AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MARCH 4, 1997 REGISTRATION NO. 333-18565 SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 AMENDMENT NO. 5 T0 FORM S-1 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933 **EMCORE CORPORATION** (EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER) **NEW JERSEY** 3670 22-2746503 (PRIMARY STANDARD INDUSTRIAL (I.R.S. EMPLOYER CLASSIFICATION CODE NUMBER) IDENTIFICATION NO.) (STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION) 394 ELIZABETH AVENUE, SOMERSET, NEW JERSEY 08873 (908) 271-9090

(ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER,
INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES) THOMAS G. WERTHAN **EMCORE CORPORATION** 394 ELIZABETH AVENUE SOMERSET, NEW JERSEY 08873 (908) 271-9090 (NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE) COPIES TO: ELLEN B. CORENSWET, ESQ. BABAK YAGHMAIE, ESQ. KEVIN KEOGH, ESQ. WHITE & CASE BROBECK, PHLEGER & HARRISON LLP 1155 AVENUE OF THE AMERICAS 1633 BROADWAY NEW YORK, NEW YORK 10036 (212) 819-8200 NEW YORK, NEW YORK 10019 (212) 581-1600 APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: as soon as practicable after the effective date of this Registration Statement. If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. [\_] If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, please check the following box and list the Securities Act of 1933 registration statement number of the earlier effective registration statement for the same offering. [\_] If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act of 1933 registration statement number of the earlier effective registration statement for the same offering. [\_] If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. [\_] THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

SUBJECT TO COMPLETION, DATED MARCH 4, 1997

PROSPECTUS , 1997

2,500,000 SHARES

LOGO [OF EMCORE} COMMON STOCK

All the 2,500,000 shares of Common Stock offered hereby (the "Offering") are being issued and sold by EMCORE Corporation ("EMCORE" or the "Company").

Prior to the Offering, there has been no public market for the Common Stock of the Company. It is currently anticipated that the initial public offering price will be between \$9.00 and \$11.00 per share. See "Underwriting" for a discussion of the factors considered in determining the initial public offering price.

The Company has applied for quotation of the Common Stock on the Nasdaq National Market under the symbol "EMKR."

SEE "RISK FACTORS" BEGINNING ON PAGE 6 FOR INFORMATION THAT SHOULD BE CONSIDERED BY PROSPECTIVE INVESTORS.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS.ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

PRICE UNDERWRITING PROCEEDS
TO THE DISCOUNTS AND TO THE

PUBLIC COMMISSIONS(1) COMPANY(2)

 Per Share.....
 \$
 \$

 Total(3).....
 \$
 \$

(1) The Company has agreed to indemnify the Underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). See "Underwriting."

- (2) Before deducting expenses, estimated at \$710,000, which will be paid by the Company.
- (3) The Company has granted the several Underwriters an option, exercisable within 30 days of the date hereof, to purchase up to 375,000 additional shares of Common Stock solely to cover over-allotments, if any. If such option is exercised in full, the total Price to the Public, Underwriting Discounts and Commissions and Proceeds to the Company will be and , respectively. See "Underwriting."

The shares of Common Stock are being offered by the several Underwriters when, as and if delivered to and accepted by the Underwriters and subject to various prior conditions, including their right to reject orders in whole or in part. It is expected that delivery of the share certificates will be made in New York, New York on or about , 1997.

DONALDSON, LUFKIN & JENRETTE SECURITIES CORPORATION

NEEDHAM & COMPANY, INC.

## PROSPECTUS SUMMARY

The following summary is qualified in its entirety by the more detailed information, including "Risk Factors" and the Financial Statements and Notes thereto, appearing elsewhere in this Prospectus. Except as otherwise indicated, (a) all references to fiscal years of the Company in this Prospectus refer to fiscal years ended on September 30 and (b) all information in this Prospectus assumes no exercise of the Underwriters' over-allotment option and reflects a 3.4-for-1 reverse stock split of the Common Stock effective February 3, 1997.

#### THE COMPANY

EMCORE, founded in 1984, designs and develops compound semiconductor materials (such as gallium arsenide) and process technology and is a leading manufacturer of production systems used to fabricate compound semiconductor wafers. The Company provides its customers, both in the U.S. and internationally, with materials science expertise, process technology and compound semiconductor production systems that enable the manufacture of commercial volumes of high-performance electronic and optoelectronic devices. In 1996, in response to the growing need of its customers to cost effectively get to market faster with high volumes of new and improved high-performance products, the Company expanded its product offerings to include the design and production of wafers and package-ready devices. The Company's market share for its wafer and package-ready device product offerings is currently not significant. The Company believes that it is the only company that offers such a broad range of products and services to the compound semiconductor industry.

Recent advances in information technologies have created a growing need for power-efficient, high- performance electronic systems that operate at very high frequencies, have increased storage, computational and display capabilities, and can be produced cost-effectively in commercial volumes. In the past, electronic systems manufacturers relied on advances in silicon semiconductor technology to meet many of these demands. However, the newest generation of high-performance electronic and optoelectronic applications require certain performance characteristics which are generally not achievable using silicon-based components.

