high-end data storage market, and include high-speed, 850 nm vertical cavity surface emitting lasers (VCSELs) and PIN photodiode components, and 10 Gb/s transmit and receive optical subassemblies (TOSAs/ROSAs). In the future, EMCORE anticipates selling our integrated pluggable X2 or XENPAK form factor modules into the emerging 10G Fibre Channel segment. These products provide optical interfaces for switches and storage systems used in large enterprise mission-critical applications, such as inventory control or financial systems.
- **Satellite Communications** - We manufacture high-efficiency solar cells and solar panels for global satellite communications (satcom), and expect to see increased applications for solar cells in terrestrial power products in fiscal 2005. EMCORE also manufactures satellite communications fiber optics products, including transmitters, receivers, subsystems, and systems, that transport wideband microwave signals between satellite hub equipment and antenna dishes.
- **Wireless Communications** - EMCORE manufactures compound semiconductor RF materials for the wireless handset, cell phone, and base station markets. Our products include 4-inch and 6-inch InGaP Hetero-junction Bipolar Transistor (HBT), AlGaAs pseudomorphic high electron mobility transistors (pHEMT), and E-mode transistor wafers that are used for power amplifiers and switches within next-generation wireless networks. We also produce GaN high electron mobility transistors (HEMT) RF materials that are designed to meet future wireless base station infrastructure requirements for higher power and frequency, along with high temperature operation at industry-leading efficiencies.

EMCORE also is involved in a joint venture with General Electric Lighting to address the solid-state lighting market with High Brightness Light Emitting Diode-based (HB-LED) lighting systems. Through its 49% ownership in GELcore, LLC. (GELcore), EMCORE participates in the development and commercialization of next-generation LED technology for use in the general and specialty illumination markets. GELcore's products include traffic lights, channel letters, and other signage and display products that incorporate HB-LEDs. In the near term, GELcore expects to deploy its HB-LED products in the commercial and industrial markets, including medical, aerospace, commercial refrigeration, transportation, appliance, and general and specialty illumination applications. GELcore is on a calendar year and anticipates revenues in the \$70.0 million range for 2004. GELcore is profitable, has experienced an annual revenue growth of approximately 23% per year, and expects similar growth for 2005.

In November 2003, EMCORE sold its TurboDisc capital equipment business to a subsidiary of Veeco Instruments Inc. (Veeco) in a transaction that is valued at up to \$80.0 million. The selling price was \$60.0 million in cash at closing, with an additional aggregate maximum payout of \$20.0 million over the next two years. EMCORE will receive in either cash or stock 50% of all revenues from this business that exceed \$40.0 million in each of the next two years, beginning January 1, 2004. EMCORE management expects to receive between \$15.0 million and \$17.0 million during the second quarter of fiscal 2005 as part of the additional payout. Our financial statements have been reclassified to reflect the TurboDisc capital equipment business as a discontinued operation for all prior periods presented. See Item 8, Note 4 - Discontinued Operations.

The table below sets forth the revenues and percentage of total revenues attributable to each of EMCORE's product lines for each of the past three fiscal years:

	<b>For the fiscal years ended September 30,</b> <i>(in thousands)</i>					
	<b>FY</b>	<b>% of</b>	<b>FY</b>	<b>% of</b>	<b>FY</b>	<b>% of</b>
	<b>2004</b>	<b>revenue</b>	<b>2003</b>	<b>revenue</b>	<b>2002</b>	<b>revenue</b>
<b>Product Revenue</b>						
Fiber Optics.....	\$ 56,169	60.4%	\$ 32,658	54.2%	\$ 9,077	17.7%
Photovoltaics.....	25,716	27.6	18,196	30.2	23,621	46.1
Electronic Materials and Devices ...	11,184	12.0	9,430	15.6	18,538	36.2
Total revenues.....	<u>\$ 93,069</u>	<u>100.0%</u>	<u>\$ 60,284</u>	<u>100.0%</u>	<u>\$ 51,236</u>	<u>100.0%</u>

### Customers and Geographic Region

EMCORE works closely with its customers to design and develop (i) process technology, (ii) material science expertise, (iii) optical sub-assemblies, and/or (iv) integrated module level products for use in its customers' end-use applications. EMCORE's customer base includes many of the largest semiconductor, telecommunications, data communications, and computer manufacturing companies in the world. In fiscal 2004, Motorola, Inc. (Motorola) and Cisco Systems, Inc. (Cisco) accounted for 13% and 8% of our total revenue, respectively. In fiscal 2003, Motorola accounted for 14% of total revenue. In fiscal 2002, revenues from Motorola, Boeing Satellite Systems, Inc. (Boeing), and Space Systems/Loral, Inc. (SS/L) accounted for 22%, 15%, and 14% of total revenue, respectively.

The following chart contains a breakdown of EMCORE's consolidated revenues by geographic region. North American sales include sales to Canada, which historically have not been material.

	<b>For the fiscal years ended September 30,</b> <i>(in thousands)</i>					
	<b>FY</b>	<b>% of</b>	<b>FY</b>	<b>% of</b>	<b>FY</b>	<b>% of</b>
	<b>2004</b>	<b>revenue</b>	<b>2003</b>	<b>revenue</b>	<b>2002</b>	<b>revenue</b>
<b>Revenue by Region</b>						
North America.....	\$ 66,485	71.4%	\$ 44,136	73.2%	\$ 42,983	83.9%
South America.....	416	0.5	-	-	-	-
AsiaPac.....	15,496	16.6	9,018	15.0	3,638	7.1
Europe.....	10,672	11.5	7,130	11.8	4,615	9.0
Total revenues.....	<u>\$ 93,069</u>	<u>100.0%</u>	<u>\$ 60,284</u>	<u>100.0%</u>	<u>\$ 51,236</u>	<u>100.0%</u>

## Backlog

As of September 30, 2004, EMCORE had a backlog it believes to be firm of approximately \$28.8 million. This compares to a backlog of \$33.1 million as reported at September 30, 2003. Backlog principally consists of EMCORE's longer lead-time products, such as satellite communications. Our other product lines, including fiber optics and RF, typically ship within the same quarter as the purchase order is received. We believe that substantially all of our backlog can be filled during the next 12 months. But given the current market environment, customers may delay shipment of certain orders. Backlog also could be adversely affected if customers unexpectedly cancel purchase orders accepted by us.

## Critical Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results may differ from those estimates. Critical accounting policies include those policies that are reflective of significant judgments and uncertainties, which potentially could produce materially different results under different assumptions and conditions. EMCORE's most significant estimates relate to accounts receivable bad debt reserves, inventory valuation reserves specifically relating to excess and obsolete inventory, product warranty accruals, the valuation of goodwill, intangibles and other long-lived assets, and revenue recognition on contracts utilizing the percentage-of-completion method.

- *Bad Debt Reserves* - EMCORE regularly evaluates its accounts receivable and accordingly maintains allowances for doubtful accounts for estimated losses resulting from the inability of our customers to meet their financial obligation to us. The allowance for doubtful accounts at September 30, 2004 and 2003 was \$0.7 million and \$1.0 million, respectively. If the financial condition of our customers were to deteriorate, additional allowances may be required.
- *Inventory Reserves* - EMCORE reserves against inventory once it has been determined that conditions exist which may not allow it to be sold for its intended purpose, the inventory's value is determined to be less than cost or it is determined to be obsolete. The charge for the inventory reserves is recorded in cost of revenue. EMCORE evaluates inventory levels at least quarterly against sales forecasts on a part-by-part basis, in addition to determining its overall inventory risk. Reserves are adjusted to reflect inventory values in excess of forecasted sales, as well as overall inventory risk assessed by management. Total inventory reserves at September 30, 2004 and 2003 were \$4.1 million and \$4.4 million, respectively. If future demand or market conditions are less favorable than our estimates, additional inventory write-downs may be required.
- *Product Warranty Reserves* - EMCORE provides its customers with limited rights of return for non-conforming shipments and warranty claims for up to 5 years for certain products. EMCORE makes estimates using historical data and accrues estimated warranty expense as a cost of revenue. Total warranty expense amounted to approximately \$1.4 million, \$2.2 million, and \$2.3 million for the years ended September 30, 2004, 2003, and 2002, respectively. Total warranty reserves at September 30, 2004 and 2003 were \$2.2 million and \$2.4 million, respectively. If our product reliability assessments change in the future, additional allowances may be required.
- *Valuation of Goodwill and Intangible Assets* - EMCORE evaluates its goodwill for impairment on an annual basis or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors that are considered important in making this determination

include, but are not limited to, the following: (a) an anticipated or historic decline in revenue or operating profit; (b) significant negative industry trends; and (c) adverse legal or regulatory developments. During fiscal 2004, 2003, and 2002, EMCORE had no impairment of any of its patents, other intangibles assets, or goodwill.

- *Valuation of Long-lived Assets* - EMCORE reviews long-lived assets on an annual basis or whenever events or circumstances indicate that the assets may be impaired. A long-lived asset is considered impaired when its anticipated undiscounted cash flow is less than its carrying value. In making this determination, EMCORE uses certain assumptions, including, but not limited to: (a) estimates of the fair market value of these assets; and (b) estimates of future cash flows expected to be generated by these assets, which are based on additional assumptions such as asset utilization, length of service that assets will be used in our operations, and estimated salvage values. During fiscal 2002, EMCORE determined certain property and equipment was impaired under Statement of Financial Accounting Standards (SFAS) No. 121, Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed of, which was the relevant accounting pronouncement at the time. As a result, we recorded an impairment charge of \$30.8 million. EMCORE determined that there was no such impairment in fiscal 2004 and 2003.
- *Revenue Recognition* - Revenue is recognized upon shipment provided persuasive evidence of a contract exists, such as when a purchase order or contract is received from a customer, the price is fixed, the product meets the customers' requirements, title and ownership have transferred to the customer, and there is reasonable assurance of collection of the sales proceeds. The majority of our products have shipping terms that are free on board (FOB) or free carrier alongside (FCA) shipping point, which means that EMCORE fulfills its delivery obligation when the goods are handed over to the freight carrier at our shipping dock. This means the buyer bears all costs and risks of loss of or damage to the goods from that point. In certain cases, EMCORE ships its products cost insurance and freight (CIF). Under this arrangement, revenue is recognized under FCA shipping point terms, but EMCORE pays (and bills the customer) for the cost of shipping and insurance to the customer's designated location. EMCORE accounts for shipping and related transportation costs by recording the charges that are invoiced to customers as revenue, with the corresponding cost recorded as cost of revenue. In those instances where inventory is maintained at a consigned location, revenue is recognized only when our customer pulls product for its use and title and ownership have transferred to the customer.

EMCORE records revenues from solar panel contracts using the percentage-of-completion method. Revenue is recognized in proportion to actual costs incurred compared to total anticipated costs expected to be incurred for each contract. If estimates of costs to complete long-term contracts indicate a loss, a provision is made for the total loss anticipated. EMCORE has numerous contracts that are in various stages of completion. Such contracts require estimates to determine the appropriate cost and revenue recognition. EMCORE uses all available information in determining dependable estimates of the extent of progress towards completion, contract revenues, and contract costs. Estimates are revised as additional information becomes available. At September 30, 2004 and 2003, EMCORE's accrued program losses totaled \$0.1 million and \$0.2 million, respectively. In the fourth quarter of fiscal 2004, we incurred a one-time \$1.2 million charge related to a communications satellite program with a positive contribution margin, but with an overall expected loss due to fixed cost overhead absorption.

Contract revenue represents reimbursement by various U.S. Government entities to aid in the development of new technology. The applicable contracts generally provide that EMCORE may elect to retain ownership of inventions made in performing the work, subject to a non-exclusive license retained by the government to practice the inventions for government purposes. The

contract funding may be based on a cost-plus, cost reimbursement, cost-share, or a firm fixed price arrangement. The amount of funding under each contract is determined based on cost estimates that include direct costs, plus an allocation for research and development, general and administrative, and the cost of capital expenses. Cost-plus funding is determined based on actual costs plus a set margin. For cost-share contracts, the actual costs of performance are divided between the U.S. Government and EMCORE based on the contract terms. A contract is considered complete when all significant costs have been incurred, milestones have been reached, and any reporting obligations to the customer have been met. Revenues from Government contracts amounted to approximately \$4.6 million, \$5.2 million, and \$3.3 million for the years ended September 30, 2004, 2003, and 2002, respectively.

The above listing is not intended to be a comprehensive list of all of our accounting policies. In many cases, the accounting treatment of a particular transaction is specifically dictated by generally accepted accounting principles (GAAP). There also are areas in which management's judgment in selecting any available alternative would not produce a materially different result. See our audited consolidated financial statements and notes thereto included in this Annual Report on Form 10-K, which contain a discussion of our accounting policies and other required GAAP disclosures.

## Results of Operations

The following table sets forth the consolidated statements of operations data of EMCORE expressed as a percentage of total revenues for the fiscal years ended September 30, 2004, 2003, and 2002:

STATEMENTS OF OPERATIONS	For the fiscal years ended September 30,		
	2004	2003	2002
Revenue .....	100.0%	100.0%	100.0%
Cost of revenue .....	92.2	102.8	121.8
Gross profit (loss) .....	7.8	(2.8)	(21.8)
Operating expenses:			
Selling, general and administrative .....	22.3	35.9	30.6
Research and development.....	25.3	28.2	59.7
Severance charges .....	1.2	-	1.6
Impairment charges.....	-	-	60.1
Total operating expenses.....	48.8	64.1	152.0
Operating loss.....	(41.0)	(66.9)	(173.8)
Other (income) expenses:			
Interest expense, net.....	5.7	12.1	11.8
Gain from debt extinguishment.....	(13.2)	(11.0)	-
Investment losses .....	0.5	-	28.1
Equity in net (income) loss of GELcore .....	(0.8)	2.0	5.3
Total other (income) expenses .....	(7.8)	3.1	45.2
Loss from continuing operations .....	(33.2)	(70.0)	(219.0)
Discontinued operations:			
(Loss) income from discontinued operations .....	(2.2)	6.1	(34.3)
Gain on disposal of discontinued operations .....	21.0	-	-
Income (loss) from discontinued operations .....	18.8	6.1	(34.3)
Net loss.....	(14.4)%	(63.9)%	(253.3)%

## Comparison of Fiscal Years Ended September 30, 2004 and 2003

*Revenue.* EMCORE's consolidated revenue increased \$32.8 million or 54% to \$93.1 million in fiscal 2004 from \$60.3 million in fiscal 2003. On a product line basis, fiber optics revenues increased \$23.5 million or 72%, photovoltaic revenues increased \$7.5 million or 41%, and electronic materials and devices revenues increased \$1.8 million or 19% from the prior year. International sales accounted for 29% of revenues in fiscal 2004 and 27% in fiscal 2003. Government contract revenue represents reimbursement by various U.S. Government entities to aid in the development of new technology. Revenue from government contracts decreased \$0.6 million to \$4.6 million in fiscal 2004 from \$5.2 million in fiscal 2003. With increased government focus on energy conservation, national security, and fiber optic communications, we expect revenues from government contracts to increase in fiscal 2005.

*Fiber Optics* - Fiber Optics revenues are derived primarily from sales of optical components and subsystems for CATV and FTTP, VCSEL and PIN photodiodes components, 10G Ethernet LX4 and CX4, TOSA/ROSA packaged parts and modules, and satcom transmitter and receiver components.

EMCORE's Albuquerque, NM facility is headquarters for three digital fiber optics product lines: VCSEL chip products, TOSA/ROSA packaged products, and transceiver module level products. In fiscal 2004, EMCORE acquired two fiber optics businesses that complement the transceiver module product line. In October 2003, EMCORE acquired Molex Inc.'s 10G Ethernet transceiver business (Molex), and in June 2004, EMCORE purchased Corona Optical Systems, Inc. (Corona), a parallel optics company. The Molex acquisition provided an extremely talented design and engineering team who worked on the new 10G CWDM fiber optic communications transceiver module. The Corona acquisition added the OptoCube transceiver to the existing parallel optical product family of SNAP-12, Quadlink™, and Smartlink™ transceivers. Annual revenues from digital fiber optics products increased \$8.9 million or 98% to \$18.0 million in fiscal 2004 from \$9.1 million in fiscal 2003. New product launches in fiscal 2004 accounted for more than 95% of the increase in annual revenues from digital fiber optics products. On a quarterly basis, fiscal 2004 digital fiber optics revenues were \$3.5 million, \$4.4 million, \$3.5 million, and \$6.6 million compared to fiscal 2003 quarterly digital fiber optics revenues of \$2.3 million, \$2.6 million, \$3.0 million, and \$1.2 million. The decrease in revenues in the third quarter of fiscal 2004 was a direct result of a LX4 product launch delay. Supply chain issues caused the delay; specifically, a vendor supplied contaminated material that was not identified until testing of the finished modules. To maintain the integrity of our business and product line, management decided not to ship the finished modules because of the risk of warranty returns. The LX4 product was successfully launched in July 2004. Digital fiber optics revenue represented 19% and 15% of EMCORE's total revenues in fiscal 2004 and 2003, respectively. Key customers for the digital fiber optics product line include Cisco, Agilent Technologies, Inc., Infineon Technologies AG, and JDS Uniphase Corporation. As a result of successful customer product qualifications and the recent increase in order backlog, digital fiber optics revenues are expected to increase over 25% in the first quarter of fiscal 2005.

In January 2003, EMCORE acquired Agere's System's, Inc.'s CATV transmission systems, telecom access, and satcom components business, formerly Ortel Corporation (Ortel). Fiber optic products acquired through the acquisition primarily consist of broadcast transmitters, analog and digital lasers, QAM transmitters, video receivers, satcom transmission links, and photodetectors. Revenues from Ortel's product lines increased \$14.6 million or 62% to \$38.2 million in fiscal 2004 from \$23.6 million in fiscal 2003. In fiscal 2003, Ortel was part of EMCORE for approximately three quarters. On a quarterly basis, Ortel's fiscal 2004 fiber optics revenues were \$12.0 million, \$9.7 million, \$8.5 million, and \$8.0 million compared to Ortel's fiscal 2003 revenues, beginning with the second quarter, of \$7.1 million, \$8.2 million, and \$8.3 million. The first quarter of fiscal 2004 experienced an unexpected increase in sales volumes due to one-time buys from our customers. But the third and fourth quarter were lower due to reduced customer demand. Ortel's backlog decreased because we improved our book-to-ship window to

two weeks on many products. Sales of Ortel's products represented 41% and 39% of EMCORE's total revenues in fiscal 2004 and 2003, respectively. Key customers for Ortel's product line include Motorola and Scientific-Atlanta, Inc. As a result of smaller lead times on purchase orders, Ortel's revenues in the first quarter of fiscal 2005 are expected to be flat when compared to the prior quarter. The communications industry in which Ortel participates continues to be dynamic. Cable operators and telephone companies compete to offer the lowest price for unlimited "triple play" (voice, data, and video) communications through a single network connection. As a market leader in radio frequency (RF) transmission over fiber products for the CATV industry, EMCORE is enabling cable companies to offer multiple forms of communications to meet the expanding demand for high-speed Internet, on-demand and interactive video, and other new services. In response to this threat from the cable companies, telephone companies also plan to offer competing services over the deployment of new FTTP systems. These growing applications should increase demand for FTTP subsystems that are manufactured and marketed by Ortel.

*Photovoltaics* - Photovoltaics revenues include the sale of epi wafers, solar cells, covered interconnect solar cells (CICs), and solar panels. The photovoltaics product line is headquartered out of EMCORE's Albuquerque, NM facility. Annual revenues from our photovoltaics product line increased \$7.5 million or 41% to \$25.7 million in fiscal 2004 from \$18.2 million in fiscal 2003. The annual increase is partly attributable to the receipt of two significant solar contracts that were delayed from the prior year. On a quarterly basis, fiscal 2004 photovoltaics revenues were \$4.5 million, \$6.1 million, \$6.8 million, and \$8.3 million compared to fiscal 2003 quarterly photovoltaic revenues of \$5.1 million, \$5.2 million, \$3.0 million, and \$4.9 million. Government contract revenues for photovoltaics products were \$2.8 million and \$2.7 million in fiscal years 2004 and 2003, respectively. The photovoltaics industry continues to experience weakness in satellite infrastructure spending, delays in government program launch schedules, and significant sales price erosion on solar products. The worldwide satellite industry has weakened with satellite awards decreasing from 19 in 2003 to 11 through December 2004. Military procurement remains steady, and we are focusing on gaining market share in that area. Private equity groups also have acquired a number of the satellite operators, and it is unclear what impact this will have on satellite procurement in the near term. In addition, on July 15, 2003, SS/L together with its parent corporation, Loral Space & Communications, Ltd., filed for bankruptcy. Our sales to SS/L were \$4.6 million in 2004, and represented 18% of our photovoltaics revenue. On October 22, 2004, SS/L filed an amended plan of reorganization to emerge from bankruptcy. The plan is subject to approval by SS/L's bankruptcy court. SS/L has stated that it believes it will emerge from bankruptcy in the first calendar quarter of 2005. During the pendency of SS/L's bankruptcy, EMCORE has continued to do business with SS/L. We do not believe that the SS/L bankruptcy or reorganization will have a material adverse effect on our business.

Sales of our photovoltaics products represented 28% and 30% of EMCORE's total revenues in fiscal 2004 and 2003, respectively. In fiscal 2005, we expect to see increased applications for our solar cells in terrestrial products, as well as the satellite industry continuing to develop a communications backbone for voice, data, and video communications. Given the projected timing for completion of three significant on-going solar paneling contracts, photovoltaics revenues in the first quarter of fiscal 2005 are expected to be slightly lower when compared to the prior quarter.