Compound semiconductors have emerged as an enabling technology to meet the complex requirements of today's advanced information systems. Compound semiconductor devices operate at much higher speeds than silicon devices with lower power consumption and less noise and distortion. In addition, unlike silicon-based devices, compound semiconductor devices have optoelectronic capabilities that enable them to emit and detect light. As a result, electronics manufacturers are increasingly integrating compound semiconductor devices into their products in order to achieve higher performance in a wide variety of applications, including wireless communications, telecommunications, computers, and consumer and automotive electronics.

Historically, developers of compound semiconductor devices have met capacity needs with in-house systems and technologies. However, the requirements for the production of commercial volumes of high- performance compound semiconductor devices have often exceeded the capabilities of such in-house solutions. The Company believes that wafers fabricated using metal organic chemical vapor deposition ("MOCVD") possess better uniformity, as well as better optical and electronic properties, than wafers fabricated by traditional methods. The Company believes that its proprietary TurboDisc(TM) MOCVD system provides a low cost of ownership and is the critical enabling process step in the volume manufacture of high-performance electronic and optoelectronic devices.

The Company's objective is to capitalize on its position as a leading developer of MOCVD process technology and production systems to become a leading supplier of wafers and package-ready devices. In 1995, the Company had a 26% share of the market for sales of MOCVD systems, according to VLSI Research Inc., which regularly publishes research on this market. In addition, the Company seeks to form strategic alliances with customers in order to obtain long-term development and high volume production contracts. The Company currently has a strategic relationship with General Motors Corporation ("General Motors") to develop and

manufacture magneto-resistive ("MR") sensor products for use in automotive applications. In addition, the Company has been integrally involved in the development of solar cell technologies for telecommunications satellites and transmitter and display technologies for wireless communications applications.

The Company works closely with its customers in designing and developing materials processes to be used in production systems for its customers' end-use applications. The Company has sold more than 180 systems worldwide to a broad base of leading electronics manufacturers, including: Spectrolab Inc. (a subsidiary of Hughes Electronics Company, "Hughes-Spectrolab"), General Motors, Hewlett Packard Co., Lucent Technologies, Inc., Motorola, Inc., Rockwell International Corp. ("Rockwell"), Samsung Co., Siemens AG, L.M. Ericsson AB, Texas Instruments Incorporated and 13 of the largest electronics manufacturers in Japan. The Company's systems are used by these customers to manufacture epitaxial wafers which are then processed into components used in a variety of end-use products, including: cellular telephones, pagers, personal communication service ("PCS") handsets, direct broadcast satellite ("DBS") systems, CD-ROMs, digital versatile disk ("DVD") players, flat-panel displays and electronic automotive components. In fiscal 1996, only one customer, Hughes-Spectrolab, accounted for more than 10% of the Company's revenues; sales to this customer accounted for 23.6% of the Company's revenues. In fiscal 1996, no other customer individually accounted for more than 7.5% of the Company's revenues.

# THE OFFERING

# SUMMARY FINANCIAL DATA

	YEARS END	DED SEPTEME	BER 30,	ENDED DECEMB (UNAUDIT	ER 31,
	1994 (IN THO	1995 DUSANDS, EX	1996 KCEPT PER	1995 SHARE AMOUNT	1996 S)
STATEMENT OF INCOME DATA: Revenues	3,825	\$ 18,137 S 8,210	9,172	1,473	1,868
Operating income (loss) Net (loss) income Net (loss) income per	116 (170)	1,516	(2,753) (3,176)	(885)	(3,798)
share(2) Shares used in computing net (loss) income per share(2)	(\$.11) 1,502	\$0.48 3,145	(\$0.72) 4,438	(\$0.20) 4,438	(\$0.86) 4,438

AS OF DECEMBER 31, 1996

ACTUAL AS ADJUSTED(3)(4)

(IN THOUSANDS)

THREE MONTHS

BALANCE SHEET DATA:

Working capital	(\$1,961)	\$16,579
Total assets	29,283	41,823
Long-term debt, net	9,063	5,063
Shareholders' equity	324	22,863

- (1) Excludes: (i) 647,059 shares of Common Stock reserved for issuance under the Company's 1995 Incentive and Non-Statutory Stock Option Plan, as amended, of which 464,017 shares are subject to outstanding options at exercise prices varying from \$3.03 per share to \$10.20 per share, (ii) warrants to purchase 9,102 shares of Common Stock at an exercise price of \$17.00 per share, exercisable until July 24, 1997, (iii) warrants to purchase 2,330,784 shares of Common Stock at an exercise price of \$4.08 per share, exercisable until May 1, 2001; and (iv) warrants to purchase 1,225,490 shares of Common Stock at an exercise price of \$10.20 per share, exercisable until September 1, 2001. See "Management--Stock Option Plan," "Description of Capital Stock--Warrants" and Note 12 of the Notes to Financial Statements.
- (2) Net (loss) income per share and shares used in computing net (loss) income per share assumes: 1,443,936 shares of Common Stock issuable under warrants and stock options issued during the twelve months preceding the filing date of the registration statement relating to the Company's initial public offering, using the treasury stock method.
- offering, using the treasury stock method.

  (3) Reflects the sale by the Company of the 2,500,000 shares of Common Stock offered hereby, after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company and the application of the estimated net proceeds therefrom. See "Use of Proceeds."
- (4) In October 1996, the Company established a \$10.0 million demand note facility with First Union National Bank. As of December 31, 1996, the Company had drawn down \$6.0 million from this facility. The Company intends to use part of the net proceeds of the Offering to pay down the balance outstanding under this facility. See "Use of Proceeds."

#### RISK FACTORS

An investment in the Common Stock offered by this Prospectus involves a high degree of risk. Risks involved in an investment in the Common Stock include, without limitation: risks related to expansion of the Company's business, risks related to continued growth, risks arising from the need to increase manufacturing capacity, the Company's history of operating losses, fluctuations in the Company's operating results, risks related to customer concentration, risks relating to the lengthy sales and qualification cycles for the Company's products, risks related to the Company's reliance on trade secrets, risks related to the Company's reliance on trade secrets, risks related to the Company's dependence on limited product offerings, manufacturing risks, risks from reliance on international sales, risks arising from rapid technological change, risks regarding the acceptance of new compound semiconductor technology by customers, risks of increased competition, risks from continued existence of a control group, risks related to dependence on key employees, risks related to environmental regulation, risks arising from the absence of a public market, risks of uncertainty of additional funding and risks of certain anti-takeover provisions. See "Risk Factors."

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This Prospectus contains certain statements of a forward-looking nature relating to future events, such as developments of processes and commencement of production, or the future financial performance of the Company. Prospective investors are cautioned that such statements are only projections and that actual events or results may differ materially. In evaluating such statements, prospective investors should specifically consider the various factors identified in this Prospectus, including the matters set forth under the heading "Risk Factors" which could cause actual results to differ materially from those indicated by such forward-looking statements.

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Certain persons participating in this offering may engage in transactions that stabilize, maintain or otherwise affect the price of the Common Stock. Specifically, the Underwriters may overallot in connection with the offering and may bid for and purchase shares of the Common Stock in the open market. For a description of these activities, see "Underwriting."

An investment in the shares of Common Stock offered by this Prospectus involves a high degree of risk. In addition to the other matters described in this Prospectus, prospective investors should carefully consider the following factors before making a decision to purchase the Common Stock offered hereby.

Risks Related to Expansion of Business. The Company has recently experienced a significant increase in the demand for its compound semiconductor production systems. There can be no assurance that the market for compound semiconductor production systems will continue to grow or that the Company will be able to continue to develop compound semiconductor systems for the market or that it will be able to meet market demands or maintain and expand its customer base for such products. A failure to do so would have a material adverse effect on the Company's business, financial condition and results of operations. The Company has also recently expanded its operations to include the production of compound semiconductor wafers and package-ready devices. The Company's expansion into the production of such new products involves substantial capital expenditures and a significant risk that management will be unsuccessful. The Company presently anticipates utilizing a significant portion of the net proceeds of the Offering for such expenditures. The development, production and sale of compound semiconductor wafers and packageready devices entail yield, process and capacity-related risks that differ from those associated with the development, production and sale of the Company's compound semiconductor production systems. The markets for compound semiconductor wafers and package-ready devices are in a relatively early stage of development. There can be no assurance that these markets will continue to grow or that the Company will be successful in developing or marketing such products. The Company's failure to successfully develop or market such products could have a material adverse effect on the Company's business, financial condition and results of operations. See "Use of Proceeds," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business--Products."

Risks Related to Continued Growth. The Company has recently experienced a period of rapid growth, has added new personnel and intends to continue to expand. For example, the number of the Company's employees has increased from 95 as of September 30, 1995 to 204 as of December 31, 1996. Because of the level of scientific and management expertise necessary to support such growth, the Company must recruit and retain highly qualified and well-trained technical and management personnel. There may be only a limited number of persons with the requisite skills to serve in these positions, and it may become increasingly difficult for the Company to hire such personnel over time. The Company's expansion may also significantly strain management, financial, sales and marketing and other personnel and systems. In order to effectively manage its growth, the Company must continue to enhance its systems and controls and successfully expand, train and manage its employee base. There can be no assurance that the Company will be able to manage this expansion effectively or will be able to recruit, train and retain sufficient technical and managerial personnel. Any failure to manage the Company's growth properly could have a material adverse effect on the Company's business, financial condition and results of operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations.'

Risks Arising from the Need to Increase Manufacturing Capacity. The Company currently anticipates increasing its manufacturing capacity to meet the demand for its compound semiconductor production systems and wafers and package-ready devices by expanding its existing production facility for its new product offerings and instituting a third shift at its facility. This increase will require substantial capital expenditures and working capital. The Company presently anticipates utilizing a significant portion of the net proceeds of the Offering for such expenditures. There can be no assurance that the Company will be successful in increasing its manufacturing capacity in time to meet the demand for its production systems or wafers and package-ready devices. In addition, the Company's success is in large part dependent on its ability to manufacture its products, particularly its wafers and package-ready devices, in high volumes and on a timely basis. In addition, commercial production of the Company's wafers and package-ready devices requires the achievement of adequate competitive yield levels. The failure of the Company to increase its manufacturing capacity, or to manufacture its products in high volumes, in a timely manner, or at sufficient yield levels, would have a material adverse

effect on the Company's business, financial condition and results of operations. See "Use of Proceeds" and "Business--Manufacturing."