*Electronic Materials and Devices* - Sales of electronic materials and devices (EMD), which include RF materials and MR sensors, increased to \$11.2 million in fiscal 2004 from \$9.4 million in fiscal 2003. This increase is due in part to EMCORE broadening its relationship with ANADIGICS, Inc. by entering into a preferred supplier agreement in the second quarter of fiscal 2004. Revenues from Freescale Semiconductor, Inc. (Freescale) also increased \$1.7 million in fiscal year 2004. On a quarterly basis, fiscal 2004 revenues from EMD were \$3.1 million, \$2.9 million, \$2.6 million, and \$2.6 million compared to fiscal 2003 quarterly revenues from EMD of \$2.0 million, \$2.0 million, \$2.7 million, and \$2.7 million. Government contract revenues for EMD products were \$1.8 million and \$2.5 million in

fiscal years 2004 and 2003, respectively. This market is highly competitive, raw materials are extremely expensive, and average selling prices have been declining over the past several years. Our contract with General Motors for MR sensors expires in the first quarter of fiscal 2005, before which a “last time buy” arrangement is expected to occur. EMD sales in the first quarter of fiscal 2005 are expected to be lower when compared to the prior quarter. However, management expects the introduction of GaN RF materials to drive revenue growth in fiscal 2005, as major RF product manufacturers roll out new commercial infrastructure devices. Revenues from Freescale may decline in the future due to their potential change in platform from EMODE to InGaP HBT devices.

*Gross Profit (Loss).* Gross profit increased \$9.0 million to \$7.3 million in fiscal 2004 from (\$1.7) million in fiscal 2003. Compared to the prior year, gross margins increased from (2.8%) to 7.8% of revenue. On a product line basis, margins for fiber optics increased from 10.4% in fiscal 2003 to 11.8% in fiscal 2004, margins for photovoltaics improved from (31.5%) in fiscal 2003 to (8.2%) in fiscal 2004 and margins for the electronic materials and devices product line increased slightly as well. Gross margins were negatively impacted by the underutilization of fixed costs and overhead resulting from expansions previously deployed through fiscal 2001. In the aggregate, EMCORE currently operates at approximately 30% of capacity. As revenues increase, our margins should increase as well since a significant portion of our facility costs is fixed, so higher throughput should result in lower costs per unit produced. Fiscal 2005 gross margins should also increase as product lines continue to be transferred to contract manufacturers for high volume production and as management implements additional programs to improve manufacturing process yields. Management does expect gains in gross margins to be somewhat offset by lower sales prices due to competitive pricing pressures.

*Selling, General and Administrative.* SG&A expenses decreased \$0.8 million or 4% to \$20.8 million in fiscal 2004 from \$21.6 million in fiscal 2003. As a percentage of revenue, SG&A significantly decreased from 36% in fiscal 2003 to 22% in fiscal 2004. In the fourth quarter of fiscal 2004, EMCORE reversed a portion of the professional fees accrual in the amount of \$0.5 million, which represented an over-accrued amount based upon information gained directly from the service providers. Assuming no further non-recurring charges and acquisitions, management expects annual SG&A expenses in fiscal year 2005 to continue to decrease as a percentage of revenue due to current cost reduction measures being undertaken and projected revenue growth.

*Research and Development.* R&D expenses increased \$6.6 million or 39% to \$23.6 million in fiscal 2004 from \$17.0 million in fiscal 2003. The increase was primarily due to an increase in R&D spending in the fiber optics product line. During fiscal 2004, this group incurred significant R&D on the development of the LX4 module, including a \$1.3 million one-time charge incurred as a result of contaminated materials supplied to us by a vendor. Also, Ortel's R&D focus continued the development of PONs and FTTP systems that are intended to provide even greater bandwidth, better performance and increased reliability to homes and businesses. As a percentage of revenue, R&D decreased from 28% in fiscal 2003 to 25% in 2004. Management expects R&D to decline as a percentage of revenue in the second quarter of fiscal 2005 as products previously under development are released to production.

*Gain From Debt Extinguishment.* In May 2001, EMCORE issued \$175.0 million aggregate principal amount of its 5% convertible subordinated notes due in May 2006 (2006 Notes). In December 2002, EMCORE purchased \$13.2 million principal amount of the notes at prevailing market prices for an aggregate of approximately \$6.3 million, resulting in a gain of approximately \$6.6 million after netting unamortized debt issuance costs of approximately \$0.3 million. In February 2004, EMCORE exchanged approximately \$146.0 million, or 90.2%, of 2006 Notes for approximately \$80.3 million aggregate principal amount of new 5% Convertible Senior Subordinated Notes due May 15, 2011 and approximately 7.7 million shares of EMCORE common stock. As a result of this transaction, EMCORE recorded a gain from early debt extinguishment of approximately \$12.3 million.

*Severance Charges.* In fiscal 2004, EMCORE initiated a restructuring program, consisting of cutting corporate overhead expenses and realignment of certain shared service operations. As a result, EMCORE incurred \$1.2 million in severance and fringe benefit charges related to employee termination costs for 110 employees. As of September 30, 2004, \$0.7 million of these charges have been paid. Management expects the restructuring program to continue into fiscal 2005.

*Interest Expense, net.* Interest expense, net decreased \$1.9 million, or 26%, to \$5.4 million in fiscal 2004 from \$7.3 million in fiscal 2003. This decrease is due to the retirement of approximately \$65.7 million of EMCORE's subordinated debt through the debt exchange accomplished in February 2004. As a result of this debt exchange, net interest expense will decrease by approximately \$3.3 million for fiscal year 2005.

*Investment Loss.* In February 2002, EMCORE purchased \$1.0 million of preferred stock of Archcom Technologies, Inc., a venture-funded, start-up optical networking components company that designs, manufactures and markets a series of high performance lasers and photodiodes for datacom and telecom industries. In fiscal 2004, EMCORE chose not to participate in a equity offering at Archcom which diluted EMCORE ownership in half to \$0.5 million.

*Equity in Net Income (Loss) of GELcore.* EMCORE's share of GELcore's net income (loss) increased \$2.0 million, or 164%, to net income of \$0.8 million in fiscal 2004 from a net loss of \$1.2 million in fiscal 2003. On a quarterly basis, EMCORE's share of GELcore's operating results was \$0.3 million, (\$0.1) million, \$0.4 million and \$0.2 million. This quarterly improvement is associated with increased unit volumes, changes in LED product mix and less manufacturing inefficiencies associated with newer product introductions. As a result, management believes GELcore's results will continue to improve in fiscal 2005 when compared to fiscal 2004.

*Income Taxes.* As a result of its losses, EMCORE did not incur any income tax expense in either fiscal 2004 or 2003. Management provides valuation allowances against the deferred tax asset for amounts which are considered "more likely than not" to be realized. As of September 30, 2004, EMCORE had net operating loss carryforwards for tax purposes of approximately \$431.0 million that expire in the years 2005 through 2024. In fiscal 2004, \$0.8 million of net operating loss carryforwards expired and approximately \$13.9 million are due to expire in fiscal 2005. EMCORE is incorporated in the State of New Jersey, which presently has a moratorium on the use of net operating loss carryforwards due to state government budget deficits.

## **Comparison of Fiscal Years Ended September 30, 2003 and 2002**

*Revenue.* EMCORE's consolidated revenue increased \$9.1 million or 18% to \$60.3 million in fiscal 2003 from \$51.2 million in fiscal 2002. Higher revenue was primarily attributable to the Ortel acquisition, which contributed \$23.6 million since being acquired in January 2003. On a product line basis, sales of fiber optic components and subsystems devices increased \$23.6 million or 260%, photovoltaic products decreased \$5.4 million or 23% and electronic materials and devices decreased \$9.1 million or 49% from the prior year. International sales accounted for 27% of revenues in fiscal 2003 and 16% of revenues in fiscal 2002.

Revenues from VCSEL chip products, packaged products, and transceiver module products were \$9.1 million for both fiscal 2003 and 2002. Sales of digital products represented 15% and 18% of EMCORE's total revenues in fiscal 2003 and 2002, respectively. In the fourth quarter of fiscal 2003, the VCSEL chip product line experienced delays of significant orders from certain customers due to a perceived quality problem that was clarified and resolved in October 2003. Also, during the fourth quarter of fiscal 2003, EMCORE experienced product obsolescence related to certain transceiver module products, which were

determined to be non-saleable because of design deficiencies. As a result, \$2.0 million of inventory costs associated with the products were written-off during the period.

Fiber optic products acquired through the Ortel acquisition primarily consist of fiber optic transmitter and receiver CATV products, Satcom transmission links, and PON and FTTP systems. Sales of these products represented 39% of EMCORE's total revenues in fiscal 2003.

Fiscal 2003 photovoltaic revenues decreased to \$18.2 million from \$23.6 million in fiscal 2002. The annual decrease is attributable to prior period weakness in satellite infrastructure spending, delays in government program launch schedules, significant sales price erosion on solar products and the delay of two significant solar contracts which have since been awarded to EMCORE. Sales in the photovoltaic group represented 30% and 46% of EMCORE's total revenues in fiscal 2003 and 2002, respectively.

Sales of electronic materials and devices (including RF materials, GaN materials, and MR sensors) decreased to \$9.4 million in fiscal 2003 from \$18.5 million in fiscal 2002 due to a significant decline in orders from Motorola. EMCORE broadened its relationship with Motorola by entering into an agreement to co-develop and transition into production certain RF materials. In light of the fact that Motorola has now developed the capacity to supply a portion of their needs internally and due to the delayed introduction of InGaP HBTs into GSM handsets, annual RF materials related revenues have decreased significantly. Annual revenues from our mature MR sensors product line decreased \$0.7 million from the prior year as a result of the phase out of certain automotive models at General Motors. While our contract with General Motors expired in fiscal 2004, we anticipate a "last time buy" order from General Motors to be separately negotiated.

Revenue from government contracts increased \$1.9 million to \$5.2 million in fiscal 2003 from \$3.3 million in fiscal 2002. Government contract revenues are included in the product line related to the work being performed. In fiscal 2003, \$2.7 million and \$2.5 million of government contract revenue was included in our photovoltaic and electronic materials and devices revenue, respectively. In fiscal 2002, \$1.5 million and \$1.8 million of government contract revenue was included in our photovoltaic and electronic materials and devices revenue, respectively.

*Gross Profit (Loss).* Gross profit increased \$9.4 million to (\$1.7) million in fiscal 2003 from (\$11.1) million in fiscal 2002. Compared to the prior year, gross margins increased from (21.8%) to (2.8%). During the second quarter of fiscal 2002, EMCORE recorded a \$7.7 million inventory charge. The inventory charge was for excess raw material and finished goods inventory that EMCORE believed it was carrying as a result of market conditions. As revenues increase, our margins should increase as well since a significant portion of our facility costs is fixed, so higher throughput should result in lower costs per unit produced.

The most significant factor contributing to these negative gross margins is unabsorbed overhead costs associated with lower revenues. EMCORE has a significant amount of fixed expenses relating to capital equipment and manufacturing overhead in its facilities. By December 2001, EMCORE's manufacturing facilities were expanded and placed into service with the anticipation of expanding market prospects. Lower than forecasted revenues caused these fixed expenses to be allocated across reduced production volumes, adversely affecting gross profit and margins. In addition, as mentioned above, a \$7.7 million inventory charge was recorded in fiscal 2002. During the fourth quarter of fiscal 2003, EMCORE recorded approximately \$0.2 million in anticipated losses on certain long-term photovoltaic contracts. On a quarterly basis, gross margins were (28.0%), (5.0%), 3.7% and 6.8%. This quarterly improvement is associated with increased volumes, changes in product mix and less manufacturing inefficiencies associated with newer product introductions.

*Selling, General and Administrative.* SG&A expenses increased \$5.9 million or 38% to \$21.6 million in fiscal 2003 from \$15.7 million in fiscal 2002. As a percentage of revenue, SG&A increased from 31%

in fiscal 2002 to 36% in 2003. The Ortel acquisition added approximately \$5.0 million of SG&A in fiscal 2003.

*Research and Development.* R&D expenses decreased \$13.6 million or 44% to \$17.0 million in fiscal 2003 from \$30.6 million in fiscal 2002. As a percentage of revenue, R&D decreased from 60% in fiscal 2002 to 28% in 2003. The Ortel acquisition added approximately \$4.2 million of R&D in fiscal 2003. The decrease in R&D was mostly due to the deferral or elimination of certain non-critical research and development projects and headcount reductions. It is also attributable to our photovoltaic customers, who in response to a depressed satellite industry, prefer to use previously qualified solar cells at lower prices instead of newly developed, more efficient product.

*Impairment and Severance Charges.* In fiscal 2002, EMCORE recorded pre-tax charges to income totaling \$31.6 million, which included an impairment charge of \$30.8 million, and severance charges of \$0.8 million.

*Impairment charges:* As discussed earlier in the critical accounting policies section, EMCORE recorded \$30.8 million of non-cash impairment charges related to its fixed assets in the second quarter of fiscal 2002.

*Severance charges:* EMCORE's fiscal 2002 restructuring program consisted of a realignment of all engineering, manufacturing and sales/marketing operations, as well as workforce reductions. As a result, EMCORE incurred severance and fringe benefit charges of \$0.8 million related to employee termination costs. All monetary obligations relating to these charges were paid as of March 31, 2003.

*Interest Expense, net.* Interest expense, net increased \$1.7 million or 28% to \$7.8 million in fiscal 2003 from \$6.1 million in fiscal 2002. The increase is due to less interest income earned primarily from lower interest rates available on our decreasing cash balance offset slightly by less interest expense of \$0.6 million due to a partial repurchase of outstanding debt.

*Other Expense.* In fiscal 2001, EMCORE recorded a net gain of \$10.0 million upon receipt of UTCI common stock in connection with the sale of a joint venture. In fiscal 2002, UTCI and its subsidiaries filed voluntary petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code. As a result, EMCORE wrote off its investment in UTCI totaling \$14.0 million in fiscal 2002.

In fiscal 2002, EMCORE invested approximately \$0.4 million in Qusion Technologies (Qusion), a Princeton, New Jersey start-up specializing in monolithic integration of optical components. Lacking additional funding, Qusion closed its business. EMCORE purchased all of Qusion's intellectual property and wrote off its entire investment.

*Equity in Net Loss of GELcore.* EMCORE's share of GELcore's net loss decreased \$1.5 million or 55% to \$1.2 million in fiscal 2003 from \$2.7 million in fiscal 2002. On a quarterly basis, EMCORE's share of GELcore's operating results was (\$0.6) million, (\$0.7) million, (\$33,000) and \$0.1 million. This quarterly improvement is associated with increased unit volumes, changes in LED product mix and less manufacturing inefficiencies associated with newer product introductions.

*Income Taxes.* As a result of its losses, EMCORE did not incur any income tax expense in either fiscal 2003 or 2002.

### ***Quarterly Results of Operations***

The following tables present EMCORE's unaudited results of operations expressed in dollars and as a percentage of revenue for the eight most recently ended quarters. EMCORE believes that all necessary adjustments, consisting only of normal recurring adjustments, have been included in the amounts below to present fairly the selected quarterly information when read in conjunction with the consolidated

financial statements and notes included elsewhere in this document. EMCORE's results from operations may vary substantially from quarter to quarter. Accordingly, the operating results for a quarter are not necessarily indicative of results for any subsequent quarter or for the full year. EMCORE has experienced and expects to continue to experience significant fluctuations in quarterly results. See Item 6, Selected Financial Data, for a listing of certain significant transactions that affect the comparability of EMCORE's operating results and financial condition.

### **STATEMENTS OF OPERATIONS**

*(in thousands)*

	<u>Dec. 31,</u> <u>2002</u>	<u>Mar. 31,</u> <u>2003</u>	<u>Jun. 30,</u> <u>2003</u>	<u>Sept. 30,</u> <u>2003</u>	<u>Dec. 31,</u> <u>2003</u>	<u>Mar. 31,</u> <u>2004</u>	<u>June 30,</u> <u>2004</u>	<u>Sept. 30,</u> <u>2004</u>
Revenue .....	\$ 9,382	\$ 16,864	\$ 16,986	\$ 17,052	\$ 23,125	\$ 23,180	\$ 21,225	\$ 25,539
Cost of revenue .....	<u>12,007</u>	<u>17,705</u>	<u>16,361</u>	<u>15,886</u>	<u>19,945</u>	<u>20,499</u>	<u>20,811</u>	<u>24,525</u>
Gross (loss) profit .....	(2,625)	(841)	625	1,166	3,180	2,681	414	1,014
<i>Operating expenses:</i>								
Selling, general & administrative .....	3,974	5,499	5,979	6,185	5,307	5,644	5,723	4,097
Research and development ...	2,449	4,212	4,283	6,058	6,046	5,714	6,535	5,260
Severance charge .....	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,156</u>
Total operating expenses .....	<u>6,423</u>	<u>9,711</u>	<u>10,262</u>	<u>12,243</u>	<u>11,353</u>	<u>11,358</u>	<u>12,258</u>	<u>10,513</u>
Operating loss .....	(9,048)	(10,552)	(9,637)	(11,077)	(8,173)	(8,677)	(11,844)	(9,499)
<i>Other (income) expenses:</i>								
Interest expense, net .....	1,786	1,746	1,827	1,920	1,867	1,486	1,004	1,016
Gain from debt extinguishment .....	(6,614)	-	-	-	-	(12,312)	-	-
Investment loss .....	-	-	-	-	-	-	-	500
Equity in net loss (income) of GELcore .....	<u>571</u>	<u>731</u>	<u>33</u>	<u>(107)</u>	<u>(267)</u>	<u>51</u>	<u>(341)</u>	<u>(232)</u>
Total other (income) expenses .....	<u>(4,257)</u>	<u>2,477</u>	<u>1,860</u>	<u>1,813</u>	<u>1,600</u>	<u>(10,775)</u>	<u>663</u>	<u>1,284</u>
(Loss) income from continuing operations .....	(4,791)	(13,029)	(11,497)	(12,890)	(9,773)	2,098	(12,507)	(10,783)
<i>Discontinued operations:</i>								
Income (loss) from discontinued operations .....	1,894	488	2,265	(965)	(1,697)	(348)	-	-
Gain on disposal of discontinued operations .....	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>19,584</u>	<u>-</u>	<u>-</u>	<u>-</u>
Income (loss) from discontinued operations .....	<u>1,894</u>	<u>488</u>	<u>2,265</u>	<u>(965)</u>	<u>17,887</u>	<u>(348)</u>	<u>-</u>	<u>-</u>
Net (loss) income .....	<u>\$ (2,897)</u>	<u>\$ (12,541)</u>	<u>\$ (9,232)</u>	<u>\$ (13,855)</u>	<u>\$ 8,114</u>	<u>\$ 1,750</u>	<u>\$ (12,507)</u>	<u>\$ (10,783)</u>

	<u>Dec. 31,</u> <u>2002</u>	<u>Mar. 31,</u> <u>2003</u>	<u>Jun. 30,</u> <u>2003</u>	<u>Sept. 30,</u> <u>2003</u>	<u>Dec. 31,</u> <u>2003</u>	<u>Mar. 31,</u> <u>2004</u>	<u>June 30,</u> <u>2004</u>	<u>Sept. 30,</u> <u>2004</u>
Revenue .....	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenue .....	128.0	105.0	96.3	93.2	86.2	88.4	98.0	96.0
Gross (loss) profit .....	(28.0)	(5.0)	3.7	6.8	13.8	11.6	2.0	4.0
<i>Operating expenses:</i>								
Selling, general & administrative .....	42.4	32.6	35.2	36.3	23.0	24.3	27.0	16.0
Research and development ...	26.1	25.0	25.2	35.5	26.1	24.7	30.8	20.6
Severance charge .....	-	-	-	-	-	-	-	4.6
Total operating expenses .....	68.5	57.6	60.4	71.8	49.1	49.0	57.8	41.2
Operating loss .....	(96.5)	(62.6)	(56.7)	(65.0)	(35.3)	(37.4)	(55.8)	(37.2)
<i>Other (income) expenses:</i>								
Interest expense, net .....	19.0	10.4	10.8	11.2	8.1	6.5	4.7	3.9
Gain from debt extinguishment	(70.5)	-	-	-	-	(53.1)	-	-
Investment loss .....	-	-	-	-	-	-	-	2.0
Equity in net loss (income) of GELcore .....	6.1	4.3	0.2	(0.6)	(1.1)	0.2	(1.6)	(0.9)
Total other (income) expenses	(45.4)	14.7	11.0	10.6	7.0	(46.4)	3.1	5.0%
Loss (income) from continuing operations .....	(51.1)	(77.3)	(67.7)	(75.6)	(42.3)	9.0	(58.9)	(42.2)%
<i>Discontinued operations:</i>								
Income (loss) from discontinued operations .....	20.2	2.9	13.3	(5.7)	(7.3)	(1.5)	-	-
Gain on disposal of discontinued operations .....	-	-	-	-	84.7	-	-	-
Income (loss) from discontinued operations .....	20.2	2.9	13.3	(5.7)	77.4	(1.5)	-	-
Net (loss) income .....	(30.9)%	(74.4)%	(54.4)%	(81.3)%	35.1%	7.5%	(58.9)%	(42.2)%

## Liquidity and Capital Resources

### Working Capital

At September 30, 2004, EMCORE had working capital of approximately \$58.0 million. Cash, cash equivalents, and marketable securities at September 30, 2004 totaled \$51.6 million, which reflects a net cash increase of \$23.1 million for fiscal 2004. In November 2003, EMCORE received \$62.0 million from the divestiture of the TurboDisc capital equipment business to Veeco. In connection with this divestiture, EMCORE management expects to receive between \$15.0 million and \$17.0 million during the second quarter of fiscal 2005 as part of the additional payout.

## Cash Flow

*Net Cash Used For Operations* - Net cash used for operations increased \$13.7 million or 74% to \$32.3 million in fiscal 2004 from \$18.6 million in fiscal 2003. Following is a summary of the major items accounting for the increase in cash used in operations:

	<b>For the fiscal years ended September 30,</b> <i>(in thousands)</i>		
	<u>2004</u>	<u>2003</u>	<u>Favorable (Unfavorable)</u>
Loss from continuing operations.....	\$ (30,965)	\$ (42,207)	\$ 11,242
Adjustments (non cash items) .....			
Depreciation .....	15,219	19,340	(4,121)
Gain from debt extinguishment.....	(12,312)	(6,614)	(5,698)
Other non-cash items .....	304	3,305	(3,001)
Adjusted loss from continuing operations .....	(27,754)	(26,176)	(1,578)
<i>Other adjustments:</i>			
Changes in working capital.....	(366)	2,207	(2,573)
Discontinued operations.....	(4,218)	5,388	(9,606)
Cash used in operations .....	<u>\$ (32,338)</u>	<u>\$ (18,581)</u>	<u>\$ (13,757)</u>

Two items accounted for 89% of the increase: (i) changes in working capital components; and (ii) discontinued operations relating to the divestiture of the TurboDisc capital equipment business. All major components of working capital increased in fiscal 2004 due to the dramatic increase in revenues resulting in a use of cash. In fiscal 2003, inventories decreased significantly, resulting in the \$2.2 million source of funds.

During fiscal 2004, we sold our TurboDisc capital equipment business to Veeco. We only owned this product line for approximately 35 days in fiscal 2004. As a result, expenses exceeded revenues and we generated a loss of \$4.2 million for the period during which we still owned the TurboDisc business. Revenues during this 35-day period were *de minimis* since, historically, the majority of our TurboDisc revenues were generated in the latter part of each fiscal quarter. In fiscal 2003, since we owned the TurboDisc business for the entire year, we generated income of \$5.4 million. Therefore, the change between fiscal years amounted to \$9.6 million, accounting for 70% of the increase in cash used in operations during fiscal 2004.

*Net Cash Provided by Investing Activities* - Net cash provided by investing activities improved \$12.0 million to \$22.3 million in fiscal 2004 from \$10.3 million in fiscal 2003. Changes in cash flow consisted of:

- Divestiture - Sale of TurboDisc business generated \$62.0 million in cash.
- Capital expenditures - Capital expenditures increased to \$4.2 million in fiscal 2004 from \$2.6 million in fiscal 2003. This increase was due in part to our purchase of a GaNzilla MOCVD reactor for \$1.3 million, to support our wide-bandgap activities. As part of our ongoing effort to manage cash, management carefully scrutinizes all significant capital purchases.
- Investments - As a result of GELcore's improved operations and recently reported profitable quarterly results, no additional investments were made to GELcore during fiscal year 2004. Investments in EMCORE's GELcore joint venture totaled approximately \$2.0 million in fiscal 2003.
- Acquisitions - In fiscal 2003, EMCORE purchased Ortel for \$26.2 million in cash, and acquired certain assets of privately-held Alvesta Corporation for approximately \$250,000. In October

2003, EMCORE acquired Molex's 10G Ethernet transceiver business for an initial \$1.0 million in cash, \$1.5 million in cash earn out based upon initial LX4 unit shipments, and future cash earn out payments calculated as a percentage of revenue, ranging from 3.7% to 0.25%, on LX4 product sold through December 2007. EMCORE has paid \$0.4 million of the \$1.5 million earn out, leaving a balance of \$1.1 million accrued at September 30, 2004. In June 2004, EMCORE purchased Corona for \$1.2 million in a cash-for-stock merger.

- Marketable securities - In fiscal 2004, EMCORE's net investment in marketable securities increased by \$32.2 million in order to take advantage of higher interest-bearing instruments. In fiscal 2003, EMCORE's net investment in marketable securities decreased by \$41.4 million (as compared to fiscal 2002) in order to fund multiple acquisitions, partially repurchase debt, and pay interest expense on the remaining debt.

*Net Cash Provided By (Used For) Financing Activities* — Net cash provided by (used for) financing activities increased \$6.9 million to \$1.0 million in fiscal 2004 from (\$5.9) million in fiscal 2003. In fiscal 2003, \$6.3 million related to the partial repurchase of our 2006 Notes (see below).

### **Financing Transactions**

In May 2001, EMCORE issued \$175.0 million aggregate principal amount of its 5% convertible subordinated notes due in May 2006 (2006 Notes). In December 2002, EMCORE purchased, in multiple transactions, \$13.2 million principal amount of the notes at prevailing market prices, for an aggregate purchase price of approximately \$6.3 million.

In February 2004, EMCORE exchanged approximately \$146.0 million or 90.2% of the remaining 2006 Notes for approximately \$80.3 million aggregate principal amount of new 5% Convertible Senior Subordinated Notes due May 15, 2011 (2011 Notes) and approximately 7.7 million shares of EMCORE common stock. Interest on the 2011 Notes is payable in arrears semiannually on May 15 and November 15 of each year. The notes are convertible into EMCORE common stock at a conversion price of \$8.06 per share, subject to adjustment under customary anti-dilutive provisions. They also are redeemable should EMCORE's common stock price reach \$12.09 per share. As a result of this transaction, EMCORE recorded a gain from early debt extinguishment of approximately \$12.3 million, decreased annual interest expense by approximately \$3.3 million, and reduced debt by approximately \$65.7 million.

EMCORE may continue to repurchase 2006 and/or 2011 Notes through various means, including, but not limited to, one or more open market or privately negotiated transactions in future periods. The timing and amount of repurchase, if any, whether *de minimis* or material, will depend on many factors, including, but not limited to, the availability of capital, the prevailing market price of the notes, and overall market conditions.

### **Contractual Obligations**

EMCORE's contractual obligations over the next five years are summarized in the table below:

<b>As of September 30, 2004</b> <i>(in millions)</i>	<b>Total</b>	<b>&lt;1 Year</b> <i>(fiscal 2005)</i>	<b>1 - 3 Years</b> <i>(fiscal 2006-08)</i>	<b>4 - 5 Years</b> <i>(fiscal 2009-10)</i>	<b>After 5 Years</b>
Long-Term Debt .....	\$ 96.0	\$ -	\$ 15.7	\$ -	\$ 80.3
Interest on Long-Term Debt .....	29.6	4.8	12.8	8.0	4.0
Capital Lease Obligations .....	0.1	0.1	-	-	-
Operating Leases .....	6.6	2.1	1.7	0.3	2.5
Molex Purchase Price Earnout .....	1.1	1.1	-	-	-
Purchase Obligations .....	4.4	4.4	-	-	-
<b>Total Contractual Cash Obligations .....</b>	<b>\$ 137.8</b>	<b>\$ 12.5</b>	<b>\$ 30.2</b>	<b>\$ 8.3</b>	<b>\$ 86.8</b>

Our long-term debt is convertible debt, and therefore may be converted to EMCORE common stock before maturity under certain circumstances. The above-listed Molex earnout obligation is an estimate. As of September 30, 2004, EMCORE does not have any purchase obligations or other long-term liabilities beyond those listed in the table above.

### ***Conclusion***

We believe that our current liquidity should be sufficient to meet our cash needs for working capital through the next 12 months. If cash generated from operations and cash on hand are not sufficient to satisfy EMCORE's liquidity requirements, EMCORE will seek to obtain additional equity or debt financing. Additional funding may not be available when needed, or on terms acceptable to EMCORE. If EMCORE is required to raise additional financing and if adequate funds are not available or not available on acceptable terms, our ability to continue to fund expansion, develop and enhance products and services, or otherwise respond to competitive pressures may be severely limited. Such a limitation could have a material adverse effect on EMCORE's business, financial condition, results of operations, and cash flow.

### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

We are exposed to financial market risks, including changes in currency exchange rates, interest rates, and non-marketable equity security prices. We do not use derivative financial instruments for speculative purposes.

*Currency Exchange Rates.* Although EMCORE occasionally enters into transactions denominated in foreign currencies, the total amount of such transactions is not material. Accordingly, fluctuations in foreign currency values would not have a material adverse effect on our future financial condition or results of operations. However, some of our foreign suppliers may adjust their prices (in \$US) from time to time to reflect currency exchange fluctuations, and such price changes could impact our future financial condition or results of operations.

*Interest Rates.* We maintain an investment portfolio in a variety of high-grade (AAA), short-term debt and money market instruments, which carry a minimal degree of interest rate risk. Due in part to these factors, our future investment income may be slightly less than expected because of changes in interest rates, or we may suffer insignificant losses in principal if forced to sell securities that have experienced a decline in market value because of changes in interest rates.

*Non-Marketable Equity Securities.* Our strategic investments in non-marketable equity securities would be affected by an adverse movement of equity market prices, although the impact cannot be directly quantified. Such a movement and the related underlying economic conditions would negatively affect the prospects of the companies in which we invest, their ability to raise additional capital, and the likelihood of our being able to realize our investments through liquidity events, such as initial public offerings, mergers, and private sales. These types of investments involve a great deal of risk, and there can be no assurance that any specific company will grow or will become successful. Consequently, we could lose all or part of our investment.

**Item 8. Financial Statements and Supplementary Data.**

**EMCORE CORPORATION**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
**For the fiscal years ended September 30, 2004, 2003, and 2002**  
*(in thousands, except per share data)*

	<u>2004</u>	<u>2003</u>	<u>2002</u>
Revenue .....	\$ 93,069	\$ 60,284	\$ 51,236
Cost of revenue .....	<u>85,780</u>	<u>61,959</u>	<u>62,385</u>
Gross profit (loss) .....	7,289	(1,675)	(11,149)
Operating expenses:			
Selling, general and administrative .....	20,771	21,637	15,659
Research and development .....	23,555	17,002	30,580
Severance charges .....	1,156	-	832
Impairment charges .....	-	-	30,804
Total operating expenses .....	<u>45,482</u>	<u>38,639</u>	<u>77,875</u>
Operating loss .....	(38,193)	(40,314)	(89,024)
Other (income) expenses:			
Interest income .....	(783)	(1,009)	(2,865)
Interest expense .....	6,156	8,288	8,936
Gain from debt extinguishment .....	(12,312)	(6,614)	-
Investment loss .....	500	-	14,388
Equity in net (income) loss of GELcore .....	(789)	1,228	2,706
Total other (income) expenses .....	<u>(7,228)</u>	<u>1,893</u>	<u>23,165</u>
Loss from continuing operations .....	(30,965)	(42,207)	(112,189)
Discontinued operations:			
(Loss) income from discontinued operations .....	(2,045)	3,682	(17,572)
Gain on disposal of discontinued operations .....	<u>19,584</u>	<u>-</u>	<u>-</u>
Income (loss) from discontinued operations .....	17,539	3,682	(17,572)
Net loss .....	<u>\$ (13,426)</u>	<u>\$ (38,525)</u>	<u>\$ (129,761)</u>
<b>Per share data:</b>			
Weighted average number of basic and diluted shares outstanding used in per share calculations .....	43,303	36,999	36,539
Loss from continuing operations per basic and diluted share .....	\$ (0.72)	\$ (1.14)	\$ (3.07)
Income (loss) from discontinued operations per basic and diluted share .....	<u>\$ 0.41</u>	<u>\$ 0.10</u>	<u>\$ (0.48)</u>
Net loss per basic and diluted share .....	<u>\$ (0.31)</u>	<u>\$ (1.04)</u>	<u>\$ (3.55)</u>

**The accompanying notes are an integral part of these consolidated financial statements.**

**EMCORE CORPORATION**  
**CONSOLIDATED BALANCE SHEETS**  
**As of September 30, 2004 and 2003**  
*(in thousands)*

	<u>2004</u>	<u>2003</u>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents .....	\$ 19,422	\$ 28,439
Marketable securities .....	32,150	-
Accounts receivable, net .....	20,775	14,221
Accounts receivable, GELcore .....	215	325
Inventories, net .....	14,839	13,963
Prepaid expenses and other current assets.....	2,496	1,936
Assets of discontinued operations.....	-	44,456
Total current assets	89,897	103,340
Property, plant and equipment, net .....	65,354	74,722
Goodwill.....	33,584	30,366
Intangible assets, net.....	5,177	4,567
Investments in GELcore .....	10,003	9,214
Other assets, net.....	9,228	10,230
Total assets .....	\$ 213,243	\$ 232,439
<b>LIABILITIES and SHAREHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable.....	\$ 16,064	\$ 8,155
Accrued expenses .....	15,078	13,204
Customer deposits.....	171	295
Capitalized lease obligation, current portion.....	43	52
Liabilities of discontinued operations .....	-	4,170
Total current liabilities.....	31,356	25,876
Convertible subordinated notes .....	96,051	161,750
Capitalized lease obligation, net of current portion .....	27	41
Total liabilities.....	127,434	187,667
Commitments and contingencies (see Note 10)		
Shareholders' equity:		
Preferred stock, \$0.0001 par, 5,882 shares authorized, no shares outstanding .....	-	-
Common stock, no par value, 100,000 shares authorized, 46,951 shares issued and 46,931 outstanding at September 30, 2004; 37,327 shares issued and 37,307 outstanding at September 30, 2003 .....	389,750	335,266
Accumulated deficit .....	(302,864)	(289,438)
Accumulated other comprehensive loss .....	(111)	(90)
Shareholders' notes receivable.....	(34)	(34)
Treasury stock, at cost; 20 shares.....	(932)	(932)
Total shareholders' equity.....	85,809	44,772
Total liabilities and shareholders' equity.....	\$ 213,243	\$ 232,439

**The accompanying notes are an integral part of these consolidated financial statements.**

**EMCORE CORPORATION**  
**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**  
For the fiscal years ended September 30, 2004, 2003, and 2002  
*(in thousands)*

	Shares	Common Stock	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Shareholders Notes Receivable	Treasury Stock	Total Shareholders' Equity
<b>Balance at</b>							
<b>October 1, 2001</b> .....	35,597	\$ 327,559	\$ (121,152)	\$ (8,314)	\$ (34)	\$ (932)	\$ 197,127
Net loss .....			(129,761)				(129,761)
Impairment of equity investment charged to expense .....				8,421			8,421
Unrealized loss on marketable securities .....				(308)			(308)
Translation adjustment .....				(21)			(21)
Comprehensive loss .....							(121,669)
Stock option exercise .....	159	1,023					1,023
Stock purchase warrant exercise .....	823	4,194					4,194
Compensatory stock issuances .....	125	714					714
Employee Stock Purchase Plan issuances .....	48	561					561
<b>Balance at</b>							
<b>September 30, 2002</b> .....	36,752	334,051	(250,913)	(222)	(34)	(932)	81,950
Net loss .....			(38,525)				(38,525)
Unrealized loss on marketable securities .....				(37)			(37)
Translation adjustment .....				169			169
Comprehensive loss .....							(38,393)
Stock option exercise .....	157	285					285
Compensatory stock issuances .....	309	759					759
Employee Stock Purchase Plan issuances .....	89	171					171
<b>Balance at</b>							
<b>September 30, 2003</b> .....	37,307	335,266	(289,438)	(90)	(34)	(932)	44,772
Net loss .....			(13,426)				(13,426)
Unrealized loss on marketable securities .....				4			4
Translation adjustment .....				(25)			(25)
Comprehensive loss .....							(13,447)
Stock option exercise .....	1,328	2,642					2,642
Compensatory stock issuances .....	230	812					812
Employee Stock Purchase Plan issuances .....	411	911					911
Subordinated debt exchange .....	7,655	50,119					50,119
<b>Balance at</b>							
<b>September 30, 2004</b> .....	46,931	\$ 389,750	\$ (302,864)	\$ (111)	\$ (34)	\$ (932)	\$ 85,809

**The accompanying notes are an integral part of these consolidated financial statements.**

**EMCORE CORPORATION**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
For the fiscal years ended September 30, 2004, 2003, and 2002  
*(in thousands)*

	<u>2004</u>	<u>2003</u>	<u>2002</u>
<b>Cash flows from operating activities:</b>			
Net loss.....	\$ (13,426)	\$ (38,525)	\$ (129,761)
Adjustments to reconcile net loss to net cash used for operating activities:			
Loss (income) from discontinued operations.....	2,045	(3,682)	17,572
Loss on disposal of property, equipment and other impairment charges.....	-	-	48,649
Recognition of loss on marketable securities.....	-	-	14,389
Gain on disposal of discontinued operations.....	(19,584)	-	-
Gain from debt extinguishment.....	(12,312)	(6,614)	-
Translation adjustment.....	(25)	169	(21)
Depreciation and amortization.....	15,219	19,340	16,902
Provision for doubtful accounts.....	(215)	443	1,589
Equity in net (income) loss of GELcore.....	(789)	1,228	2,706
Compensatory stock issuances.....	812	759	714
Reduction of note receivable due for services received.....	521	706	-
Decrease (increase) in assets:			
Accounts receivable.....	(6,190)	(1,953)	(3,949)
Accounts receivable, GELcore.....	110	193	1,643
Inventories.....	(752)	6,639	1,777
Prepaid and other current assets.....	(560)	(779)	3,065
Other assets.....	(509)	(619)	1,206
Increase (decrease) in liabilities:			
Accounts payable.....	6,543	(12)	(1,430)
Accrued expenses.....	1,116	(936)	(680)
Customer deposits.....	(124)	(326)	621
Net cash (used for) provided by operating activities of discontinued operations.....	<u>(4,218)</u>	<u>5,388</u>	<u>(8,603)</u>
Total adjustments.....	<u>(18,912)</u>	<u>19,944</u>	<u>96,150</u>
Net cash used for operating activities.....	<u>(32,338)</u>	<u>(18,581)</u>	<u>(33,611)</u>
<b>Cash flows from investing activities:</b>			
Cash proceeds from disposition of discontinued operations.....	62,043	-	-
Purchase of plant and equipment.....	(4,173)	(2,599)	(4,259)
Investments in GELcore.....	-	(1,960)	(1,960)
Investments in associated company.....	-	-	(1,000)
Repayment of related part loan.....	-	-	5,000
Cash purchase of business, net of cash acquired.....	(3,386)	(26,450)	(25,084)
(Investment in) net proceeds from sales of marketable securities.....	(32,146)	41,428	28,682
Net cash used for investing activities of discontinued operations.....	<u>-</u>	<u>(164)</u>	<u>(1,990)</u>
Net cash provided by (used for) investing activities.....	<u>22,338</u>	<u>10,255</u>	<u>(611)</u>
<b>Cash flows from financing activities:</b>			
Repurchase of convertible subordinated notes.....	(10)	(6,317)	-
Payments on capital lease obligations.....	(60)	(90)	(79)
Proceeds from exercise of stock purchase warrants.....	-	-	4,194
Proceeds from exercise of stock options.....	2,642	285	1,023
Proceeds from employee stock purchase plan.....	911	171	561
Convertible debt/equity issuance costs.....	(2,500)	-	-
Net cash provided by (used for) financing activities.....	<u>983</u>	<u>(5,951)</u>	<u>5,699</u>
Net decrease in cash and cash equivalents.....	(9,017)	(14,277)	(28,523)
Cash and cash equivalents, beginning of period.....	28,439	42,716	71,239
Cash and cash equivalents, end of period.....	<u>\$ 19,422</u>	<u>\$ 28,439</u>	<u>\$ 42,716</u>
<b>Supplemental Disclosure of Cash Flow Information:</b>			
Cash paid during the period for interest.....	\$ 7,383	\$ 8,498	\$ 8,958
<b>Non-Cash Investing and Financing Activities:</b>			
Acquisition of property and equipment under capital leases.....	\$ 37	\$ -	\$ -
Issuance of common stock in conjunction with subordinated debt exchange ...	\$ 51,091	\$ -	\$ -

**The accompanying notes are an integral part of these consolidated financial statements.**

# EMCORE Corporation

## Notes to Consolidated Financial Statements

As of September 30, 2004 and 2003, and  
for the fiscal years ended September 30, 2004, 2003, and 2002

### NOTE 1. Description of Business.

EMCORE Corporation (EMCORE), a New Jersey corporation established in 1984, offers a broad portfolio of compound semiconductor-based components and subsystems for the broadband, fiber optic, satellite, and wireless communications markets. Through our 49% ownership in GELcore, LLC. (GELcore), we also participate in the development and commercialization of next-generation LED technology for use in the general and specialty illumination market. EMCORE continues to expand its comprehensive product portfolio to enable the transport of voice, data, and video over copper, hybrid fiber/coax (HFC), fiber, satellite, and wireless networks. EMCORE is building upon its leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the cable television (CATV), fiber-to-the-premise, business, curb or home (FTTP), telecommunications, data and storage, satellite, and wireless communications markets.

### NOTE 2. Summary of Significant Accounting Policies.

*Principles of Consolidation.* The consolidated financial statements include the accounts of EMCORE and all its wholly owned subsidiaries. Under the terms of its joint venture agreement with General Electric Lighting, EMCORE has a 49% non-controlling interest in the GELcore venture and accounts for this investment using the equity method of accounting. All material intercompany accounts and transactions have been eliminated in consolidation.

*New Accounting Pronouncements.* EMCORE has reviewed recently issued accounting standards that have not yet been adopted in order to determine their potential effect, if any, on the results of operations or financial position of EMCORE. Based on that review, EMCORE does not currently believe that any of these recent accounting pronouncements will have a significant effect on its current or future financial position, results of operations, cash flows or disclosures.

*Cash and Cash Equivalents.* Cash and cash equivalents consist of highly liquid short-term investments purchased with an original maturity of three months or less.

*Marketable Securities.* Unrealized gains and losses for these securities are excluded from earnings and reported as a separate component of shareholders' equity. Realized gains and losses on sales of investments, as determined on a specific identification basis, are included in the consolidated statement of operations. Fair values are determined by reference to market prices for securities as quoted based on publicly traded exchanges. The fair value of the debt securities approximated cost. Declines in values that are deemed to be other than temporary are recorded as a component of other (income) expense on the statement of operations. EMCORE recorded approximately \$0.1 million and \$0.2 million of net realized gains on sales of available-for-sale debt securities during fiscal 2003 and 2002, respectively. There were no net realized gains on sales of available-for-sale debt securities during fiscal 2004.

*Concentration of Credit Risk.* Financial instruments, which may subject EMCORE to a concentration of credit risk, consist primarily of cash and cash equivalents, marketable securities and accounts receivable. EMCORE's cash and cash equivalents consist primarily of money market funds. EMCORE has maintained cash balances with certain financial institutions in excess of the \$100,000 insured limit of

the Federal Deposit Insurance Corporation. EMCORE performs ongoing credit evaluations of its customers' financial condition and generally requires no collateral from its customers.

*Fair Value of Financial Instruments.* The carrying amounts of cash and cash equivalents, marketable securities, account receivable, accounts payable, and accrued expenses approximate fair value because of the short maturity of these instruments. The carrying amount of long-term receivables approximates fair value, as the effective rates for these instruments are comparable to market rates at year-end. The carrying amount of investments approximates fair market value. As of September 30, 2004 and 2003, the fair market value of the convertible subordinated debenture, based on the quoted market prices, approximated \$88.0 million and \$129.4 million, respectively.