History of Operating Losses; Uncertainty of Profitability. The Company has been in operation since 1984 and had an accumulated deficit of \$18.1 million at September 30, 1996. In fiscal 1996, and the first quarter of fiscal 1997, the Company incurred consolidated net losses of \$3.2 million and \$3.8 million, respectively, which primarily resulted from significant initial operating expenses related to the Company's expansion to include the production of compound semiconductor wafers and package-ready devices as well as, for the quarter ended December 31, 1996, \$1.0 million of imputed warrant interest, non-cash. The Company has increased its expense levels to support anticipated growth in demand for each of its compound semiconductor production systems, wafer and package-ready device product offerings, including the hiring of additional manufacturing, research, engineering, sales and administrative personnel and has also increased its investments in inventory and capital equipment. As a result, the Company is dependent upon increasing revenues and profit margins to achieve profitability. If the Company's sales and profit margins do not increase to support the higher levels of operating expenses, the Company's business, financial condition and results of operations would be materially adversely affected. There can be no assurance that the Company will ever again achieve profitability. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Financial Statements and the Notes thereto.

Substantial Losses Incurred in First Fiscal Quarter of 1997. The Company incurred a loss of \$3.8 million in the quarter ended December 31, 1996. The loss was primarily attributable to continuing start-up expenses associated with the Company's two new product lines, in addition to \$1.0 million of imputed warrant interest, non-cash. There can be no assurance that the Company will reverse its losses or cease reporting quarterly losses or that the Company's capital expenditures incurred in connection with the initiation of new product offerings will yield net revenues. The failure to report positive results from the two new product offerings could have a material adverse effect on the Company's business, financial condition and results of operation. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Fluctuations in Operating Results. Historically, the Company has derived substantially all of its revenues from the sale of compound semiconductor production systems which typically have list prices ranging from approximately \$350,000 to \$2.5 million per system. At the Company's current revenue level, each shipment of a compound semiconductor production system or failure to make a shipment can have a material effect on the Company's quarterly or annual results of operations. A cancellation, rescheduling or delay in a system shipment near the end of a particular quarter could cause net revenues in that quarter to fall significantly below the Company's expectations and could materially adversely affect the Company's operating results for such quarter. The Company's policy is to maintain positive relationships with its customers by responding promptly and effectively to warranty claims. Since the occurrence of warranty claims is unpredictable, the Company's prompt action in response to such claims could cause the Company's operating results to fluctuate unexpectedly. The Company maintains reserves against warranty claims; however, an unexpectedly high level of warranty claims in a particular quarter could have a material adverse effect on the Company's business, financial condition and results of operation for that quarter. The Company anticipates that any revenues derived in the future from its recentlyestablished wafer and package-ready device products will be subject to similar risks. Other factors which may lead to fluctuations in the Company's quarterly and annual operating results include: market acceptance of the Company's and its customers' products; the number of compound semiconductor production systems, wafers or package-ready devices being manufactured during any particular period; the mix of sales by product and by distribution channel; the timing of announcement and introduction of new compound semiconductor production systems, wafers or package-ready devices by the Company and its competitors; a downturn in the market for products incorporating compound semiconductors; variations in the configuration of production systems; changes in the design or process conditions for the production of wafers or packageready devices; product discounts and changes in pricing; delays in deliveries from suppliers; delays in orders due to customers' financial difficulties; and volatility in the compound semiconductor industries and the markets served by the Company's customers. In addition, customers may face competing capital budget considerations, thus making the timing of customer

orders uneven and difficult to predict. There can be no assurance that the Company will be able to achieve a rate of growth or level of revenues in any future period commensurate with its level of expenses. It is likely that, in some future quarter or quarters, the Company's operating results may be below the expectations of analysts and investors. In such event, the price of the Company's Common Stock would likely be materially adversely affected. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Risks Related to Customer Concentration. A small number of customers have historically accounted for a substantial portion of the Company's revenues, and the Company expects a significant portion of its future sales to remain concentrated within a limited number of customers. Sales of the Company's production systems to Hughes-Spectrolab accounted for approximately 28.9% and 23.6% of the Company's revenues in fiscal 1995 and 1996, respectively. Hughes-Spectrolab is currently the Company's largest purchaser of compound semiconductor production systems. General Motors is currently the Company's sole customer for package-ready devices. In addition, substantially all of the wafers fabricated by the Company are currently being used only in connection with the package-ready devices being sold to General Motors. There can be no assurance that the Company will succeed in marketing its wafers and packageready devices to any customer other than General Motors. Failure by the Company to provide wafers and package-ready devices for customers other than General Motors would have a material adverse effect on the Company's business, financial condition and results of operations. In addition, the loss of, or a significant reduction of orders from, Hughes-Spectrolab or General Motors would have a material adverse effect on the Company's business, financial condition and results of operations. There can be no assurance that the Company will be able to retain these or other major customers or that such customers will not cancel, delay or reschedule orders. Any reduction or delay in orders from any of the Company's significant customers, including reductions or delays due to market, economic or competitive conditions in compound semiconductor-related industries, or the loss of any such customers, would have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Customers."