*Inventories.* Inventories are stated at the lower of cost or market, with cost being determined using the standard cost method.

*Property, Plant, and Equipment.* Property, plant, and equipment are recorded at cost and depreciated on a straight-line basis over the assets' estimated useful lives, which range from three to forty years. Leasehold improvements are amortized over the lesser of the asset life or the life of the related lease. Expenditures for repairs and maintenance are charged to expense as incurred. The costs for major renewals and improvements are capitalized and depreciated over their estimated useful lives. The cost and related accumulated depreciation of the assets are removed from the accounts upon disposition and any resulting gain or loss is reflected in operations.

*Valuation of Goodwill and Intangible Assets.* EMCORE evaluates its goodwill for impairment on an annual basis or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors that are considered important in making this determination include, but are not limited to, the following: (a) an anticipated or historic decline in revenue or operating profit; (b) significant negative industry trends; and (c) adverse legal or regulatory developments. EMCORE also reviews its capitalized patent portfolio and records impairment charges when circumstances warrant, such as when patents have been abandoned or are no longer being pursued. During fiscal 2004, 2003, and 2002, EMCORE had no impairment of any of its patents, other intangible assets, or goodwill.

*Valuation of Long-lived Assets.* EMCORE reviews long-lived assets on an annual basis or whenever events or circumstances indicate that the assets may be impaired. A long-lived asset is considered impaired when its anticipated undiscounted cash flow is less than its carrying value. In making this determination, EMCORE uses certain assumptions, including, but not limited to: (a) estimates of the fair market value of these assets; and (b) estimates of future cash flows expected to be generated by these assets, which are based on additional assumptions such as asset utilization, length of service that assets will be used in our operations, and estimated salvage values. During fiscal 2002, EMCORE determined certain property and equipment was impaired under Statement of Financial Accounting Standards (SFAS) No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed of*, which was the relevant accounting pronouncement at the time. As a result, we recorded an impairment charge of \$30.8 million. EMCORE determined that there was no such impairment in fiscal 2004 and 2003.

*Other Assets.* Included in other assets are various deferred costs, related party receivables and an investment. The deferred costs are primarily related to financing costs associated with our convertible subordinated notes due in 2006 and 2011. These financing costs are being amortized on a straight-line basis over the life of the notes. Total capitalized financing costs, net of amortization, were \$1.6 million and \$3.0 million at September 30, 2004 and 2003, respectively. Total amortization expense related to these financing costs amounted to approximately \$0.6 million, \$1.0 million and \$1.3 million for the years ended September 30, 2004, 2003 and 2002 respectively. Related party receivables at September 30, 2004 primarily consisted of a \$3.6 million loan and accrued interest due from the Chief Executive Officer

issued in fiscal 2001. Also included in other assets is a \$2.0 million six-year promissory note due from Analytical Solutions, Inc. issued in fiscal 2002.

*Revenue Recognition.* Revenue is recognized upon shipment provided persuasive evidence of a contract exists, such as when a purchase order or contract is received from a customer, the price is fixed, the product meets the customers' requirements, title and ownership have transferred to the customer, and there is reasonable assurance of collection of the sales proceeds. The majority of our products have shipping terms that are free on board (FOB) or free carrier alongside (FCA) shipping point, which means that EMCORE fulfills its delivery obligation when the goods are handed over to the freight carrier at our shipping dock. This means the buyer bears all costs and risks of loss of or damage to the goods from that point. In certain cases, EMCORE ships its products cost insurance and freight (CIF). Under this arrangement, revenue is recognized under FCA shipping point terms, but EMCORE pays (and bills the customer) for the cost of shipping and insurance to the customer's designated location. EMCORE accounts for shipping and related transportation costs by recording the charges that are invoiced to customers as revenue, with the corresponding cost recorded as cost of revenue. In those instances where inventory is maintained at a consigned location, revenue is recognized only when our customer pulls product for its use and title and ownership have transferred to the customer.

EMCORE records revenues from solar panel contracts using the percentage-of-completion method. Revenue is recognized in proportion to actual costs incurred compared to total anticipated costs expected to be incurred for each contract. If estimates of costs to complete long-term contracts indicate a loss, a provision is made for the total loss anticipated. EMCORE has numerous contracts that are in various stages of completion. Such contracts require estimates to determine the appropriate cost and revenue recognition. EMCORE uses all available information in determining dependable estimates of the extent of progress towards completion, contract revenues, and contract costs. Estimates are revised as additional information becomes available. At September 30, 2004 and 2003, EMCORE's accrued program losses totaled \$0.1 million and \$0.2 million, respectively. In the fourth quarter of fiscal 2004, we incurred a one-time \$1.2 million charge related to a communications satellite program with a positive contribution margin, but with an overall expected loss due to fixed cost overhead absorption.

Contract revenue represents reimbursement by various U.S. Government entities to aid in the development of new technology. The applicable contracts generally provide that EMCORE may elect to retain ownership of inventions made in performing the work, subject to a non-exclusive license retained by the government to practice the inventions for government purposes. The contract funding may be based on a cost-plus, cost reimbursement, cost-share, or a firm fixed price arrangement. The amount of funding under each contract is determined based on cost estimates that include direct costs, plus an allocation for research and development, general and administrative, and the cost of capital expenses. Cost-plus funding is determined based on actual costs plus a set margin. For cost-share contracts, the actual costs of performance are divided between the U.S. Government and EMCORE based on the contract terms. A contract is considered complete when all significant costs have been incurred, milestones have been reached, and any reporting obligations to the customer have been met. Revenues from Government contracts amounted to approximately \$4.6 million, \$5.2 million, and \$3.3 million for the years ended September 30, 2004, 2003, and 2002, respectively.

*Research and Development.* Research and development costs are charged to expense as incurred.

*Income Taxes.* Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts. Management provides valuation allowances against the deferred tax asset for amounts which are considered "more likely than not" to be realized.

*Use of Estimates.* The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and

assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates. EMCORE's most significant estimates relate to accounts receivable bad debt reserves, inventory valuation reserves specifically relating to excess and obsolete inventory, the valuation of goodwill, intangibles and other long-lived assets, product warranty accruals and revenue recognition on contracts utilizing the percentage-of-completion method.

- Bad debt reserves - EMCORE regularly evaluates its accounts receivable and accordingly maintains allowances for doubtful accounts for estimated losses resulting from the inability of our customers to meet their financial obligation to us. The allowance for doubtful accounts at September 30, 2004 and 2003 was \$0.7 million and \$1.0 million, respectively. If the financial condition of our customers were to deteriorate, additional allowances may be required.
- Inventory reserves - EMCORE reserves against inventory once it has been determined that conditions exist which may not allow it to be sold for its intended purpose, the inventory's value is determined to be less than cost or it is determined to be obsolete. The charge for the inventory reserves is recorded in cost of revenue. EMCORE evaluates inventory levels at least quarterly against sales forecasts on a part-by-part basis, in addition to determining its overall inventory risk. Reserves are adjusted to reflect inventory values in excess of forecasted sales, as well as overall inventory risk assessed by management. Total inventory reserves at September 30, 2004 and 2003 were \$4.1 million and \$4.4 million, respectively. If future demand or market conditions are less favorable than our estimates, additional inventory write-downs may be required.
- Product warranty reserves - EMCORE provides its customers with limited rights of return for non-conforming shipments and warranty claims for up to 5 years for certain products. EMCORE makes estimates using historical data and accrues estimated warranty expense as a cost of revenue. Total warranty expense amounted to approximately \$1.4 million, \$2.2 million, and \$2.3 million for the years ended September 30, 2004, 2003, and 2002, respectively. Total warranty reserves at September 30, 2004 and 2003 were \$2.2 million and \$2.4 million, respectively. If our product reliability assessments change in the future, additional allowances may be required.

*Comprehensive Income.* SFAS No. 130, *Reporting Comprehensive Income*, establishes standards for reporting and display of comprehensive income and its components in financial statements. It requires that all items that are required to be recognized under accounting standards as components of comprehensive income be reported in the financial statement that is displayed with the same prominence as other financial statements. Comprehensive income consists of net earnings, the net unrealized gains or losses on available for sale marketable securities and foreign currency translation adjustments and is presented in the consolidated statements of shareholders' equity.

*Earnings (Loss) Per Share.* Basic earnings (loss) per share is calculated by dividing net earnings (loss) applicable to common stock by the weighted average number of common stock shares outstanding for the period. Diluted earnings per share reflect the potential dilution that could occur if EMCORE's outstanding stock options were exercised. The effect of outstanding common stock purchase options and warrants, the convertible preferred stock and the convertible subordinated notes have been excluded from the diluted earnings per share calculation since the effect of such securities is anti-dilutive.

*Stock Options.* In accordance with Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, as amended (APB 25), no compensation expense is recorded for stock options or other stock-based awards that are granted to employees with an exercise price equal to or above the common stock price on the grant date.

EMCORE accounts for stock-based compensation in accordance with APB 25, and provides the pro forma disclosures required by SFAS No. 123, *Accounting for Stock-Based Compensation*, as amended by SFAS No. 148, *Accounting for Stock-Based Compensation Transition and Disclosure*.

Pro forma information regarding net income (loss) and net income (loss) per share is required by SFAS No. 148. EMCORE computes fair value for this purpose using the Black-Scholes option valuation model. The Black-Scholes model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. EMCORE's options have characteristics significantly different from traded options, and the input assumptions used in the model can materially affect the fair value estimate. The assumptions used in this model to estimate fair value and resulting values are as follows:

	<b>For the fiscal years ended September 30,</b>		
	<b><u>2004</u></b>	<b><u>2003</u></b>	<b><u>2002</u></b>
Expected dividend yield.....	0.0%	0.0%	0.0%
Expected stock price volatility.....	109.0%	112.0%	112.0%
Risk-free interest rate.....	3.4%	2.8%	2.6%
Weighted average expected life (in years) .....	5.0	5.0	5.0

The following table illustrates the effect on the net loss and net loss per share if EMCORE had applied the fair value recognition provisions of SFAS No. 123 to stock based compensation:

	<b>For the fiscal years ended September 30,</b>		
	<i>(in thousands)</i>		
	<b><u>2004</u></b>	<b><u>2003</u></b>	<b><u>2002</u></b>
Net loss.....	\$ (13,426)	\$ (38,525)	\$ (129,761)
Deduct: Total stock based employee compensation expense determined under fair value based methods for all awards, net of related tax effects.....	<u>(3,476)</u>	<u>(3,339)</u>	<u>(4,998)</u>
Pro forma net loss .....	<u>\$ (16,902)</u>	<u>\$ (41,864)</u>	<u>\$ (134,759)</u>
Reported net loss per basic and diluted share .....	\$ (0.31)	\$ (1.04)	\$ (3.55)
Pro forma net loss per basic and diluted share.....	<u>\$ (0.39)</u>	<u>\$ (1.13)</u>	<u>\$ (3.69)</u>

### **NOTE 3. Stock Options and Warrants.**

*Stock Option Plans.* EMCORE has stock option plans to provide incentives to eligible employees, officers and directors in the form of stock options. Most of the options vest and become exercisable over three to five years and have ten year terms.

EMCORE maintains two incentive stock option plans: the 2000 Stock Option Plan (2000 Plan), and the 1995 Incentive and Non Statutory Stock Option Plan (1995 Plan and, together with the 2000 Plan, the Option Plans). The 1995 Plan authorizes the grant of options to purchase up to 2,744,118 shares of EMCORE's common stock. As of September 30, 2004, no options were available for issuance under the 1995 Plan. The 2000 Plan authorizes the grant of options to purchase up to 6,850,000 shares of

EMCORE's common stock. As of September 30, 2004, 1,597,766 options were available for issuance under the 2000 Plan. Certain options under the Option Plans are intended to qualify as incentive stock options pursuant to Section 422A of the Internal Revenue Code.

During fiscal 2004, 1,920,950 options were granted pursuant to the 2000 Plan at exercise prices ranging from \$1.79 to \$7.18 per share. As of September 30, 2004, 2003, and 2002, options with respect to 2,489,807, 3,088,389, and 2,493,083 were exercisable, respectively. The following table summarizes the activity under the Option Plans:

	<u>Shares</u>	<u>Weighted Average Exercise Price</u>
Outstanding as of October 1, 2001	3,402,731	\$ 15.49
Granted.....	3,156,782	7.93
Exercised.....	(133,441)	7.25
Cancelled .....	<u>(1,419,484)</u>	<u>12.52</u>
Outstanding as of September 30, 2002	5,006,588	11.79
Granted.....	4,181,349	1.87
Exercised.....	(156,716)	3.14
Cancelled .....	<u>(3,280,155)</u>	<u>13.28</u>
Outstanding as of September 30, 2003	5,751,066	3.98
Granted.....	1,920,950	3.03
Exercised.....	(1,327,819)	1.98
Cancelled .....	<u>(842,884)</u>	<u>3.47</u>
Outstanding as of September 30, 2004 .....	<u>5,501,313</u>	<u>\$ 4.21</u>

At September 30, 2004, stock options outstanding were as follows:

<u>Exercise Price</u>	<u>Options Outstanding</u>	<u>Weighted Average Remaining Contractual Life (Years)</u>	<u>Exercisable Options</u>	<u>Weighted Average Exercise Price</u>
<\$1	1,920	3.18	1,920	\$ 0.23
\$1≤\$5	4,096,671	8.05	1,229,314	2.37
\$5≤\$10	1,153,132	5.02	1,009,303	6.90
>\$10	<u>249,590</u>	5.54	<u>249,270</u>	\$ 22.07
	<u>5,501,313</u>		<u>2,489,807</u>	

On September 30, 2002, EMCORE offered to all employees holding options with an exercise price of at least \$4.00 per share, excluding executive officers, the opportunity to exchange those options for new options to be issued on May 1, 2003. On October 30, 2002, EMCORE accepted all options tendered for exchange and canceled them all. On May 1, 2003, EMCORE issued 2,972,149 options in exchange for the tendered options. These options had an exercise price of \$1.82, which was the closing price for

EMCORE common stock on May 1, 2003. With the exception of the new exercise price, the new options had the same terms as the tendered options.

*Warrants.* Set forth below is a summary of EMCORE's outstanding warrants at September 30, 2004:

<u>Underlying Security</u>	<u>Exercise Price</u>	<u>Warrants</u>	<u>Expiration Date</u>
Common Stock <sup>(1)</sup> .....	\$ 2.16	14,796	August 21, 2006
Common Stock <sup>(2)</sup> .....	\$ 15.16 - 31.18	16,739	March 5, 2006 - September 1, 2006

<sup>(1)</sup> Issued in connection with EMCORE's December 1997 acquisition of MicroOptical Devices, Inc.

<sup>(2)</sup> Issued in connection with EMCORE's IP agreement with Sandia Laboratories.

#### **NOTE 4. Discontinued Operations.**

On November 3, 2003, EMCORE sold its TurboDisc capital equipment business to a subsidiary of Veeco in a transaction that is valued at up to \$80.0 million. The selling price was \$60.0 million in cash at closing with an additional aggregate maximum payout of \$20.0 million over the next two years. EMCORE will receive in either cash or securities 50% of all revenues from this business that exceed \$40.0 million in each of the next two years, beginning January 1, 2004. EMCORE also received an additional \$2.0 million in cash for working capital adjustments and expense reimbursements. This transaction included the assets, products, product warranty liabilities, hardware-related technology, and intellectual property used primarily in the operation of the TurboDisc business, including its manufacturing facility located in Somerset, New Jersey. 140 employees of EMCORE were involved in the TurboDisc business, of whom 118 became employees of Veeco. EMCORE's financial statements have been reclassified to reflect the TurboDisc business as a discontinued operation for all prior periods presented.

Operating results of the discontinued operations are as follows:

	<b>For the fiscal years ended September 30,</b>		
	<i>(in thousands)</i>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
<b>STATEMENT OF OPERATIONS</b>			
Revenue.....	\$ 1,001	\$ 52,822	\$ 36,536
Cost of revenue .....	<u>1,704</u>	<u>36,630</u>	<u>26,029</u>
Gross (loss) profit .....	(703)	16,192	10,507
<i>Operating expenses:</i>			
Selling, general and administrative.....	831	7,353	12,568
Research and development.....	512	5,179	10,390
Impairment and restructuring.....	<u>-</u>	<u>-</u>	<u>5,085</u>
Total operating expenses.....	<u>1,343</u>	<u>12,532</u>	<u>28,043</u>
Interest income (expense) .....	<u>1</u>	<u>22</u>	<u>(36)</u>
(Loss) income from operations .....	<u>\$ (2,045)</u>	<u>\$ 3,682</u>	<u>\$ (17,572)</u>

The components of the gain on disposal of discontinued operations are as follows:

	<i>(in thousands)</i>
Cash received .....	\$ 62,043
Assets sold:	
Accounts receivable .....	(10,418)
Inventories .....	(11,887)
Prepaid and other current assets .....	(14)
Property, plant and equipment .....	(20,673)
Identifiable intangible assets .....	(833)
Total assets sold .....	<u>(43,825)</u>
Liabilities sold:	
Accounts payable .....	2,161
Accrued expenses .....	2,410
Customer deposits .....	794
Total liabilities sold .....	<u>5,365</u>
Less: disposal costs .....	(3,999)
Gain on disposal of discontinued operations .....	<u>\$ 19,584</u>

The carrying values of the assets and liabilities of the discontinued operation included in the September 30, 2003 consolidated balance sheet are as follows:

	<u><b>As of September 30, 2003</b></u>
	<i>(in thousands)</i>
Assets:	
Accounts receivable .....	\$ 11,375
Inventories .....	11,143
Other current assets .....	18
Property, plant and equipment .....	21,087
Identifiable intangible assets .....	833
Total assets to be disposed .....	<u>44,456</u>
Liabilities:	
Accounts payable .....	3,372
Accrued expenses .....	506
Customer deposits .....	292
Total liabilities to be disposed .....	<u>\$ 4,170</u>

#### **NOTE 5. Acquisitions.**

*Ortel* - In January 2003, EMCORE purchased Agere Systems, Inc.'s CATV transmission systems, telecom access, and satellite communications components business, formerly Ortel Corporation (Ortel), for \$26.2 million in cash.

*Molex* - On October 9, 2003, EMCORE acquired Molex Inc.'s 10G Ethernet transceiver business (Molex) for an initial \$1.0 million in cash, \$1.5 million in cash earn out based upon initial LX4 unit volumes, and future cash earnout payments calculated as a percentage of revenue, ranging from 3.7% to 0.25%, on LX4 product sold through December 2007. EMCORE had paid \$0.4 million of the \$1.5 million earn out, leaving a balance of \$1.1 million accrued at September 30, 2004. EMCORE accounted for this transaction under the purchase method and allocated the purchase price on a preliminary basis,

which included acquisition costs of \$0.2 million, using estimated fair values of the acquired assets as follows: \$1.5 million to goodwill, \$0.6 million to equipment, and \$0.6 million to net identifiable intangible assets. Future cash earn out payments made will be charged to goodwill accordingly. This acquisition is not significant on a pro forma basis, and therefore, pro forma financial statements are not provided. The operating results of the assets acquired are included in the accompanying consolidated statement of operations from the date of acquisition.

*Corona* - On June 30, 2004, EMCORE purchased Corona Optical Systems, Inc. (Corona), a parallel optics company, for \$1.2 million in a cash-for-stock merger. EMCORE accounted for this transaction under the purchase method and allocated the purchase price on a preliminary basis, which included acquisition costs of approximately \$0.2 million, using estimated fair values of the acquired assets and liabilities as follows: \$0.2 million of cash, \$0.1 million to accounts receivable, \$0.1 million to inventory, \$0.1 million to plant and equipment, \$1.0 million to net identifiable intangible assets, \$1.8 million to current liabilities, and \$1.7 million to goodwill. This acquisition is not significant on a pro forma basis, and therefore, pro forma financial statements are not provided. The operating results of the assets acquired are included in the accompanying consolidated statement of operations from the date of acquisition.

#### **NOTE 6. Impairment and Severance Charges.**

In fiscal 2004, EMCORE initiated a restructuring program to reduce corporate overhead expenses and realign certain shared service operations. As a result, EMCORE incurred \$1.2 million in severance and fringe benefit charges related to employee termination costs for 110 employees. As of September 30, 2004, \$0.7 million of these charges have been paid. Management expects the restructuring program to continue into fiscal 2005.

##### ***Impairment Charges***

In fiscal 2002, we determined certain fixed assets were impaired. As a result, EMCORE recorded impairment charges of \$30.8 million. By December 2001, we completed new facilities in anticipation of expanding market prospects. Business forecasts updated in fiscal 2002 indicated significantly diminished prospects, primarily based on the downturn in the telecommunications industry. As a result of these circumstances, management determined that the long-lived assets should be assessed for impairment. Based on the outcome of this assessment, EMCORE recorded a \$23.5 million non-cash asset impairment charge to plant and equipment. The fair values of the assets were determined based upon a calculation of the present value of the expected future cash flows to be generated by its facilities. The remainder of the impairment charge totaling \$7.3 million related to certain manufacturing assets that were disposed of. Such decision was made based upon the downturn in the economic environment that affected certain product lines causing these manufacturing assets to become idle.

##### ***Severance Charges***

In fiscal 2002, EMCORE proceeded with a restructuring program, consisting of the realignment of all engineering, manufacturing and sales/marketing operations, as well as workforce reductions. As a result, we incurred \$0.8 million of severance and fringe benefit charges related to employee termination costs for 330 employees.

##### ***Other Charges***

In fiscal 2002, EMCORE recorded a \$7.7 million charge to cost of revenues. Consistent with the downturn in the markets served by EMCORE, management evaluated its inventory levels in light of actual and forecasted revenue. The inventory charge related to reserves for excess inventory that EMCORE believed it was carrying as a result of the market conditions. Included in SG&A expense was a \$1.4 million charge related to a loss provision for accounts receivable for customers whose current financial condition and payment history indicate payment is doubtful.

**NOTE 7. GELcore (HB-LED) Joint Venture.**

In January 1999, General Electric Lighting and EMCORE formed GELcore, a joint venture to develop and market HB-LED lighting products. General Electric Lighting and EMCORE have agreed that this joint venture will be the exclusive vehicle for each party's participation in solid-state lighting. EMCORE has a 49% non-controlling interest in the GELcore venture, and accounts for this investment using the equity method of accounting. As a result of GELcore's improved operations and recently reported profitable quarterly results, no additional investments were made to GELcore during the fiscal year ended September 30, 2004. Investments in GELcore totaled approximately \$2.0 million in fiscal 2003. For the years ended September 30, 2004, 2003, and 2002, EMCORE recognized income (loss) of \$0.8 million, \$ (1.2) million, and \$ (2.7) million, respectively, related to this joint venture, which was recorded as a component of other income and expenses. As of September 30, 2004 and 2003, EMCORE's net investment in this joint venture amounted to approximately \$10.0 million and \$9.2 million, respectively.

GELcore maintains a Revolving Loan Agreement (the "GELcore Credit Facility") with General Electric Canada, Inc., an affiliate of General Electric. EMCORE has guaranteed 49% (i.e., its proportionate share) of GELcore's obligations under the GELcore Credit Facility. As of September 30, 2004, there was no amount outstanding under this credit facility. As of September 30, 2003, EMCORE's share of this obligation was \$0.7 million. If GELcore's cash generated from operations and cash on hand are not sufficient to repay the amount outstanding under the facility, EMCORE would be required to make the necessary pro rata payment as outlined above.

**NOTE 8. Balance Sheet Data.**

*Accounts receivable*

Net accounts receivable consisted of the following:

	<b>As of September 30,</b>	
	<i>(in thousands)</i>	
	<b>2004</b>	<b>2003</b>
Accounts receivable .....	\$ 19,270	\$ 13,128
Accounts receivable - unbilled.....	2,171	2,134
	<u>21,441</u>	<u>15,262</u>
Allowance for doubtful accounts .....	(666)	(1,041)
Total .....	<u>\$ 20,775</u>	<u>\$ 14,221</u>

The unbilled accounts receivable as of September 30, 2003 was completely invoiced and collected during fiscal 2004. The unbilled accounts receivable as of September 30, 2004 is expected to be completely invoiced by February 2005. The decrease in the allowance for doubtful accounts in fiscal 2004 resulted after EMCORE received partial payment on a fiscal 2001 accounts receivable.

The following table summarizes the changes in the allowance for doubtful accounts for the years ended September 30, 2004, 2003 and 2002:

	<b>As of September 30,</b> <i>(in thousands)</i>		
	<b>2004</b>	<b>2003</b>	<b>2002</b>
Balance at beginning of year.....	\$ 1,041	\$ 1,185	\$ 269
Additions charged to costs and expenses.....	(215)	443	1,589
Write-offs (deductions) .....	(160)	(587)	(673)
Balance at end of year.....	<u>\$ 666</u>	<u>\$ 1,041</u>	<u>\$ 1,185</u>

### ***Inventory***

Net inventories consisted of the following:

	<b>As of September 30,</b> <i>(in thousands)</i>	
	<b>2004</b>	<b>2003</b>
Raw materials.....	\$ 9,000	\$ 6,858
Work-in-process.....	4,140	4,739
Finished goods .....	5,754	6,725
Reserves .....	(4,055)	(4,359)
Total .....	<u>\$ 14,839</u>	<u>\$ 13,963</u>

### ***Property, Plant, and Equipment***

Net property, plant, and equipment consisted of the following:

	<b>As of September 30,</b> <i>(in thousands)</i>	
	<b>2004</b>	<b>2003</b>
Land .....	\$ 1,502	\$ 1,502
Building and improvements.....	37,938	38,980
Equipment.....	72,094	68,064
Furniture and fixtures.....	5,002	5,036
Leasehold improvements .....	2,893	1,802
Construction in progress .....	1,406	1,928
Property and equipment under capital lease .....	466	429
	121,301	117,741
Less: accumulated depreciation and amortization .....	(55,947)	(43,019)
Total .....	<u>\$ 65,354</u>	<u>\$ 74,722</u>

At September 30, 2004, minimum future lease payments due under the capital leases are as follows:

	<u>Lease Payment</u> <i>(in thousands)</i>
Year ending:	
September 30, 2005 .....	\$ 47
September 30, 2006 .....	21
September 30, 2007 .....	<u>8</u>
Total minimum lease payments .....	76
Less: amount representing interest .....	<u>6</u>
Net minimum lease payments .....	70
Less: current portion .....	<u>43</u>
Long-term portion .....	<u>\$ 27</u>

Depreciation expense on owned property and equipment amounted to approximately \$13.2 million, \$16.8 million, and \$16.3 million in fiscal 2004, 2003, and 2002, respectively. Accumulated amortization on assets accounted under capital leases amounted to approximately \$0.4 million and \$0.3 million as of September 30, 2004 and 2003, respectively.

#### ***Intangible Assets, net***

Intangible assets include patents and other intellectual property. Patent costs reflect costs incurred related to obtaining product patents that enhance and maintain EMCORE's intellectual property position. Patent costs are amortized on a straight-line basis over five years or over the remaining life of the patent, whichever is less. Other intellectual property is amortized on a straight-line basis over a 4-5 year period (except for trademarks and tradenames, which are amortized over 15 years). During fiscal year 2004, EMCORE acquired \$0.6 million and \$1.0 million of intellectual property in connection with the Molex and Corona acquisitions, respectively. Total amortization expense amounted to approximately \$1.3 million, \$0.9 million, and \$0.2 million for the years ended September 30, 2004, 2003, and 2002, respectively.

The components of intangible assets consisted of the following:

	<u>As of September 30, 2004</u> <i>(in thousands)</i>			<u>As of September 30, 2003</u> <i>(in thousands)</i>		
	<u>Gross</u> <u>Assets</u>	<u>Accumulated</u> <u>Amortization</u>	<u>Net</u> <u>Assets</u>	<u>Gross</u> <u>Assets</u>	<u>Accumulated</u> <u>Amortization</u>	<u>Net</u> <u>Assets</u>
Patents .....	\$ 860	\$ (294)	\$ 566	\$ 469	\$ (165)	\$ 304
Acquired intellectual property:						
Ortel .....	3,274	(1,098)	2,176	3,274	(486)	2,788
Tecstar .....	1,900	(970)	930	1,900	(586)	1,314
Alvesta .....	193	(68)	125	193	(32)	161
Molex .....	558	(112)	446	-	-	-
Corona .....	1,000	(66)	934	-	-	-
Total .....	<u>\$ 7,785</u>	<u>\$ (2,608)</u>	<u>\$ 5,177</u>	<u>\$ 5,836</u>	<u>\$ (1,269)</u>	<u>\$ 4,567</u>

Future amortization expense as of September 30, 2004 is as follows:

	<b><u>Amortization</u></b> <b><i>(in thousands)</i></b>
Year ending:	
September 30, 2005 .....	\$ 1,533
September 30, 2006 .....	1,520
September 30, 2007 .....	1,153
September 30, 2008 .....	579
September 30, 2009 .....	392
Future amortization expense .....	<u>\$ 5,177</u>

### ***Goodwill***

The changes in the carrying value of goodwill for the years ended September 30, 2004 and 2003 are as follows:

	<b><u>Goodwill</u></b> <b><i>(in thousands)</i></b>
Balance as of September 30, 2002 .....	\$ 20,384
Ortel acquisition .....	<u>9,982</u>
Balance as of September 30, 2003 .....	30,366
Molex acquisition .....	1,518
Corona acquisition .....	<u>1,700</u>
Balance as of September 30, 2004 .....	<u>\$ 33,584</u>

### ***Accrued Expenses***

Accrued expenses consisted of the following:

	<b>As of September 30,</b> <b><i>(in thousands)</i></b>	
	<b><u>2004</u></b>	<b><u>2003</u></b>
Compensation .....	\$ 4,875	\$ 4,447
Interest .....	1,814	3,055
Warranty .....	2,152	2,440
Professional fees .....	1,223	1,200
Royalty .....	1,554	200
Self insurance .....	1,182	750
Other .....	2,278	1,112
Total .....	<u>\$ 15,078</u>	<u>\$ 13,204</u>

**NOTE 9. Convertible Subordinated Notes.**

In May 2001, EMCORE issued \$175.0 million aggregate principal amount of its 5% convertible subordinated notes due in May 2006 (2006 Notes). Interest is payable in arrears semiannually on May 15 and November 15 of each year. The notes are convertible into EMCORE common stock at a conversion price of \$48.76 per share, subject to certain adjustments, at the option of the holder.

In December 2002, EMCORE purchased \$13.2 million principal amount of the 2006 Notes at prevailing market prices for an aggregate of approximately \$6.3 million, resulting in a gain of approximately \$6.6 million after netting unamortized debt issuance costs of approximately \$0.3 million.

On February 24, 2004, EMCORE exchanged approximately \$146.0 million, or 90.2%, of its remaining 2006 Notes for approximately \$80.3 million aggregate principal amount of new 5% Convertible Senior Subordinated Notes due May 15, 2011 (2011 Notes) and approximately 7.7 million shares of EMCORE common stock. Interest on the 2011 Notes is payable in arrears semiannually on May 15 and November 15 of each year. The notes are convertible into EMCORE common stock at a conversion price of \$8.06 per share, subject to adjustment under customary anti-dilutive provisions. They also are redeemable should EMCORE's common stock price reach \$12.09 per share. As a result of this transaction, EMCORE reduced debt by approximately \$65.7 million, recorded a gain from early debt extinguishment of approximately \$12.3 million, and approximately \$15.7 million of the original convertible subordinated notes remain outstanding.

For the years ended September 30, 2004, 2003, and 2002, interest expense relating to the notes approximated \$6.1 million, \$8.3 million, and \$8.8 million, respectively.

**NOTE 10. Commitments and Contingencies.**

EMCORE leases certain land, facilities, and equipment under non-cancelable operating leases. All of the leases provide for rental adjustments for increases in base rent (up to specific limits), property taxes, and general property maintenance that would be recorded as rent expense. EMCORE also has subleased a portion of one of its leased facilities to a third party. Net facility and equipment rent expense under such leases amounted to approximately \$2.3 million, \$2.1 million, and \$1.1 million for the years ended September 30, 2004, 2003, and 2002, respectively.

Future minimum rental payments under EMCORE's non-cancelable operating leases with an initial or remaining term of one year or more as of September 30, 2004 are as follows:

	<b><u>Operating</u></b> <b><i>(in thousands)</i></b>
Period ending:	
September 30, 2005 .....	\$ 2,078
September 30, 2006 .....	1,067
September 30, 2007 .....	528
September 30, 2008 .....	133
September 30, 2009 .....	133
Thereafter .....	<u>2,662</u>
Total minimum lease payments .....	<u>\$ 6,601</u>

Future amounts to be received from third parties related to the sublease of certain of EMCORE's facilities are as follows:

	<u><b>Subleases</b></u> <i>(in thousands)</i>
Period ending:	
September 30, 2005.....	\$ 193
September 30, 2006.....	136
Total minimum lease payments .....	<u>\$ 329</u>

EMCORE is involved in lawsuits and proceedings that arise in the ordinary course of business. There are no matters pending that we expect to be material in relation to our business, consolidated financial condition, results of operations, or cash flows.

**NOTE 11. Income Taxes.**

The principal differences between the U.S. statutory and effective income tax rates were as follows:

	<b>For the fiscal years ended September 30,</b>		
	<u><b>2004</b></u>	<u><b>2003</b></u>	<u><b>2002</b></u>
US statutory income tax rate.....	(34.0)%	(34.0)%	(34.0)%
State rate, net of federal benefit .....	(5.9)%	(5.9)%	(5.9)%
Change in valuation allowance .....	39.9%	39.9%	39.9%
Effective tax rate .....	-	-	-

As a result of its losses, EMCORE did not incur any income tax expense during the fiscal years ended September 30, 2004, 2003, and 2002. The components of EMCORE's net deferred taxes were as follows:

	<b>For the fiscal years ended September 30,</b> <i>(in thousands)</i>	
	<u><b>2004</b></u>	<u><b>2003</b></u>
Deferred tax assets:		
Federal net operating loss carryforwards .....	\$ 88,799	\$ 71,723
Research credit carryforwards (state and federal) .....	4,124	4,124
Inventory reserves .....	1,360	1,712
Accounts receivable reserves .....	233	573
Fixed assets .....	6,110	8,241
Accrued warranty reserve.....	852	933
State net operating loss carryforwards .....	15,277	13,942
Investment writedown .....	4,766	4,766
Other.....	1,993	1,670
Valuation reserve - federal .....	(93,675)	(96,677)
Valuation reserve - state.....	<u>(19,809)</u>	<u>(9,409)</u>
Total deferred tax assets .....	10,030	1,598
Deferred tax liabilities:		
Fixed assets and intangibles .....	10,030	1,598
Net deferred taxes.....	<u>\$ -</u>	<u>\$ -</u>

EMCORE has established a valuation reserve as it has not determined that it is "more likely than not" that the net deferred tax asset is realizable, based upon EMCORE's past earnings history.

As of September 30, 2004, EMCORE had net operating loss (NOL) carryforwards for tax purposes of approximately \$431.0 million that expire in the years 2005 through 2024. In fiscal 2004, \$0.8 million of NOL carryforwards expired and approximately \$13.9 million are due to expire in fiscal 2005. As of September 30, 2004, EMCORE had federal research credit carryovers for tax purposes of approximately \$1.0 million that expire in the years 2005 through 2024. EMCORE believes that the consummation of certain equity transactions and a significant change in the ownership during fiscal years 1995, 1998, and 1999 have constituted a change in control under Section 382 of the Internal Revenue Code (IRC). Due to the change in control, EMCORE's ability to use its federal NOL carryovers and federal research credit carryovers to offset future income and income taxes, respectively, are subject to annual limitations under IRC Sections 382 and 383.

**NOTE 12. Shareholders' Equity.**

*Preferred Stock.* EMCORE's certificate of incorporation authorizes the Board of Directors to issue up to 5,882,352 shares of preferred stock of EMCORE upon such terms and conditions having such rights, privileges, and preferences as the Board of Directors may determine.

*Future Issuances.* At September 30, 2004, EMCORE has reserved a total of 17,851,455 shares of its common stock for future issuances as follows:

	<u>Number of shares</u>
For exercise of outstanding warrants to purchase common stock	31,535
For exercise of outstanding common stock options	5,501,313
For conversion of subordinated notes	10,283,307
For future common stock option awards	1,599,966
For future issuances to employees under the Employee Stock Purchase Plan	435,334
Total reserved	<u>17,851,455</u>

**NOTE 13. Related Parties.**

From time to time, prior to July 2002, EMCORE has lent money to certain of its executive officers and directors. Pursuant to due authorization from EMCORE's Board of Directors, EMCORE lent \$3.0 million to the Chief Executive Officer (CEO) in February 2001. The promissory note matures on February 22, 2006 and bears interest (compounded annually) at a rate of (a) 5.18% per annum through May 23, 2002, and (b) 4.99% from May 24, 2002 through maturity. All interest is payable at maturity. The note is secured by a pledge of shares of EMCORE's common stock. Accrued interest at September 30, 2004 totaled \$0.6 and is recorded with the loan principal within other assets. During fiscal 2004, the highest amount of the CEO's indebtedness to EMCORE was \$3.6 million. In addition, pursuant to due authorization of our Board of Directors, EMCORE lent \$82,000 to the Chief Financial Officer (CFO) of EMCORE in December 1995. The promissory note executed by the CFO does not bear interest, and provides for offset of the loan via bonuses payable to the CFO over a period of up to 25 years. The balance outstanding on the loan is currently \$82,000, and no larger amount has been outstanding since the beginning of fiscal 2004.

**NOTE 14. Segment Data and Related Information.**

On November 3, 2003, EMCORE sold its TurboDisc capital equipment business to Veeco. Prior to this divestiture, EMCORE had two reportable operating segments: the systems segment, and the components and subsystems segment. As a result of this divestiture, EMCORE now reports only one operating segment: the components and subsystems segment. This segment is comprised of our Fiber Optics, Photovoltaics, and Electronic Materials and Devices product lines. EMCORE's Fiber Optics revenues are derived primarily from sales of optical components and subsystems for CATV and FTTP, VCSEL and PIN photodiodes components, 10G LX4, CX4, TOSA, ROSA packages and modules, and satcom transmitter and receiver components. EMCORE's Photovoltaic revenues are derived primarily from the sales of solar power conversion products, including solar cells, covered interconnect solar cells (CICs), and solar panels. EMCORE's Electronic Materials and Devices revenues are derived primarily from sales of wireless components, such as RF materials including HBTs and enhancement-mode pHEMTs, MR sensors, and process development technology.

**Product Revenue**

The table below sets forth the revenues and percentage of total revenues attributable to each of EMCORE's product lines for each of the past three fiscal years:

	<b>For the fiscal years ended September 30,</b> <i>(in thousands)</i>					
	<b>FY 2004</b>	<b>% of revenue</b>	<b>FY 2003</b>	<b>% of revenue</b>	<b>FY 2002</b>	<b>% of revenue</b>
<b>Product Revenue</b>						
Fiber Optics.....	\$ 56,169	60.4%	\$ 32,658	54.2%	\$ 9,077	17.7%
Photovoltaics.....	25,716	27.6	18,196	30.2	23,621	46.1
Electronic Materials and Devices ...	11,184	12.0	9,430	15.6	18,538	36.2
Total revenues.....	<u>\$ 93,069</u>	<u>100.0%</u>	<u>\$ 60,284</u>	<u>100.0%</u>	<u>\$ 51,236</u>	<u>100.0%</u>

**Customers**

EMCORE's customer base includes many of the largest semiconductor, telecommunications, data communications, consumer goods, and computer manufacturing companies in the world. In fiscal 2004, Motorola and Cisco accounted for 13% and 8% of our total revenue, respectively. In fiscal 2003, Motorola accounted for 14% of total revenue. In fiscal 2002, revenues from Motorola, Boeing, and SS/L accounted for 22%, 15% and 14% of total revenue, respectively.

The following chart contains a breakdown of EMCORE's consolidated revenues by geographic region. North American sales include sales to Canada, which historically have not been material.

	<b>For the fiscal years ended September 30,</b> <i>(in thousands)</i>					
	<b>FY 2004</b>	<b>% of revenue</b>	<b>FY 2003</b>	<b>% of revenue</b>	<b>FY 2002</b>	<b>% of revenue</b>
<b>Revenue by Region</b>						
North America.....	\$ 66,485	71.4%	\$ 44,136	73.2%	\$ 42,983	83.9%
South America.....	416	0.5	-	-	-	-
AsiaPac.....	15,496	16.6	9,018	15.0	3,638	7.1
Europe.....	10,672	11.5	7,130	11.8	4,615	9.0
Total revenues.....	<u>\$ 93,069</u>	<u>100.0%</u>	<u>\$ 60,284</u>	<u>100.0%</u>	<u>\$ 51,236</u>	<u>100.0%</u>

**NOTE 15. Employee Benefits.**

EMCORE has a savings plan (Savings Plan) that qualifies as a deferred salary arrangement under Section 401 (k) of the Internal Revenue Code. Under the Savings Plan, participating employees may defer a portion of their pretax earnings, up to the Internal Revenue Service annual contribution limit. All employer contributions are made in EMCORE's common stock. For the years ended September 30, 2004, 2003, and 2002, EMCORE contributed approximately \$739,000, \$701,000, and \$714,000, respectively, in common stock to the Savings Plan.

EMCORE adopted an Employee Stock Purchase Plan (ESPP) in fiscal 2000, which was amended in fiscal 2004. The amendment changed the ESPP plan from a 12-month duration plan to a 6-month duration plan, with new participation periods beginning in January and July of each year. The ESPP provides employees of EMCORE with an opportunity to purchase common stock through payroll deductions. The option price is set at 85% of the market price for EMCORE's common stock on either the first or last day of the participation period, whichever is lower. Contributions are limited to 10% of an employee's compensation. The Board of Directors has reserved 1,000,000 shares of common stock for issuance under the ESPP. The remaining amount of shares reserved for the ESPP are as follows:

	<u>Number of shares</u>
Original amount of shares reserved for the ESPP	1,000,000
Number of shares issued in January 2001 for CY2000 .....	(16,534)
Number of shares issued in January 2002 for CY2001 .....	(48,279)
Number of shares issued in January 2003 for CY2002 .....	(89,180)
Number of shares issued in January 2004 for CY2003 .....	(244,166)
Number of shares issued in July 2004 for first half of CY2004 .....	(166,507)
Remaining shares reserved for the ESPP as of September 30, 2004.....	<u>435,334</u>

**NOTE 16. Quarterly Financial Data (Unaudited).**

<i>(in thousands)</i>	<u>Dec. 31,</u> <u>2002</u>	<u>Mar. 31,</u> <u>2003</u>	<u>Jun. 30,</u> <u>2003</u>	<u>Sept. 30,</u> <u>2003</u>	<u>Dec. 31,</u> <u>2003</u>	<u>Mar. 31,</u> <u>2004</u>	<u>June 30,</u> <u>2004</u>	<u>Sept. 30,</u> <u>2004</u>
Revenue .....	\$ 9,382	\$ 16,864	\$ 16,986	\$ 17,052	\$23,125	\$ 23,180	\$ 21,225	\$ 25,539
Cost of revenue.....	<u>12,007</u>	<u>17,705</u>	<u>16,361</u>	<u>15,886</u>	<u>19,945</u>	<u>20,499</u>	<u>20,811</u>	<u>24,525</u>
Gross (loss) profit .....	(2,625)	(841)	625	1,166	3,180	2,681	414	1,014
Operating expenses:								
Selling, general & administrative .....	3,974	5,499	5,979	6,185	5,307	5,644	5,723	4,097
Research and development ....	2,449	4,212	4,283	6,058	6,046	5,714	6,535	5,260
Severance charges.....	-	-	-	-	-	-	-	1,156
Total operating expenses	<u>6,423</u>	<u>9,711</u>	<u>10,262</u>	<u>12,243</u>	<u>11,353</u>	<u>11,358</u>	<u>12,258</u>	<u>10,513</u>
Operating loss.....	(9,048)	(10,552)	(9,637)	(11,077)	(8,173)	(8,677)	(11,844)	(9,499)
<b>Other (income) expenses:</b>								
Interest expense, net .....	1,786	1,746	1,827	1,920	1,867	1,486	1,004	1,016
Gain from debt extinguishment .....	(6,614)	-	-	-	-	(12,312)	-	-
Investment loss .....	-	-	-	-	-	-	-	500
Equity in net loss (income) of GELcore .....	571	731	33	(107)	(267)	51	(341)	(232)
Total other (income) expenses.....	<u>(4,257)</u>	<u>2,477</u>	<u>1,860</u>	<u>1,813</u>	<u>1,600</u>	<u>(10,775)</u>	<u>663</u>	<u>1,284</u>
(Loss) income from Continuing operations.....	<u>(4,791)</u>	<u>(13,029)</u>	<u>(11,497)</u>	<u>(12,890)</u>	<u>(9,773)</u>	<u>2,098</u>	<u>(12,507)</u>	<u>(10,783)</u>
<b>Discontinued operations:</b>								
Income (loss) from discontinued operations .....	1,894	488	2,265	(965)	(1,697)	(348)	-	-
Gain on disposal of discontinued operations .....	-	-	-	-	19,584	-	-	-
Income (loss) from discontinued operations .....	<u>1,894</u>	<u>488</u>	<u>2,265</u>	<u>(965)</u>	<u>17,887</u>	<u>(348)</u>	<u>-</u>	<u>-</u>
Net (loss) income.....	<u>\$ (2,897)</u>	<u>\$ (12,541)</u>	<u>\$ (9,232)</u>	<u>\$ (13,855)</u>	<u>\$ 8,114</u>	<u>\$ 1,750</u>	<u>\$ (12,507)</u>	<u>\$ (10,783)</u>

**NOTE 17. Subsequent Events.**

In October 2004, EMCORE invested \$1.0 million in K2 Optronics, Inc., a California-based company specializing in the design and manufacture of external cavity lasers, to strengthen its partnership in designing next-generation long wavelength components for the CATV and FTTP markets. EMCORE does not exercise significant influence over financial and operating policies, and the investment represents approximately 6.6% ownership. Therefore, EMCORE accounts for this investment under the cost method of accounting.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of  
EMCORE Corporation  
Somerset, New Jersey

We have audited the accompanying consolidated balance sheets of EMCORE Corporation (the "Company") as of September 30, 2004 and 2003, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended September 30, 2004. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of EMCORE Corporation as of September 30, 2004 and 2003, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2004, in conformity with accounting principles generally accepted in the United States of America.