Risks Related to Lengthy Sales and Qualification Cycles. Sales of the Company's compound semiconductor production systems depend, in significant part, upon the decision of a prospective customer to increase its manufacturing capacity, which typically involves a significant capital commitment by the customer. The amount of time from the initial contact with the customer to the customer's placement of an order is typically two to nine months or longer. The Company often experiences delays in obtaining system sales orders while customers evaluate and receive approvals for the purchase of compound semiconductor production systems. Such delays may include the time necessary to plan, design or complete a new or expanded compound semiconductor fabrication facility. Due to these factors, the Company's compound semiconductor systems typically have a lengthy sales cycle during which the Company may expend substantial funds and sales, marketing and management effort. There can be no assurance that any of these expenditures or efforts on the part of the Company will result in sales. Although the Company has a limited operating history for wafer and package-ready device fabrication, the Company anticipates that such products will have similarly lengthy sales cycles and will therefore be subject to risks substantially similar to those inherent in the lengthy sales cycles for compound semiconductor systems. In addition, the sales cycle for wafers and package-ready devices also includes a period of two to six months during which the Company develops the formula of materials necessary to meet the customer's specifications and qualifies the materials which may also require the delivery of samples. There can be no assurance that the Company will successfully develop an appropriate product in accordance with customer specifications. See "Business--Products," "--Sales and Marketing" and "--Competition.'

Risks Related to Reliance on Trade Secrets; No Assurance of Continued Intellectual Property Protections. The Company's success and competitive position both for sales of production systems and for wafers and package-ready devices depend on whether it can maintain trade secrets, patents and other intellectual property protections. Trade secrets are routinely employed in the Company's manufacturing processes. A "trade secret" includes 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. In order to protect its trade secrets, the Company takes certain measures to ensure their secrecy, such as executing non-disclosure agreements with its employees, customers and suppliers. Reliance on trade secrets is only an effective business practice

insofar as (i) trade secrets remain undisclosed and (ii) a proprietary product or process is not reverse engineered or independently developed. The Company's inability to maintain its trade secrets relating to the systems production technology and operation could have a material adverse effect on the ability of the Company to sell its production systems. There can be no assurance that these trade secrets will remain undisclosed, that the Company's non-disclosure agreements will not be breached, that there will be adequate remedies for any such breach, or that the Company's production systems, process and operations will not be reverse engineered or independently developed. There can be no assurance that the steps taken by the Company will prevent misappropriation of its technology. Sales of the Company's wafers and package-ready devices depends heavily on the Company's trade secrets related to its MOCVD technology and processes. Failure to maintain trade secrets in this area would have a material adverse effect on the sales of the Company's wafer and package-ready devices. Although the Company holds six U.S. patents, these patents do not claim any material aspect of the current or planned commercial versions of the Company's systems, wafers or package-ready devices. The Company is actively pursuing patents on its recent inventions, but there can be no assurance that patents will be issued from any pending applications, or that the claims in any existing or future patents issued or licensed to the Company will not be challenged, invalidated or circumvented, or that any of the Company's pending or future patent applications will result in an issued patent with the scope of the claims sought by the Company, if at all. The Company has not been notified of any third parties that are infringing its intellectual property rights, or that the Company is infringing intellectual property rights of third parties, but there can be no assurance that the Company will not face such claims or infringements in the future. There can be no assurance that the Company would be successful in any resulting litigation or obtaining a license on commercially reasonable terms, if at all, or will not be prevented from engaging in certain activities. Defense and prosecution of infringement claims can be expensive and time consuming, regardless of outcome, and can result in the diversion of substantial financial, management and other resources of the Company. In addition, the laws of certain other countries may not protect the Company's intellectual property to the same extent as the laws of the United States. See "Business--Intellectual Property.'

Risks Arising from Reversal of Declaratory Judgment in Rockwell Patent Litigation. To permit sales of its MOCVD production systems, the Company was in 1992 granted a non-exclusive license (the "Rockwell License") under Ú.S. patent number 4,368,098 (the "Rockwell Patent") issued on January 11, 1983 to Rockwell. The Rockwell Patent claimed, among other things, intellectual property rights in the general use of MOCVD in unspecified applications and expires in 2000. In October 1996, the Company initiated discussions with Rockwell to receive additional licenses to permit the Company to utilize MOCVD technology to manufacture and sell certain wafers and package-ready devices. On November 15, 1996, in litigation not involving the Company, the Rockwell Patent was declared invalid by the U.S. Court of Federal Claims. The Company believes that Rockwell will appeal this judgment. In the event the foregoing judgment is reversed by a court of appeal, the Company may be liable to Rockwell for royalty payments, as well as other amounts which the Company may ultimately be deemed to owe Rockwell in connection with the sales of its systems, wafers and package-ready devices. Moreover, the Company may require additional licenses from Rockwell under the Rockwell Patent in order to manufacture and sell certain wafers and package-ready devices. There can be no assurance that the foregoing judgment will not be reversed, that the Rockwell License can be maintained or that licenses for wafers and package-ready devices can be obtained or maintained on commercially feasible terms, if at all. The failure to maintain or obtain such licenses could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Intellectual Property.'