*DELOITTE & TOUCHE LLP*

Parsippany, New Jersey  
December 14, 2004

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.**

None.

**Item 9A. Controls and Procedures.**

**(a) Evaluation of Disclosure Controls and Procedures**

The term “disclosure controls and procedures” is defined in Rules 13a-15 (e) and 15d-15 (e) of the Securities Exchange Act of 1934, as amended (Exchange Act). This term refers to the controls and procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files under the Exchange Act is recorded, processed, summarized, and reported within required time periods. Our Chief Executive Officer and our Chief Financial Officer have evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this annual report. They have concluded that, as of that date, our disclosure controls and procedures were effective at ensuring that required information will be disclosed on a timely basis in our reports filed under the Exchange Act.

**(b) Changes in Internal Control over Financial Reporting**

No change in our internal control over financial reporting (as defined in Rules 13a-15 (f) and 15d-15 (f) under the Exchange Act) occurred during the fiscal quarter ended September 30, 2004 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information.**

None.

### **PART III**

#### **Item 10. Directors and Executive Officers of the Registrant.**

Information regarding our executive officers and directors required by this Item is incorporated by reference to EMCORE's Definitive Proxy Statement in connection with the 2005 Annual Meeting of Stockholders (the "Proxy Statement"), which will be filed with the Securities and Exchange Commission within 120 days after the fiscal year ended September 30, 2004. Information required by Item 405 of Regulation S-K is incorporated by reference to the section entitled "Section 16 (a) Beneficial Ownership Reporting Compliance" in the Proxy Statement.

We have adopted a code of ethics entitled the "EMCORE Corporate Code of Conduct," which is applicable to all employees, officers, and directors of EMCORE. The full text of our Corporate Code of Conduct is included with the Corporate Governance information available on our website ([www.emcore.com](http://www.emcore.com)).

#### **Item 11. Executive Compensation.**

Information required by this Item is incorporated by reference to the section entitled "Executive Compensation" in the Proxy Statement.

#### **Item 12. Security Ownership of Certain Beneficial Owners and Management.**

Information regarding security ownership of certain beneficial owners and management is incorporated by reference to the section entitled "Security Ownership of Certain Beneficial Owners and Management" in the Proxy Statement.

Information regarding EMCORE's equity compensation plans is incorporated by reference to the section entitled "Equity Compensation Plans" in the Proxy Statement.

#### **Item 13. Certain Relationships and Related Transactions.**

Information required by this Item is incorporated by reference to the sections entitled "Certain Relationships and Related Transactions" and "Compensation Committee Interlocks and Insider Participation" in the Proxy Statement.

#### **Item 14. Principal Accounting Fees and Services.**

Information required by this Item is incorporated by reference to the sections entitled "Independent Auditors" in the Proxy Statement.

## PART IV

### **Item 15. Exhibits, Financial Statement Schedules.**

#### **(a) (1) Financial Statements**

Included in Part II, Item 8 of this Annual Report on Form 10-K:

Consolidated Statements of Operations for the years ended September 30, 2004, 2003, 2002 .....	55
Consolidated Balance Sheets as of September 30, 2004 and 2003 .....	56
Consolidated Statements of Shareholders' Equity for the years ended September 30, 2004, 2003, 2002 .....	57
Consolidated Statements of Cash Flows for the years ended September 30, 2004, 2003, 2002 ..	58
Notes to Consolidated Financial Statements .....	59
Report of Independent Registered Public Accounting Firm .....	78

#### **(a) (2) Financial Statement Schedule**

*See Item 8, Note 8 - Balance Sheet Data.*

#### **(a) (3) Exhibits**

<u>Exhibit No.</u>	<u>Description</u>
2.1	Asset Purchase Agreement, dated as of November 3, 2003, by and among Veeco St. Paul Inc., Veeco Instruments Inc. and Registrant (incorporated by reference to Exhibit 2.1 to Registrant's current report on Form 8-K filed November 18, 2003).
3.1	Restated Certificate of Incorporation, dated December 21, 2000 (incorporated by reference to Exhibit 3.1 the registrant's annual report on Form 10-K for the fiscal year ended September 30, 2000).
3.2	Amended By-Laws, as amended through December 21, 2000 (incorporated by reference to Exhibit 3.2 to the registrant's annual report on Form 10-K for the fiscal year ended September 30, 2000).
4.1	Indenture, dated as of May 7, 2001, between the registrant and Wilmington Trust Company, as Trustee (incorporated by reference to Exhibit 4.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2001).
4.2	Note, dated as of May 7, 2001, in the amount of \$175,000,000 (incorporated by reference to Exhibit 4.2 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2001).
4.3	Indenture, dated as of February 24, 2004, between the registrant and Deutsche Bank Trust Company Americas, as Trustee.*
4.4	Note dated as of February 24, 2004, in the amount of \$80,276,000.*

<u>Exhibit No.</u>	<u>Description</u>
10.1	Specimen certificate for shares of common stock (incorporated by reference to Exhibit 4.1 to Amendment No. 3 to the Registration Statement on Form S-1 (File No. 333-18565) filed with the Commission on February 24, 1997).
10.2	Form of \$11.375 (pre-split) Warrant (incorporated by reference to Exhibit 4.2 to the registrant's annual report on Form 10-K for the fiscal year ended September 30, 1998).
10.3	Registration Rights Agreement, dated November 30, 1998 by and between the registrant, Hakuto, UMI and UTC (incorporated by reference to Exhibit 10.16 to the registrant's annual report on Form 10-K for the fiscal year ended September 30, 1998).
10.4	Registration Rights Agreement, dated as of May 26, 1999, by and between EMCORE Corporation and GE Capital Equity Investments, Inc. (incorporated by reference to Exhibit 10.19 to Amendment No. 2 to the Registration Statement on Form S-3 (File No. 333-71791) filed with the Commission on June 9, 1999).
10.5	Registration Rights Agreement, dated as of May 7, 2001, among EMCORE and the Credit Suisse First Boston Corporation, on behalf of the initial purchasers (incorporated by reference to Exhibit 10.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2001).
10.6	Transaction Agreement dated January 20, 1999 between General Electric Company and the registrant (incorporated by reference to Exhibit 10.1 to EMCORE's filing on Form 10-Q/A, filed on May 17, 1999). Confidential treatment has been requested by EMCORE for portions of this document. Such portions are indicated by "[*]".
10.7	1995 Incentive and Non-Statutory Stock Option Plan (incorporated by reference to Exhibit 10.1 to the Amendment No. 1 to the Registration Statement on Form S-1 filed on February 6, 1997).
10.8	1996 Amendment to Option Plan (incorporated by reference to Exhibit 10.2 to Amendment No. 1 to the Registration Statement on Form S-1 filed on February 6, 1997).
10.9	MicroOptical Devices 1996 Stock Option Plan (incorporated by reference to Exhibit 99.1 to the Registration Statement on Form S-8 filed on February 6, 1998).
10.10	2000 Stock Option Plan, as amended and restated, effective February 20, 2004 (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-8 filed on August 10, 2004).
10.11	2000 Employee Stock Purchase Plan (incorporated by reference to Exhibit 4.3 to the Registration Statement on Form S-8 filed on May 18, 2000).
10.12	Directors' Stock Award Plan (incorporated herein by reference to Exhibit 99.1 to Registrant's Original Registration Statement of Form S-8 filed on November 5, 1997), as amended by the Registration Statement on Form S-8 filed on August 10, 2004.
10.13	Amended and Restated Note, dated as of May 23, 2002 between the registrant and Reuben F. Richards, Jr. (incorporated by reference to Exhibit 10.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2002).
10.14	Amended and Restated Stock Pledge Agreement, dated as of May 23, 2002 between the registrant and Reuben F. Richards, Jr. (incorporated by reference to Exhibit 10.2 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2002).

<u>Exhibit No.</u>	<u>Description</u>
10.15	Membership Interest Purchase Agreement, dated as of August 2, 2001, by and among Uniroyal Technology Corporation, Uniroyal Compound Semiconductor, Inc., Uniroyal Optoelectronics, LLC and the registrant (incorporated by reference to Exhibit 2.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2001).
14.1	Code of Ethics for Financial Professionals (incorporated by reference to Exhibit 14.1 to the registrant's annual report on Form 10-K for the fiscal year ended September 30, 2003).
21.1	Subsidiaries of the Registrant.*
23.1	Consent of Deloitte & Touche LLP.*
31.1	Certificate of Chief Executive Officer pursuant to Securities Exchange Act Rules 13a-14 (a) and 15d-14 (a) as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, dated December 14, 2004.*
31.2	Certificate of Chief Financial Officer pursuant to Securities Exchange Act Rules 13a-14 (a) and 15d-14 (a) as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, dated December 14, 2004.*
32.1	Certificate of Chief Executive Officer pursuant to section 18 U.S.C. § 1350, dated December 14, 2004.*
32.2	Certificate of Chief Financial Officer pursuant to section 18 U.S.C. § 1350, dated December 14, 2004.*

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\* Filed herewith

## SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

EMCORE CORPORATION

Date: December 14, 2004

By: /s/ Reuben F. Richards, Jr.

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Reuben F. Richards, Jr.  
President and Chief Executive Officer

## POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints and hereby authorizes Reuben F. Richards, Jr. and Thomas G. Werthan, severally, such person's true and lawful attorneys-in-fact, with full power of substitution or resubstitution, for such person and in his name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments, including post-effective amendments to this Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Commission granting unto said attorneys-in-fact, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities indicated, on December 14, 2004.

<u>Signature</u>	<u>Title</u>
<u>/s/ Thomas J. Russell</u> Thomas J. Russell	Chairman of the Board and Director
<u>/s/ Reuben F. Richards, Jr.</u> Reuben F. Richards, Jr.	President, Chief Executive Officer, and Director (Principal Executive Officer)
<u>/s/ Thomas G. Werthan</u> Thomas G. Werthan	Executive Vice President, Chief Financial Officer, and Director (Principal Accounting and Financial Officer)
<u>/s/ Richard A. Stall</u> Richard A. Stall	Executive Vice President, Chief Technology Officer, and Director
<u>/s/ Robert Louis-Dreyfus</u> Robert Louis-Dreyfus	Director
<u>/s/ Charles T. Scott</u> Charles T. Scott	Director
<u>/s/ Robert Bogomolny</u> Robert Bogomolny	Director
<u>/s/ John Gillen</u> John Gillen	Director

## **EXHIBIT INDEX**

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32.2	Certificate of Chief Financial Officer pursuant to section 18 U.S.C. § 1350, dated December 14, 2004.*

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\* Filed herewith

**SUBSIDIARIES OF THE REGISTRANT**

Corona Optical Systems, Inc., a Delaware corporation

EMCORE IRB Company, Inc., a New Mexico corporation

EMCORE Real Estate Holding Corporation, a Delaware corporation

MicroOptical Devices, Inc., a Delaware corporation

TPS Acquisition Corporation, a Delaware corporation

TPS Financing Corporation, a Delaware corporation

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statement Nos. 333-27507, 333-37306, 333-36445, 333-39547, 333-60816, 333-45827, 333-118074, and 333-118076 of EMCORE Corporation on Form S-8, Registration Statement No. 333-111585 of EMCORE Corporation on Form S-4, and Registration Statement Nos. 333-94911, 333-87753, 333-65526, 333-71791 and 333-42514 of EMCORE Corporation on Form S-3 of our report, dated December 14, 2004, appearing in this Annual Report on Form 10-K of EMCORE Corporation for the year ended September 30, 2004.

*DELOITTE & TOUCHE LLP*

Parsippany, New Jersey  
December 14, 2004

**CERTIFICATION**

I, Reuben F. Richards, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of EMCORE Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 (e) and 15d-15 (e)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer (s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 14, 2004

By: /s/ Reuben F. Richards, Jr.

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Reuben F. Richards, Jr.  
President and CEO

**CERTIFICATION**

I, Thomas G. Werthan, certify that:

1. I have reviewed this annual report on Form 10-K of EMCORE Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 (e) and 15d-15 (e)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer (s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 14, 2004

By: /s/ Thomas G. Werthan

\_\_\_\_\_  
Thomas G. Werthan  
Chief Financial Officer

**STATEMENT REQUIRED BY 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of EMCORE Corporation (the "Company") for the year ended September 30, 2004, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Reuben F. Richards, Jr., President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that: 1) the Report fully complies with the requirements of Section 13 (a) or 15 (d) of the Securities Exchange Act of 1934; and 2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: December 14, 2004

By: /s/ Reuben F. Richards, Jr.

\_\_\_\_\_  
Reuben F. Richards, Jr.  
President and CEO

*A signed original of this written statement required by Section 906 has been provided to EMCORE Corporation and will be retained by EMCORE Corporation and furnished to the Securities and Exchange Commission or its staff upon request. This certification has not been, and shall not be deemed to be, filed with the Securities and Exchange Commission.*

**STATEMENT REQUIRED BY 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of EMCORE Corporation (the "Company") for the year ended September 30, 2004, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Thomas G. Werthan, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that: 1) the Report fully complies with the requirements of section 13 (a) or 15 (d) of the Securities Exchange Act of 1934; and 2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: December 14, 2004

By: /s/ Thomas G. Werthan

\_\_\_\_\_  
Thomas G. Werthan  
Chief Financial Officer

*A signed original of this written statement required by Section 906 has been provided to EMCORE Corporation and will be retained by EMCORE Corporation and furnished to the Securities and Exchange Commission or its staff upon request. This certification has not been and shall not be deemed to be filed with the Securities and Exchange Commission.*





**EMCORE CORPORATION  
145 Belmont Drive  
Somerset, New Jersey 08873**

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**NOTICE OF ANNUAL MEETING OF SHAREHOLDERS  
TO BE HELD ON MONDAY, FEBRUARY 28, 2005**

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*To our Shareholders:*

The 2005 Annual Meeting of Shareholders (the "Annual Meeting") of EMCORE Corporation (the "Company") will be held at 10:00 A.M. local time on Monday, February 28, 2005, at the Holiday Inn, 195 Davidson Avenue, Somerset, NJ 08873, for the following purposes:

- (1) To elect three (3) members to the Company's Board of Directors;
- (2) To ratify the selection of Deloitte & Touche LLP as the Company's independent registered public accounting firm for the fiscal year ending September 30, 2005; and
- (3) To transact such other business as may properly come before the Annual Meeting and any adjournments or postponements thereof.

The Board of Directors has fixed the close of business on January 12, 2005 as the record date for determining those shareholders entitled to notice of, and to vote at, the Annual Meeting and any adjournments or postponements thereof. Whether or not you expect to be present, please sign, date, and return the enclosed proxy card in the enclosed pre-addressed envelope as promptly as possible. No postage is required if mailed in the United States.

By Order of the Board of Directors,

A handwritten signature in cursive script, appearing to read "Howard W. Brodie".

HOWARD W. BRODIE  
SECRETARY

January 25, 2005  
Somerset, New Jersey

THIS IS AN IMPORTANT MEETING AND ALL SHAREHOLDERS ARE INVITED TO ATTEND THE MEETING IN PERSON. ALL SHAREHOLDERS ARE RESPECTFULLY URGED TO EXECUTE AND RETURN THE ENCLOSED PROXY CARD AS PROMPTLY AS POSSIBLE. SHAREHOLDERS WHO EXECUTE A PROXY CARD MAY NEVERTHELESS ATTEND THE MEETING, REVOKE THEIR PROXY, AND VOTE THEIR SHARES IN PERSON.



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**EMCORE CORPORATION  
145 Belmont Drive  
Somerset, New Jersey 08873**

**PROXY STATEMENT**

**ANNUAL MEETING OF SHAREHOLDERS**

**MONDAY, FEBRUARY 28, 2005**

This Proxy Statement is being furnished to shareholders of record of EMCORE Corporation (“EMCORE”, “Company”, “we”, or “us”) as of January 12, 2005, in connection with the solicitation on behalf of the Board of Directors of EMCORE of proxies for use at the Annual Meeting of Shareholders to be held at 10:00 A.M. local time, on Monday, February 28, 2005, at the Holiday Inn, 195 Davidson Avenue, Somerset, NJ 08873, or at any adjournments thereof, for the purposes set forth in the accompanying Notice of Annual Meeting of Shareholders. The approximate date that this Proxy Statement and the enclosed proxy are first being sent to shareholders is January 25, 2005. Shareholders should review the information provided herein in conjunction with the Company’s 2004 Annual Report to Shareholders, which accompanies this Proxy Statement. The Company’s principal executive offices, and the mailing addresses for each of the Company’s principal executive officers, are located at 145 Belmont Drive, Somerset, New Jersey 08873, and its telephone number is (732) 271-9090.

**INFORMATION CONCERNING PROXY**

The enclosed proxy is solicited on behalf of the Company’s Board of Directors. The giving of a proxy does not preclude the right to vote in person should any shareholder giving the proxy so desire. Shareholders have an unconditional right to revoke their proxy at any time prior to the exercise thereof, either in person at the Annual Meeting or by filing with the Company’s Secretary at the Company’s headquarters a written revocation or duly executed proxy bearing a later date; however, no such revocation will be effective until written notice of the revocation is received by the Company at or prior to the Annual Meeting.

The cost of preparing, assembling, and mailing this Proxy Statement, the Notice of Annual Meeting of Shareholders, and the enclosed proxy is borne by the Company. In addition to the use of mail, employees of the Company may solicit proxies personally and by telephone. The Company’s employees will receive no compensation for soliciting proxies other than their regular salaries. The Company may request banks, brokers and other custodians, nominees, and fiduciaries to forward copies of the proxy material to their principals and to request authority for the execution of proxies. The Company may reimburse such persons for their expenses in so doing.

**PURPOSES OF THE MEETING**

At the Annual Meeting, the Company’s shareholders will consider and vote upon the following matters:

- (1) To elect three (3) members to the Company’s Board of Directors;
- (2) To ratify the selection of Deloitte & Touche LLP as the Company’s independent registered public accounting firm for the fiscal year ending September 30, 2005; and
- (3) To transact such other business as may properly come before the Annual Meeting and any adjournments or postponements thereof.

Unless contrary instructions are indicated on the enclosed proxy, all shares represented by valid proxies received pursuant to this solicitation (and which have not been revoked in accordance with the

procedures set forth above) will be voted (1) FOR the election of the nominees for directors named below, (2) FOR ratification of the Company's independent registered public accounting firm named above, and (3) by the proxies in their discretion upon any other proposals as may properly come before the Annual Meeting. In the event a shareholder specifies a different choice by means of the enclosed proxy, such shareholder's shares will be voted in accordance with the specification so made.

#### **OUTSTANDING VOTING SECURITIES AND VOTING RIGHTS**

As of the close of business on January 12, 2005 (the "Record Date"), the Company had 47,247,001 shares of no par value common stock ("Common Stock") outstanding. Each share of Common Stock is entitled to one vote on all matters presented at the Annual Meeting. The presence, either in person or by properly executed proxy, of the holders of the majority of the shares of Common Stock entitled to vote at the Annual Meeting is necessary to constitute a quorum at the Annual Meeting. Attendance at the Annual Meeting will be limited to shareholders as of the Record Date, their authorized representatives, and guests of the Company.

If the enclosed proxy is signed and returned, it may nevertheless be revoked at any time prior to the voting thereof at the pleasure of the shareholder signing it, either by a written notice of revocation received by the person or persons named therein or by voting the shares covered thereby in person or by another proxy dated subsequent to the date thereof.

Proxies in the accompanying form will be voted in accordance with the instructions indicated thereon, and, if no such instructions are indicated, will be voted in favor of the nominees for election as directors named below and for the other proposals herein.