Risks Related to Dependence on Limited Product Offerings. To date, substantially all of the Company's revenues have resulted from sales of its TurboDisc(TM) systems. The Company anticipates that a majority of its revenues in fiscal 1997 will be derived from the sale of these systems. The Company has recently developed the capacity to produce compound semiconductor wafers and package-ready devices. The Company's future success depends on whether it can develop and introduce in a timely manner new products, including improvements to its existing products, which compete effectively on the basis of price and performance and which adequately address customer requirements. The success of new product introductions is dependent upon several factors, including timely completion of new product designs, achievement of acceptable yields and market acceptance.

No assurance can be given that the Company's product and process development efforts will be successful or that its new products will achieve market acceptance. To the extent that such new product introductions do not occur in a timely manner or the Company's or its customers' products do not achieve market acceptance, the Company's business, financial condition and results of operations would be materially adversely affected. See "Business--Products."

Manufacturing Risks. The manufacture of systems, wafers and package-ready devices are each subject to significant risks. The manufacture of systems is a highly complex and precise process. The Company increasingly outsources the fabrication of certain components and sub-assemblies of the systems it manufactures. Any impairment in the supply of these components or subassemblies would have a material adverse effect on revenues derived from sales of the Company's systems. In addition, any reduction in the precision of these components will result in sub-standard end products and would cause delays and interruptions in the production cycle. To the extent the Company experiences shipment delays for its systems or wafers or package-ready devices, the Company's operating results would be materially adversely affected. The Company relies exclusively on its own recently-established production capabilities for manufacturing wafers and package-ready devices, and such operations are subject to additional manufacturing risks. Minute impurities, difficulties in the production process, defects in the epitaxial growth of the package-ready devices' constituent compounds, wafer breakage or other factors can cause a substantial percentage of wafers and package-ready devices to be rejected or numerous package-ready devices on each wafer to be nonfunctional. Such factors may result in lower than expected production yields, which would delay product shipments and materially adversely affect the Company's operating results. There can be no assurance that the Company will maintain acceptable production yields in the future. Because the majority of the Company's costs of manufacture are relatively fixed, the number of shippable package-ready devices per wafer for a given product is critical to the Company's operating results. Additionally, because the Company manufactures all of its products at its facility in Somerset, New Jersey, and such components, products and systems are not readily available from other sources, any interruption in manufacturing resulting from fire, natural disaster, equipment failures or otherwise would have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Manufacturing."

Reliance on International Sales; Reliance on Single Distributor. Sales to customers located outside the United States accounted for approximately 58.6%, 36.0%, 42.5% and 64.3% of the Company's revenues in fiscal 1994, 1995, 1996 and the first fiscal quarter of 1997, respectively. The Company believes that such international sales will continue to account for a significant percentage of the Company's revenues. In particular, to market and service its systems in seven Asian countries, the Company relies on a single marketing, distribution and service provider, Hakuto & Co., Ltd. ("Hakuto"). A substantial portion of the Company's sales of systems in Asia is to Hakuto. The Company's agreement with Hakuto has an initial term of seven years but allows for earlier termination upon 60 days notice. The Company has reached preliminary agreement with Hakuto to replace the existing distributorship agreement with a new distributorship agreement whose term will be five years and under which Hakuto will distribute additional products of the Company. The material terms of the agreement will otherwise remain the same. There can be no assurance that Hakuto will continue to adequately and effectively market and service the Company's systems. Termination of the Company's relationship with Hakuto would result in significant delays or interruption in the Company's marketing and service programs in Asia and would have a material adverse effect on the Company's business, financial condition and results of operations. The Company competes with its competitors for relationships with reliable international distributors. There can be no assurance that international distributors, including Hakuto, will not market products in competition with the Company's in the future or will not otherwise reduce or discontinue their relationships with or support of the Company and its products, or that the Company will be able to attract and retain qualified international distributors in the future. The inability of the Company to obtain qualified new international distributors could have a material adverse effect on the Company's business, financial condition and results of operations. In general, the Company's international sales are subject to risks different from domestic U.S. sales, including U.S. and international regulatory requirements and policy changes, U.S. and international export controls, political and economic instability, increased installation costs, difficulties in accounts receivable collection, exchange rates affecting end-market purchasers, tariffs and other barriers, extended payment terms, difficulty in staffing and managing

international operations, dependence on and difficulties in managing international distributors or representatives and potentially adverse tax consequences. In particular, exports of the Company's products to certain destinations, such as the People's Republic of China, 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. The Company, on certain occasions, has been denied authorization, particularly with respect to the People's Republic of China, and there is no assurance that export licenses will be granted in the future. Failure to receive such authorizations could have a material adverse effect on the Company's business, financial condition and results of operations. Furthermore, although the Company seeks to meet technical standards established by non-U.S. regulatory bodies, there can be no assurance that the Company will be able to comply with such standards in the future. In addition, the laws of certain countries may not protect the Company's trade secrets and intellectual property to the same extent as the laws of the United States. See "Business--Sales and Marketing."