The vote required for approval of each of the proposals before the shareholders at the Annual Meeting is specified in the description of such proposal below. For the purpose of determining whether a proposal has received the required vote, abstentions and broker non-votes will be included in the vote total, with the result that an abstention or broker non-vote, as the case may be will have the same effect as if no instructions were indicated.

**PROPOSAL I: ELECTION OF DIRECTORS**

Pursuant to EMCORE’s Restated Certificate of Incorporation, the Board of Directors of EMCORE is divided into three classes as set forth in the following table. The directors in each class hold office for staggered terms of three years. The Class A directors, Messrs. Russell, Richards, and Bogomolny, whose present terms expire in 2005, are being proposed for a new three-year term (expiring in 2008) at this Annual Meeting.

The shares represented by proxies returned executed will be voted, unless otherwise specified, in favor of the nominee for the Board of Directors named below. If, as a result of circumstances not known or unforeseen, any of such nominee shall be unavailable to serve as director, proxies will be voted for the election of such other person or persons as the Board of Directors may select. Each nominee for director will be elected by a plurality of votes cast at the Annual Meeting of Shareholders. Proxies will be voted FOR the election of the nominee unless instructions to “withhold” votes are set forth on the proxy card. Withholding votes will not influence voting results. Abstentions may not be specified as to the election of directors.

The following tables set forth certain information regarding the members of and nominees for the Board of Directors:

<b>Name and Other Information</b>	<b>Age</b>	<b>Class and Year in Which Term Will Expire</b>	<b>Principal Occupation</b>	<b>Served as Director Since</b>
<b>NOMINEES FOR ELECTION AT THE 2005 ANNUAL MEETING</b>				
Thomas J. Russell <sup>(2)(3)(4)</sup>	73	Class A 2005	Chairman of the Board, EMCORE Corporation	1995
Reuben F. Richards, Jr.	49	Class A 2005	President and Chief Executive Officer, EMCORE Corporation	1995
Robert Bogomolny <sup>(1)(3)(4)</sup>	66	Class A 2005	President, University of Baltimore	2002
<b>DIRECTORS WHOSE TERMS CONTINUE</b>				
Thomas G. Werthan	48	Class C 2006	Executive V.P. and Chief Financial Officer, EMCORE Corporation	1992
John Gillen <sup>(1)(2)(3)(4)</sup>	63	Class C 2006	Partner, Gillen and Johnson, P.A., Certified Public Accountants	2003
Charles Scott <sup>(1)(2)(3)(4)</sup>	55	Class B 2007	Chairman of William Hill plc	1998
Richard A. Stall	48	Class B 2007	Executive V.P. and Chief Technology Officer, EMCORE Corporation	1996
Robert Louis-Dreyfus <sup>(4)</sup>	58	Class B 2007	Chairman of IVS; Chairman of Infront Sports and Media AG	1997

(1) Member of Audit Committee.  
 (2) Member of Nominating Committee.  
 (3) Member of Compensation Committee. Dr. Russell was a member through February 2004. Mr. Bogomolny joined the committee in February 2004.  
 (4) Determined by the Board of Directors to be an independent director.

## DIRECTORS AND EXECUTIVE OFFICERS

Set forth below is certain information with respect to each of the nominees for the office of director and other directors and executive officers of EMCORE.

THOMAS J. RUSSELL, PH.D. has been a director of the Company since May 1995 and was elected Chairman of the Board on December 6, 1996. Dr. Russell founded Bio/Dynamics, Inc. in 1961 and managed the company until its acquisition by IMS International in 1973, following which he served as President of that company's Life Sciences Division. From 1984 until 1988, he served as Director, then as Chairman of IMS International until its acquisition by Dun & Bradstreet in 1988. From 1988 to 1992, he served as Chairman of Applied Biosciences, Inc., and was a Director until 1996. In 1990, Dr. Russell was appointed as a Director of Saatchi & Saatchi plc (now Cordiant plc), and served on that board until 1997. He served as a Director of adidas-Salomon AG from 1994 to 2001. He also served on the board of LD COM Networks until 2004. He holds a Ph.D. in physiology and biochemistry from Rutgers University.

REUBEN F. RICHARDS, JR. joined the Company in October 1995 as its President and Chief Operating Officer, and became Chief Executive Officer in December 1996. Mr. Richards has been a director of the Company since May 1995. From September 1994 to December 1996, Mr. Richards was a Senior Managing Director of Jesup & Lamont Capital Markets Inc. ("Jesup & Lamont" (an affiliate of a registered broker-dealer)). From December 1994 to December 1996, he was a member and President of Jesup & Lamont Merchant Partners, L.L.C. From 1992 through 1994, Mr. Richards was a principal with Hauser, Richards & Co., a firm engaged in corporate restructuring and management turnarounds. From 1986 until 1992, Mr. Richards was a Director at Prudential-Bache Capital Funding in its Investment Banking Division. Mr. Richards also serves on the board of the Company's GELcore LLC joint venture.

THOMAS G. WERTHAN joined the Company in 1992 as its Chief Financial Officer and a director. Mr. Werthan has over 22 years experience in assisting high technology, venture capital financed growth companies. Prior to joining the Company in 1992, he was associated with The Russell Group, a venture capital partnership, as Chief Financial Officer for several portfolio companies. The Russell Group was affiliated with Thomas J. Russell, Chairman of the Board of Directors of the Company. From 1985 to 1989, Mr. Werthan served as Chief Operating Officer and Chief Financial Officer for Audio Visual Labs, Inc., a manufacturer of multimedia and computer graphics equipment.

RICHARD A. STALL, PH.D. became a director of the Company in December 1996. Dr. Stall helped found the Company in 1984 and has been the Chief Technology Officer (previously titled Vice President - Technology) at the Company since October 1984, except for a sabbatical year in 1993 during which Dr. Stall acted as a consultant to the Company and his position was left unfilled. Prior to 1984, Dr. Stall was a member of the technical staff of AT&T Bell Laboratories and was responsible for the development of MBE technologies. He has co-authored more than 75 papers and holds seven patents on MBE and MOCVD technology and the characterization of compound semiconductor materials.

ROBERT LOUIS-DREYFUS has been a director of the Company since March 1997. Mr. Louis-Dreyfus was the Chairman of Louis Dreyfus Communications (now Neuf Telecom) from May 2000 through October 2004. From 1993 through 2001, he was Chairman of the Board of Directors and Chief Executive Officer of adidas-Salomon AG. From 1989 until 1993, Mr. Louis-Dreyfus was the Chief Executive Officer of Saatchi & Saatchi plc (now Cordiant plc). Since 1992, he has been an investor and a director of several other companies, and is currently serving as an advisory board member of The Parthenon Group since October 1998, Chairman of the Board of IVS since 2002, and Chairman of the Board of Infront Sports and Media AG since 2002. From 1982 until 1988, he served as Chief Operating Officer (1982 to 1983), and then as Chief Executive Officer (from 1984 to 1988), of IMS International until its acquisition by Dun & Bradstreet in 1988.

ROBERT BOGOMOLNY has served as a director of the Company since April 2002. Since August 2002, Mr. Bogomolny has served as President of the University of Baltimore. Prior to that, he served as Corporate Senior Vice President and General Counsel of G.D. Searle & Company, a pharmaceuticals manufacturer, from 1987 to 2001. At G.D. Searle, Mr. Bogomolny was responsible at various times for its legal, regulatory, quality control, and public affairs activities. He also led its government affairs department in Washington, D.C., and served on the Searle Executive Management Committee.

CHARLES SCOTT has served as a director of the Company since February 1998. Since January 1, 2004, he has served as Chairman of the Board of Directors of William Hill plc, a leading provider of bookmaking services in the United Kingdom. Prior to that, Mr. Scott served as Chairman of a number of companies, including Cordiant Communications Group plc, Saatchi & Saatchi Company plc, and Robert Walters plc.

JOHN GILLEN has served as a director of the Company since March 2003. Mr. Gillen has been a partner in the firm of Gillen and Johnson, P.A., Certified Public Accountants since 1974. Prior to that time, Mr. Gillen was employed by the Internal Revenue Service and Peat Marwick Mitchell & Company, Certified Public Accountants.

#### Non-Director Executive Officers

HOWARD W. BRODIE, ESQ., 37, joined the Company in August 1999 and serves as Executive Vice President, Chief Legal Officer, and Secretary of the Company. From 1995 to 1999, Mr. Brodie was with the law firm of White & Case LLP, where he practiced securities law and mergers and acquisitions. From 1994 to 1995, Mr. Brodie served as a judicial law clerk to Chief Judge Gilbert S. Merritt on the Sixth Circuit Court of Appeals. Mr. Brodie received his J.D. degree from Yale Law School in 1994.

SCOTT T. MASSIE, 43, joined the Company in September 2002 and serves as Executive Vice President and Chief Operating Officer. From 1997 to 2000, Mr. Massie was Chief Operating Officer of IQE plc, a merchant epi wafer supplier, and its predecessor, QED. In 2000, Mr. Massie became President of IQE, Inc., the U.S. subsidiary of IQE plc, and he held this position until 2002. Mr. Massie holds a B.S. in mathematics, a B.S. in physics, and an M.S. in physics, all from Virginia Tech University. He also is a Commonwealth Fellow of the Commonwealth of Virginia, and a Director of the Greater Albuquerque Chamber of Commerce.

## **COMPENSATION OF DIRECTORS**

The Board of Directors held seven meetings during fiscal 2004, and took other certain actions by unanimous written consent. Pursuant to its Directors' Stock Award Plan, the Company pays non-employee directors a fee in the amount of \$3,000 per Board meeting attended and \$500 for each committee meeting attended (\$600 for the Chairman of the committee), including in each case reimbursement of reasonable out-of-pocket expenses incurred in connection with such Board or committee meeting. Payment of all fees is made in common stock of the Company at the closing price on the NASDAQ National Market for the day prior to the meeting. No director who is an employee of the Company will receive compensation for services rendered as a director. From time to time, Board members are invited to attend meetings of Board committees of which they are not members; in such cases, such Board members receive a committee meeting fee of \$500. During fiscal 2004, all directors of the Company, except for Mr. Louis-Dreyfus, attended at least 75% of the aggregate meetings of the Board and committees on which they served, during their tenure on the Board.

## **NOMINATING COMMITTEE**

The Company's Nominating Committee currently consists of Messrs. Russell, Scott, and Gillen, each of whom is an independent director, as that term is defined by the NASDAQ listing standards. The Nominating Committee recommends new members to the Company's Board of Directors. The Nominating Committee meets once annually. A copy of the Charter of the Nominating Committee is posted on the Company's website, [www.emcore.com](http://www.emcore.com).

When considering a potential director candidate, the Nominating Committee looks for demonstrated character, judgment, relevant business, functional and industry experience, and a high degree of acumen. There are no differences in the manner in which the Nominating Committee evaluates nominees for director based on whether the nominee is recommended by a shareholder. The Company does not pay any third party to identify or assist in identifying or evaluating potential nominees.

The Nominating Committee will consider suggestions from shareholder regarding possible director candidates for election in 2006. Such suggestions, together with appropriate biographical information, should be submitted to the Company's Secretary. See the section titled "Shareholder Proposals" below under "General Matters" for details regarding the procedures and timing for the submission of such suggestions. Each director nominated in this Proxy was recommended for election by the Board of Directors. The Board of Directors did not receive any notice of a Board of Directors nominee recommendation in connection with this Proxy Statement from any shareholder.

## **LIMITATION OF OFFICERS' AND DIRECTORS' LIABILITY AND INDEMNIFICATION MATTERS**

The Company's Restated Certificate of Incorporation and By-Laws include provisions (i) to reduce the personal liability of the Company's directors for monetary damage resulting from breaches of their fiduciary duty, and (ii) to permit the Company to indemnify its directors and officers to the fullest extent permitted by New Jersey law. The Company has obtained directors' and officers' liability insurance that insures such persons against the costs of defense, settlement, or payment of a judgment under certain circumstances. There is no pending litigation or proceeding involving any director, officer, employee, or agent of the Company as to which indemnification is being sought. The Company is not aware of any pending or threatened litigation that might result in claims for indemnification by any director or executive officer.

## **RECOMMENDATION OF THE BOARD OF DIRECTORS**

**THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT SHAREHOLDERS VOTE "FOR" THE ELECTION OF EACH OF NOMINEES LISTED ABOVE UNDER PROPOSAL I.**

**SECURITY OWNERSHIP OF  
CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth as of January 6, 2005 certain information regarding the beneficial ownership of voting Common Stock by (i) each person or “group” (as that term is defined in Section 13(d)(3) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) known by the Company to be the beneficial owner of more than 5% of the voting Common Stock, (ii) each named executive officer of the Company, (iii) each director and nominee, and (iv) all directors and executive officers as a group (10 persons). Except as otherwise indicated, the Company believes, based on information furnished by such persons, that each person listed below has the sole voting and investment power over the shares of Common Stock shown as beneficially owned, subject to common property laws, where applicable. Shares beneficially owned include shares and underlying warrants and options exercisable within sixty (60) days of January 6, 2005. Unless otherwise indicated, the address of each of the beneficial owners is c/o the Company, 145 Belmont Drive, Somerset, NJ 08873.

<b>Name</b>	<b>Shares Beneficially Owned</b>	<b>Percent of Common Stock</b>
Thomas J. Russell <sup>(1)</sup> .....	5,015,554	10.6%
Reuben F. Richards, Jr. <sup>(2)</sup> .....	1,196,539	2.5%
Thomas G. Werthan <sup>(3)</sup> .....	343,263	*
Richard A. Stall <sup>(4)</sup> .....	442,403	*
Robert Louis-Dreyfus <sup>(5)</sup> .....	3,301,916	7.0%
Robert Bogomolny .....	77,367	*
John Gillen.....	18,438	*
Charles Scott <sup>(6)</sup> .....	31,107	*
Howard W. Brodie, Esq. <sup>(7)</sup> .....	137,741	*
Scott Massie <sup>(8)</sup> .....	26,944	*
All directors and executive officers as a group (10 persons) <sup>(9)</sup> .....	10,591,272	21.9%
State of Wisconsin Investment Board <sup>(10)</sup> .....	5,944,500	12.6%
Pioneer Global Asset Management <sup>(11)</sup> .....	3,726,600	7.9%
Capital Guardian Trust Co. <sup>(12)</sup> .....	3,621,140	7.7%
Wellington Management Company, LLP <sup>(13)</sup> .....	2,385,293	5.0%

\* Less than 1.0%

(1) Includes 2,280,035 shares are held by The AER Trust.

(2) Includes options to purchase 353,824 shares.

(3) Includes options to purchase 285,370 shares.

(4) Includes options to purchase 329,768 shares.

(5) All 3,301,916 shares held by Gallium Enterprises Inc.

(6) Includes 19,107 shares owned by Kircal, Ltd.

(7) Includes options to purchase 135,000 shares.

(8) Includes options to purchase 25,000 shares

(9) Includes options to purchase 1,123,962 shares.

(10) The address of State of Wisconsin Investment Board is 121 East Wilson Street, 2nd Floor, Madison, WI, 53703-3474.

(11) The address of Pioneer Investment Management, Inc., the U.S. subsidiary of Pioneer Global Asset Management S.p.A., is 66 Brooks Drive, Suite 55014, Braintree, MA 02184.

(12) The address of Capital Guardian Trust Co. is 222 South Hope Street, 54th Floor, Los Angeles, CA 90071-1447.

(13) The address of Wellington Management Company, LLP is 75 State Street, 19th Floor, Boston, MA, 02109-1809.

## EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth, as of September 30, 2004, the number of securities outstanding under each of EMCORE's stock option plans, the weighted average exercise price of such options, and the number of options available for grant under such plans:

	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
<b>Plan Category</b>			
Equity compensation plans approved by security holders.....	5,499,393	\$ 4.21	1,597,766
Equity compensation plans not approved by security holders.....	<u>1,920</u>	<u>0.23</u>	<u>-</u>
Totals.....	<u>5,501,313</u>	<u>\$ 4.21</u>	<u>1,597,766</u>

### SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Based on the Company's review of copies of all disclosure reports filed by directors and executive officers of the Company pursuant to Section 16(a) of the Exchange Act, as amended, and written representations furnished to the Company, the Company believes that there was compliance with all filing requirements of Section 16(a) applicable to directors and executive officers of the Company during the fiscal year, with the exception of one option grant to each of Messrs. Richards (145,000 shares), Stall (50,000 shares), Werthan (80,000 shares), Massie (40,000 shares) and Brodie (60,000 shares) made on May 18, 2004, which were not timely reported. The Company has since corrected its process.

### COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The Company's Compensation Committee currently consists of Messrs. Gillen, Bogomolny, and Scott. The Compensation Committee reviews and recommends to the Board of Directors the compensation and benefits of all executive officers of the Company, reviews general policy matters relating to compensation and benefits of executive officers and employees of the Company, and administers the issuance of stock options and stock appreciation rights and awards of restricted stock to the Company's officers and key salaried employees. No member of the Compensation Committee is now or ever was an officer or an employee of the Company. No executive officer of the Company serves as a member of the Compensation Committee of the Board of Directors of any entity one or more of whose executive officers serves as a member of the Company's Board of Directors or Compensation Committee. The Compensation Committee meets once annually.

## REPORT OF THE COMPENSATION COMMITTEE

*The following Report of the Compensation Committee does not constitute soliciting material, and should not be deemed filed or incorporated by reference into any other Company filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent the Company specifically incorporates this Report of the Compensation Committee by reference therein.*

### The Committee's Responsibilities

The Compensation Committee of the Board of Directors is composed entirely of independent directors. The Compensation Committee is responsible for setting and administering policies which govern EMCORE's executive compensation programs. The purpose of this report is to summarize the compensation philosophy and policies that the Compensation Committee applied in making executive compensation decisions in 2004.

### Compensation Philosophy

The Compensation Committee has approved compensation programs intended to:

- Attract and retain talented executive officers and key employees by providing total compensation competitive with that of other executives employed by companies of similar size, complexity and lines of business;
- Motivate executives and key employees to achieve strong financial and operational performance;
- Emphasize performance-based compensation, which balances rewards for short-term and long-term results;
- Reward individual performance;
- Link the interests of executives with shareholders by providing a significant portion of total pay in the form of stock-based incentives and requiring target levels of stock ownership; and
- Encourage long-term commitment to EMCORE.

### Compensation Methodology

Each year the Compensation Committee reviews data from market surveys, proxy statements, and independent consultants to assess EMCORE's competitive position with respect to the following three components of executive compensation:

- Base salary;
- Annual incentives; and
- Long-term incentives.

The Compensation Committee also considers individual performance, level of responsibility, and skills and experience in making compensation decisions for each executive.

## Components of Compensation

*Base Salary.* Base salaries for executives are determined based upon job responsibilities, level of experience, individual performance, comparisons to the salaries of executives in similar positions obtained from market surveys, and competitive data obtained from consultants and staff research. The goal for the base pay component is to compensate executives at a level which approximates the median salaries of individuals in comparable positions and markets. The Compensation Committee approves all salary increases for executive officers, as such are recommended to the Committee by the Company's Chief Executive Officer. Base pay increases were approved, effective January 1, 2004, for Messrs. Stall, Werthan, Brodie, and Massie as follows:

<b>Name</b>	<b>Existing Base</b>	<b>New Base</b>
Stall .....	\$215,000	\$235,000
Werthan.....	\$200,000	\$225,000
Brodie.....	\$195,000	\$210,000
Massie .....	\$215,000	\$215,000

*Annual Incentives.* Annual cash incentives are provided to executives to promote the achievement of performance objectives of EMCORE and the executive's particular business unit. In February 2004, the Compensation Committee awarded the following cash compensation based on recommendations from the CEO:

<b>Name</b>	<b>Cash Bonus</b>
Stall .....	\$75,000
Werthan.....	\$100,000
Brodie.....	\$100,000
Massie .....	\$80,000

*Long-Term Incentives.* In February 2004, as a component of 2004 compensation, the Compensation Committee approved awards of stock options to the following executive officers: Stall, Werthan, Brodie, and Massie. All of the stock options were granted under the 2000 Stock Option Plan and are to be awarded at the same time as the Company's general grant. The exercise price is equal to the fair market value of EMCORE Common Stock on the grant date. The options have a ten year term and will vest equally over four years.

<b>Name</b>	<b>Options</b>
Stall .....	50,000
Werthan.....	80,000
Brodie.....	60,000
Massie .....	40,000

## Compliance with Section 162(m) of the Internal Revenue Code

Under Section 162(m) of the Internal Revenue Code, EMCORE may not deduct annual compensation in excess of \$1 million paid to certain employees, generally its Chief Executive Officer and its four other most highly compensated executive officers, unless that compensation qualifies as performance-based compensation. While the Compensation Committee intends to structure performance-related awards in a way that will preserve the maximum deductibility of compensation awards, the Compensation Committee may from time to time approve awards that would vest upon the passage of time or other compensation, which would not result in qualification of those awards as performance-based compensation.

## Compensation of the Chief Executive Officer

The Compensation Committee reviews annually the compensation of the Chief Executive Officer and recommends any adjustments to the Board of Directors for approval. The Chief Executive Officer participates in the same programs and receives compensation based upon the same criteria as EMCORE's other executive officers. However, the Chief Executive Officer's compensation reflects the greater policy- and decision-making authority that the Chief Executive Officer holds and the higher level of responsibility he has with respect to the strategic direction of EMCORE and its financial and operating results. The components of Mr. Richards's 2004 compensation were:

*Base Salary.* After considering EMCORE's overall performance and competitive practices, the Compensation Committee recommended, and the Board of Directors approved, a 9% increase in Mr. Richards' base salary, to \$365,000, effective January 1, 2004.

*Annual Incentives.* Annual incentive compensation for Mr. Richards is based upon achievement of targets set by the Board of Directors. Based on 2003 performance, Mr. Richards received a payment of \$300,000, representing 82% of his target incentive opportunity.

*Long-Term Incentives.* In February 2004, Mr. Richards received a stock option award for 145,000 shares of EMCORE Common Stock to be granted at the same time as the Company's general grant with an exercise price at fair market value on the date of grant. The stock option has a ten-year term, and will vest 25% on each of the first four anniversaries of the grant date.