Dependence on Key Sole Source Suppliers. The Company does not maintain any long-term supply agreements with any of its suppliers, and the majority of the critical components and sub-assemblies included in the Company's production systems, as well as certain raw materials required for the fabrication of the Company's wafers and package-ready devices, are obtained from sole source suppliers or a limited number of suppliers. The manufacture of certain components and sub-assemblies and raw materials is very complex and requires long lead times. The Company's systems cannot be produced without certain sole-sourced, critical components. In addition, the production of the Company's wafers and package-ready devices is inherently dependent on an adequate source of raw materials. Alternative suppliers for many of these components and materials may not be readily available. In addition, the Company intends to rely to an increasing degree on outside suppliers because of their specialized expertise. The Company's reliance on a limited group of suppliers, and particularly on sole source suppliers, involves several risks, including the potential inability to obtain an adequate supply of components and materials, and reduced control over pricing and delivery time. To date, the Company has experienced occasional delays in obtaining components and materials. There can be no assurance that delays or shortages caused by suppliers will not occur in the future. The failure to obtain adequate, timely deliveries of sub-assemblies and components and materials could prevent the Company from meeting scheduled shipment dates, which could damage relationships with current and prospective customers and could materially adversely affect the Company's business, financial condition and results of operations. See "Business--Manufacturing."

Risks Arising from Rapid Technological Change; Reliance Upon Continued Product Development. The markets in which the Company and its customers compete are characterized by rapid technological change, evolving industry standards and continuous improvements in products and services. Due to continual changes in these markets, the Company's future success will depend upon whether it can improve its production systems and processes, wafers and package-ready devices and develop new technologies that compete effectively on the basis of price and performance and adequately address customer requirements. There can be no assurance that the Company's research and development staff will develop new products in time or with sufficient performance characteristics to meet the demands of the market. The Company's production systems must remain competitive on the basis of cost of ownership, process performance and capital productivity. Because it is generally not possible to predict the time required and costs involved in reaching certain research, development and engineering objectives, actual development costs could exceed budgeted amounts and estimated product development schedules could require extension. Any delay or inability to overcome such difficulties would materially adversely affect the Company's business, financial condition and results of operations. Additionally, if new products or enhancements experience reliability or quality problems, the Company could encounter a number of difficulties, including reduced orders, higher manufacturing costs, delays in collection of accounts receivable and additional service and warranty expenses, all of which could materially adversely affect the Company's business, financial condition and results of operations. See "Business--Compound Semiconductor Process Technology," "--Products," " Research and Development" and "--Competition."

Risks Regarding the Acceptance of New Compound Semiconductor Technology By Customers. The Company's systems utilize MOCVD technologies. These same technologies are used in the Company's

11

production of wafers and package-ready devices. MOCVD technology differs significantly from the technological approaches used by others for each of these products. The semiconductor industry is especially resistant to the introduction of changes in process or approach in a manufacturing cycle which is quite long, consists of many separate process events and suffers from limited control measurement points during the overall fabrication process. Accordingly, potential customers may resist changing systems or accepting any new technological approach. Additionally, the inclusion of compound semiconductor wafers and package-ready devices increases the cost of electronic end products and, therefore, limits the feasibility of commercial applications of such products. The Company is seeking to persuade certain potential customers to incorporate compound semiconductor-based package-ready devices in many of their high-performance applications. Because a substantial investment is required by semiconductor manufacturers to install and integrate capital equipment into a production line, these manufacturers may tend to choose compound semiconductor equipment suppliers based on past relationships, product compatibility and proven operating performance. The Company's potential wafer and package-ready device customers may be reluctant to re-tool their equipment and production systems to accept these new technologies, may be reluctant to rely upon a smaller supplier such as the Company for packageready devices, and may be reluctant to pay higher device costs. There can be no assurance that the Company's MOCVD-based products will achieve broad market acceptance. See "Business -- Compound Semiconductor Process Technology, "Business--Products" and "Business--Customers."

Risks of Increased Competition. The Company faces substantial competition from both established competitors and potential new entrants. The Company believes that the primary competitive factors in the markets in which the Company's products compete are yield, throughput, capital and direct costs, system performance, size of installed base, breadth of product line and customer satisfaction, as well as customer commitment to competing technologies. The Company's principal competitors in the market for MOCVD systems include Aixtron GmbH ("Aixtron"), Nippon Sanso K.K. ("Nippon Sanso") and Thomas Swann Ltd. ("Thomas Swann"). The Company's principal competitors for sales of wafers and package-ready devices include Epitaxial Products International, Kopin Corp. and Q.E.D. The Company also faces competition from manufacturers that produce wafers and package-ready devices for their own use. The Company may experience competition from corporations that have been in business longer than the Company and have broader product lines, more experience with high volume manufacturing, broader name recognition, substantially larger installed bases, alternative technologies which may be better established than the Company's and significantly greater financial, technical and marketing resources than the Company. There can be no assurance that the Company will successfully compete with these competitors in the future or that the Company's competitors will not develop enhancements to or future generations of competitive products that will offer price and performance features that are superior to those of the Company. The Company believes that in order to remain competitive, it must invest significant financial resources in developing new product features and enhancements and in maintaining customer satisfaction worldwide. In marketing its products, the Company may face competition from suppliers employing new technologies in order to extend the capabilities of competitive products beyond their current limits or increase their productivity. In addition, increased competitive pressure could lead to intensified price-based competition, resulting in lower prices and margins, which would materially adversely affect the Company's business, financial condition and results of operations. See "Business--Competition.'