The Compensation Committee conducts its annual review of Chief Executive Officer performance and compensation after the close of the fiscal year, to assure thorough consideration of year-end results. Actions taken by the Board of Directors with respect to Mr. Richards' 2005 compensation will be reflected in the Proxy Statement for the 2006 annual meeting.

It is the Compensation Committee's policy and intention that, when taken together, the components of Mr. Richards' pay, including base salary, annual incentives, and long-term incentives, will result in compensation which approximates the 50th percentile of the market when incentive plan performance expectations are met and in compensation as high as the 75th percentile of the market when incentive plan performance expectations are exceeded.

This report has been provided by the Compensation Committee.

March 2004

### COMPENSATION COMMITTEE

John Gillen, Chairman  
Charlie Scott  
Robert Bogomolny

## EXECUTIVE COMPENSATION

The following table sets forth certain information concerning the annual and long-term compensation for services in all capacities to the Company for fiscal years ended September 30, 2004, 2003, and 2002 of those persons who during such fiscal year (i) served as the Company's chief executive officer, and (ii) were the four most highly-compensated officers (other than the chief executive officer) (collectively, the "Named Executive Officers"):

<b>Annual Compensation</b>						
<b>Name and Principal Position</b>	<b>Fiscal Year</b>	<b>Salary</b>	<b>Bonus <sup>(1)</sup></b>	<b>Other Annual Compensation</b>	<b>Long-term Compensation Securities Underlying Options</b>	<b>All Other Compensation</b>
Reuben F. Richards, Jr.	2004	\$356,923	\$325,000	--	145,000	--
President and	2003	\$327,307	--	--	--	--
Chief Executive Officer	2002	\$315,000	\$335,000	--	120,000	--
Richard A. Stall	2004	\$231,615	\$100,000	--	50,000	--
Executive Vice President and	2003	\$203,461	--	--	--	--
Chief Technology Officer	2002	\$185,000	--	--	100,000	--
Thomas G. Werthan	2004	\$218,269	\$125,000	--	80,000	--
Executive Vice President and	2003	\$190,392	--	--	--	--
Chief Financial Officer	2002	\$175,000	--	--	42,500	--
Howard W. Brodie, Esq.	2004	\$205,961	\$125,000	--	60,000	--
Executive Vice President and	2003	\$181,538	--	--	--	--
Chief Legal Officer	2002	\$150,800	--	--	42,500	--
Scott Massie	2004	\$197,482	\$80,000	--	40,000	--
Executive Vice President and	2003	\$175,000	--	--	--	--
Chief Operating Officer	2002	\$ 6,730	\$79,936	--	50,000	--

### Notes

(1) In addition to the bonus amounts described in the March 2004 Report of the Compensation Committee, the bonuses listed above for Messrs. Richards, Stall, Werthan, and Brodie include an additional \$25,000 bonus awarded in November 2003.

## OPTION GRANTS IN FISCAL 2004

The following table sets forth information with respect to option grants to the Named Executive Officers during fiscal 2004:

- The number of shares of EMCORE common stock underlying options granted during fiscal 2004;
- The percentage that such options represent of all options of the same class granted to employees during fiscal 2004;
- The exercise price (equal to the fair market value of the stock on the date of grant);
- The expiration date of the grant; and
- The potential realizable value at assumed annual rates of stock price appreciation (5% and 10%) through the expiration of the option term.

	<b>Number of Options Granted</b>	<b>% of Total Options Granted to Employees in Fiscal Year</b>	<b>Exercise Price (\$/Share)</b>	<b>Expiration Date</b>	<b>Potential Realizable Value @ 5%</b>	<b>Potential Realizable Value @ 10%</b>
Reuben F. Richards, Jr....	145,000	8.0%	\$2.63	5/18/2014	\$ 239,250	\$ 607,550
Thomas G. Werthan.....	80,000	4.4%	\$2.63	5/18/2014	\$ 132,000	\$ 335,200
Richard A. Stall .....	50,000	2.8%	\$2.63	5/18/2014	\$ 82,500	\$ 209,500
Howard W. Brodie, Esq..	60,000	3.3%	\$2.63	5/18/2014	\$ 99,000	\$ 251,400
Scott Massie.....	40,000	2.2%	\$2.63	5/18/2014	\$ 66,000	\$ 167,600

**AGGREGATED OPTION EXERCISES IN FISCAL 2004  
AND YEAR-END OPTION VALUES <sup>(1)</sup>**

The following table sets forth the number of shares acquired by the Named Executive Officers upon options exercised during fiscal 2004 and the value thereof, together with the number of exercisable and unexercisable options held by the Named Executive Officers on September 30, 2004 and the aggregate gains that would have been realized had these options been exercised on September 30, 2004, even though such options had not been exercised by the Named Executive Officers.

<b>Name</b>	<b>Total Number of Unexercised Options at September 30, 2004<sup>(2)</sup></b>		<b>Value of Unexercised In-the-Money Options at September 30, 2004<sup>(3)</sup></b>	
	<b>Exercisable</b>	<b>Unexercisable</b>	<b>Exercisable</b>	<b>Unexercisable</b>
Reuben F. Richards, Jr.....	323,824	175,000	\$26,765	--
Richard A. Stall .....	304,768	75,000	\$1,205	--
Thomas G. Werthan.....	274,745	90,625	\$17,210	--
Howard W. Brodie, Esq.....	124,375	70,625	--	--
Scott Massie.....	25,000	65,000	--	--

(1) No options were exercised by the Named Executive Officers in fiscal 2004.

(2) This represents the total number of shares subject to stock options held by each Named Executive Officer at September 30, 2004. These options were granted on various dates during the fiscal years 1995 through 2004.

(3) These amounts represent the difference between the exercise price of the stock options and the closing price of the Common Stock on September 30, 2004 for all the in-the-money options held by each Named Executive Officer. The in-the-money stock option exercise price is \$1.515. These stock options were granted at the fair market value of the Common Stock on the grant date.

**CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

From time to time, prior to July 2002, EMCORE has lent money to certain of its executive officers and directors. Pursuant to due authorization from EMCORE's Board of Directors, EMCORE lent \$3.0 million to the Chief Executive Officer (CEO) in February 2001. The promissory note matures on February 22, 2006 and bears interest, compounded annually, at a rate of (a) 5.18% per annum through May 23, 2002, and (b) 4.99% from May 24, 2002 through maturity. All interest is payable at maturity. The note is secured by a pledge of shares of EMCORE's common stock. Accrued interest at September 30, 2004 totaled \$0.6 million and is recorded with the loan principal within other assets. During fiscal 2004, the highest amount of the CEO's indebtedness to EMCORE was \$3.6 million.

In addition, pursuant to due authorization of our Board of Directors, EMCORE lent \$82,000 to the Chief Financial Officer (CFO) of EMCORE in December 1995. The promissory note executed by the CFO does not bear interest, and provides for the potential offset of the loan via bonuses payable to the CFO over a period of up to 25 years. The balance outstanding on the loan is currently \$82,000, and no larger amount has been outstanding since the beginning of fiscal 2004.

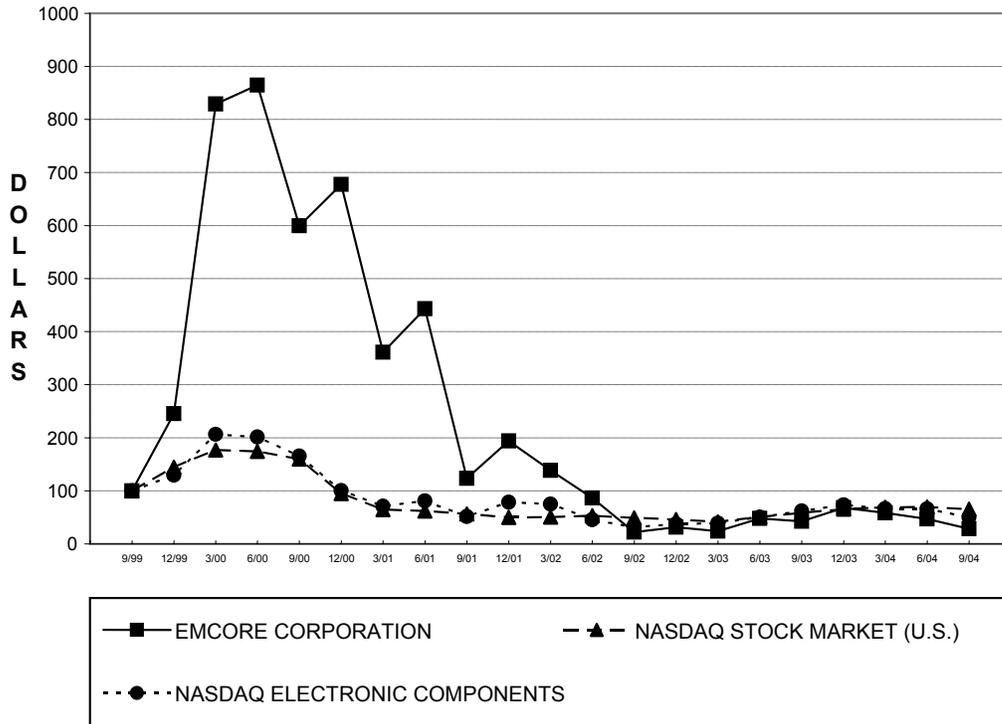
The Company paid \$18,403 to Dr. Russell and Rectrix Aviation, which is controlled by Dr. Russell, as reimbursement for the use of Rectrix Aviation aircraft for air travel on Company business in fiscal 2004 by directors and/or officers of the Company. These reimbursements were based on published first class fares by commercial airlines traveling the same or similar routes, which fares were substantially less than the flight costs actually incurred by Dr. Russell and/or Rectrix Aviation. Fiscal 2003 and 2002 reimbursements for the use of Rectrix Aviation aircraft for air travel on Company business were \$96,200 and \$108,470, respectively. The Company believes that these transactions and relationships were reasonable and in the best interest of the Company.

## STOCK PERFORMANCE GRAPH

The following Stock Performance Graph does not constitute soliciting material, and should not be deemed filed or incorporated by reference into any other Company filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent the Company specifically incorporates this Stock Performance Graph by reference therein.

The following graph and table compares the cumulative total shareholders' return on the Company's common stock for the five-year period from the September 30, 1999 through September 30, 2004 with the cumulative total return on the NASDAQ Stock Market Index and the NASDAQ Electronic Components Stocks Index (SIC Code 3674). The comparison assumes \$100 was invested on September 30, 1999 in the Company's common stock. The Company did not declare, nor did it pay, any dividends during the comparison period.

### COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN\* AMONG EMCORE CORPORATION, THE NASDAQ STOCK MARKET (U.S.) INDEX AND THE NASDAQ ELECTRONIC COMPONENTS INDEX



\* \$100 invested on 9/30/99 in stock or index- including reinvestment of dividends Fiscal year ending September 30.

**PROPOSAL II: APPOINTMENT OF INDEPENDENT  
REGISTERED PUBLIC ACCOUNTING FIRM**

Deloitte & Touche LLP, an independent registered public accounting firm, audited the financial statements of EMCORE Corporation for the fiscal year ending September 30, 2004. The Audit Committee and the Board of Directors have selected Deloitte & Touche LLP as the Company's independent registered public accounting firm for the fiscal year ending September 30, 2005. The ratification of the appointment of Deloitte & Touche LLP will be determined by the vote of the holders of a majority of the shares present in person or represented by proxy at the Annual Meeting. If this appointment of Deloitte & Touche LLP is not ratified by shareholders, the Board of Directors will appoint another independent registered public accounting firm whose appointment for any period subsequent to the 2005 Annual Meeting of Shareholders will be subject to the approval of shareholders at that meeting.

Representatives of Deloitte & Touche LLP are expected to attend the Annual Meeting of Shareholders. They will have the opportunity to make a statement if they desire to do so, and are expected to be available to answer appropriate questions.

**FISCAL 2004 & 2003 FEES AND SERVICES**

Deloitte & Touche LLP was the independent registered public accounting firm that audited EMCORE's financial statements for fiscal 2004 and 2003. In addition to performing the audit services for fiscal 2004 and 2003, the Company also retained Deloitte & Touche LLP to perform other non-audit related services during these periods.

The aggregate fees billed by Deloitte & Touche LLP in connection with audit and non-audit services rendered for fiscal 2004 and 2003 are as follows:

	<b>Fiscal 2004</b>	<b>Fiscal 2003</b>
Audit fees <sup>(1)</sup> .....	\$ 279,000	\$ 209,000
Audit-related fees <sup>(2)</sup> .....	156,000	123,000
Tax fees <sup>(3)</sup> .....	59,000	86,000
All other fees <sup>(4)</sup> .....	<u>15,000</u>	<u>-</u>
Total .....	<u>\$ 509,000</u>	<u>\$ 418,000</u>

Notes

- (1) Represents fees for professional services rendered in connection with the audit of our annual financial statements, reviews of our quarterly financial statements, and advice provided on accounting matters that arose in connection with audit services.
- (2) Represents fees for professional services related to the audits of our employee benefit plan and other statutory or regulatory filings.
- (3) Represents fees for tax services provided in connection with general tax matters.
- (4) All other fees represent fees for services provided to EMCORE that are not otherwise included in the categories above.

## REPORT OF THE AUDIT COMMITTEE

*The following Report of the Audit Committee does not constitute soliciting material, and should not be deemed filed or incorporated by reference into any other Company filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent the Company specifically incorporates this Report of the Audit Committee by reference therein.*

The Company has a separately-designated standing audit committee (the “Audit Committee”) established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act. The Audit Committee currently consists of Messrs. Scott, Gillen, and Bogomolny. Each member of the audit committee is currently an independent director within the meaning of NASD Rule 4200(a)(15). The Board of Directors has determined that Messrs. Scott and Gillen are each audit committee financial experts. The Audit Committee met five times in fiscal 2004. The Audit Committee performs the functions set forth in the EMCORE Corporation Audit Committee Charter, which has been adopted by the Board of Directors. The Audit Committee Charter is available on our website at [www.emcore.com](http://www.emcore.com).

The Audit Committee has reviewed and discussed the Company’s audited financial statements for fiscal 2004 with management of the Company. The Audit Committee has discussed with the Company’s independent registered public accounting firm the matters required to be discussed by SAS 61. The Audit Committee has received the written disclosures and letter from the Company’s independent registered public accounting firm required by independence Standards Board Standard No. 1, and has discussed with such accounting firm the independence of such accounting firm. Based on the foregoing review and discussions, the Audit Committee recommended to the Board of Directors that the Company’s audited financial statements be included in the Company’s Annual Report on Form 10-K for Fiscal 2004, which was filed on December 14, 2004.

The Audit Committee has determined that the provision of non-audit services by Deloitte & Touche LLP is compatible with maintaining the independence of Deloitte & Touche LLP. In accordance with its charter, the Audit Committee approves in advance all audit and non-audit services to be rendered by Deloitte & Touche LLP. In considering whether to approve such services, the Audit Committee will consider the following:

- Whether the services are performed principally for the Audit Committee
- The effect of the service, if any, on audit effectiveness or on the quality and timeliness of the Company’s financial reporting process
- Whether the service would be performed by a specialist (e.g. technology specialist) and who also provide audit support and whether that would hinder independence
- Whether the service would be performed by audit personnel and, if so, whether it will enhance the knowledge of the Company’s business
- Whether the role of those performing the service would be inconsistent with the auditor’s role (e.g., a role where neutrality, impartiality and auditor skepticism are likely to be subverted)
- Whether the audit firm’s personnel would be assuming a management role or creating a mutuality of interest with management
- Whether the auditors would be in effect auditing their own numbers
- Whether the project must be started and completed very quickly
- Whether the audit firm has unique expertise in the service, and
- The size of the fee(s) for the non-audit service(s)

During fiscal 2004, all professional services provided Deloitte & Touche LLP were pre-approved by the Audit Committee in accordance with this policy.

AUDIT COMMITTEE

Charles Thomas Scott, Chairman  
Robert Bogomolny  
John Gillen

**RECOMMENDATION OF THE BOARD OF DIRECTORS**

**THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE “FOR” THE RATIFICATION OF THE APPOINTMENT OF DELOITTE & TOUCHE LLP AS THE COMPANY’S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM UNDER PROPOSAL II.**

## GENERAL MATTERS

### Annual Report on Form 10-K and Financial Statements

The Company's 2004 Annual Report on Form 10-K is being mailed to the Company's shareholders together with this Proxy Statement. Additional exhibits to the Form 10-K not included in this mailing will be furnished upon written request directed to the Company at 145 Belmont Drive, Somerset, NJ 08873, Attention: Investor Relations. The Company's 2004 Annual Report on Form 10-K (including exhibits thereto) and this Proxy Statement are also available on the Company's website ([www.emcore.com](http://www.emcore.com)).

### Shareholder Proposals

Shareholder proposals intended to be presented at the 2006 Annual Meeting of Shareholders, including nominations for the Company's Board of Directors, must be received by the Company no later than September 29, 2005. Proposals may be mailed to the Company, to the attention of Howard W. Brodie, Secretary, 145 Belmont Drive, Somerset, NJ 08873. Proposals must comply with all applicable SEC rules.

### Shareholder Communications with the Board

Shareholders may communicate with the Company's Board of Directors through its Secretary by writing to the following address: Board of Directors, c/o Howard W. Brodie, Secretary, EMCORE Corporation, 145 Belmont Drive, Somerset, NJ 08873. The Company's Secretary will forward all correspondence to the Board of Directors, except for junk mail, mass mailings, product complaints or inquiries, job inquiries, surveys, business solicitations or advertisements, or patently offensive or otherwise inappropriate material. The Company's Secretary may forward certain correspondence, such as product-related inquiries, elsewhere within the Company for review and possible response.

### Board Attendance at Annual Meetings

The Company strongly encourages members of the Board of Directors to attend the Company's Annual Meeting of Shareholders, and historically a majority have done so. For example, 4 of 7 directors attended the 2003 Annual Meeting, and 6 of 8 directors attended the 2004 Annual Meeting.

### Other Matters

The Board of Directors knows of no other business which will be presented at the meeting. If, however, other matters are properly presented, the persons named in the enclosed proxy will vote the shares represented thereby in accordance with their judgment on such matters.

By Order of the Board of Directors,



HOWARD W. BRODIE  
SECRETARY

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## CORPORATE INFORMATION

### BOARD OF DIRECTORS

**Thomas J. Russell, Ph.D.**

Chairman of the Board

**Reuben F. Richards, Jr.**

President, Chief Executive Officer, and Director  
(Principal Executive Officer)

**Thomas G. Werthan**

Executive Vice President, Chief Financial Officer, and Director  
(Principal Accounting and Financial Officer)

**Richard A. Stall**

Executive Vice President, Chief Technology Officer, and Director

**Robert Louis-Dreyfus**

Director

**Robert Bogomolny**

Director

**Charles T. Scott**

Director

**John Gillen**

Director

### AUDITORS

Deloitte & Touche LLP  
Two Hilton Court  
Parsippany, NJ 07054

### TRANSFER AGENT

American Stock Transfer & Trust Company  
59 Maiden Lane  
New York, NY 10038

### INVESTOR RELATIONS

TTC Group  
24 John Street, 4th Floor  
New York, NY 10038  
(212) 227-0997

### STOCK LISTING

The Company's common stock is traded on the NASDAQ National Market under the symbol "EMKR"

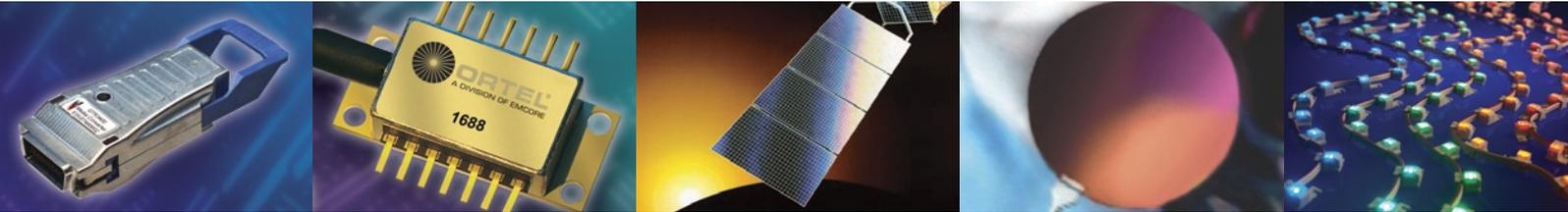
### CORPORATE PROFILE

EMCORE Corporation offers a broad portfolio of compound semiconductor-based components and subsystems for the broadband, fiber optic, satellite, and wireless communications markets. The company's integrated solutions philosophy embodies state-of-the-art technology, material science expertise, and a shared vision of our customer's goals and objectives to be leaders in the transport of voice, data, and video over copper, hybrid fiber/coax (HFC), fiber, satellite, and wireless networks.

EMCORE's solutions include: optical components and subsystems for fiber-to-the-premise, cable television, and high speed data and telecommunications networks; solar cells, solar panels, and fiber optic ground station links for global satellite communications; and electronic materials for high bandwidth wireless communications systems, such as Wi-Fi Internet access and cell phones. Through its joint venture participation in GELcore, LLC, EMCORE plays a vital role in developing and commercializing next-generation High-Brightness LED technology for use in the general and specialty illumination markets.

*For further information about EMCORE,  
visit [www.emcore.com](http://www.emcore.com).*





#### HEADQUARTERS

EMCORE Corporation  
145 Belmont Drive  
Somerset, NJ 08873  
(732) 271-9090

#### ADDITIONAL LOCATIONS

EMCORE Fiber Optics  
1600 Eubank Boulevard, SE  
Albuquerque, NM 87123

EMCORE Fiber Optics  
5224 Katrine Avenue  
Downers Grove, IL 60515

EMCORE Fiber Optics  
1529 Continental Drive  
Eau Claire, WI 54701

Ortel, a Division of EMCORE  
2015 West Chestnut Street  
Alhambra, CA 91803

EMCORE Photovoltaics  
10420 Research Road, SE  
Albuquerque, NM 87123

EMCORE Photovoltaics  
12521 Don Julian Road  
City of Industry, CA 91745

EMCORE Silicon Valley  
3350 Scott Boulevard, Bldg. 5  
Suite #01  
Santa Clara, CA 95054