Risks from Continued Existence of Control Group. Prior to consummation of the Offering, Jesup & Lamont Merchant Partners, L.L.C. ("JLMP"), the Company's majority shareholder, beneficially owned approximately 72.9% of the Common Stock outstanding, not including warrants to purchase 980,392 shares of Common Stock, which become exercisable on May 6, 1997. After the Offering, JLMP, together with the Company's directors and officers, will beneficially own approximately 52.9% of the Common Stock outstanding, not including warrants to purchase 980,392 shares of Common Stock, which become exercisable on May 6, 1997. Accordingly, the Company's majority shareholder and management will continue to hold sufficient voting power to control the business and affairs of the Company for the foreseeable future. Such concentration of ownership may also have the effect of delaying, deferring or preventing a change in control of the Company. Reuben F. Richards, Jr., the Company's President, Chief Executive Officer and a director, Howard R. Curd and Howard F. Curd, each a director of the Company, are three of the five members of JLMP. To guarantee the Company's

12

demand note facility, Thomas J. Russell, the Chairman of the Company's Board of Directors and one of three trustees of a trust which is a member of JLMP, has granted the Company's lender a security interest over certain assets he controls. The Company intends to use up to \$10.0 million of the net proceeds from the Offering to repay the borrowings under the demand note facility. See "Use of Proceeds," "Principal Shareholders" and "Certain Transactions."

Risks Related to Dependence on Key Employees. The future success of the Company is dependent, in part, on whether the Company can attract and retain certain key personnel, including materials scientists and operations and finance personnel. The Company anticipates that it will need to hire additional skilled personnel to expand all areas of its business to continue to grow. The competition for such employees is extremely intense. There can be no assurance that the Company will be able to retain its existing personnel or attract additional qualified employees in the future, failure of which would have a material adverse effect on the Company's business, financial condition and results of operations.

Risks Related to Environmental Regulation. The Company 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 research and development and production operations, as well as laws and regulations concerning environmental remediation and employee health and safety. The Company has retained an environmental consultant to advise it in complying with applicable environmental and health and safety laws and regulations. There can be no assurance, however, that future changes in such laws and regulations will not result in expenditures or liabilities, or in restrictions on the Company's operation, that could have such an effect. The production of wafers and package-ready devices involves the use of certain hazardous raw materials, including, but not limited to, ammonia, phosphine and arsenic. The Company's expansion to offer wafers and package-ready devices will require the increased usage and maintenance of these materials on the Company's premises. There can be no assurance that the Company's control systems will be successful in preventing a release of these materials or other adverse environmental conditions, which could cause a substantial interruption in the Company's operations. Such an interruption could have a material adverse effect on the Company's business, financial condition and results of operation. See "Business--Environmental Regulations.'

Risks Arising from Absence of Public Market; Possible Volatility of Stock Price. There has been no prior public market for the Company's Common Stock. Consequently, the initial public offering price has been determined by negotiations between the Company and Donaldson, Lufkin & Jenrette Securities Corporation and Needham & Company, Inc., as representatives of the underwriters. There can be no assurance that an active public market for the Common Stock will develop or be sustained after the Offering or that the market price of the Common Stock will not decline below the initial public offering price. The Company believes that a variety of factors could cause the price of the Company's Common Stock to fluctuate, perhaps substantially, including: announcements of developments related to the Company's business; quarterly fluctuations in the Company's actual or anticipated operating results and order levels; general conditions in the compound semiconductor and related industries or the worldwide economy; announcements of technological innovations; new products or product enhancements by the Company or its competitors; developments in patents or other intellectual property rights and litigation; and developments in the Company's relationships with its customers, distributors and suppliers. In addition, in recent years the stock market in general, and the market for shares of small capitalization and semiconductor industry-related stocks in particular, have experienced extreme price fluctuations which have often been unrelated to the operating performance of affected companies. Any such fluctuations in the future could adversely affect the market price of the Company's Common Stock. See "Underwriting.'

Risks of Uncertainty of Additional Funding. The Company may require substantial additional capital to fund the Company's operations through 1997 and may need to raise additional funds through public or private financings. No assurance can be given that additional financing will be available or that, if available, it will be available on terms favorable to the Company or its shareholders. If additional funds are raised through the issuance of equity securities, the percentage ownership of then current shareholders of the Company will be reduced and such equity securities may have rights, preferences or privileges senior to those of the holders of the

Company's Common Stock. If adequate funds are not available to satisfy either short or long-term capital requirements, the Company may be required to limit its operations significantly. The Company's capital requirements will depend on many factors, including, but not limited to, the rate at which the Company develops and introduces its products, the market acceptance and competitive position of such products, the levels of promotion and advertising required to launch and market such products and attain a competitive position in the marketplace, and the response of competitors to the products based on the Company's technologies. See "Use of Proceeds" and "Management's Discussion and Analysis of Financial Condition and Results of Operations--Liquidity and Capital Resources."

Effect of Certain Anti-Takeover Provisions. The Company's Restated Certificate of Incorporation (the "Certificate of Incorporation") and the New Jersey Business Corporation Act contain certain provisions that could delay or impede the removal of incumbent directors and would make more difficult a merger, tender offer or proxy contest involving the Company, even if such a transaction were beneficial to the interests of the shareholders, or could discourage a third party from attempting to acquire control of the Company. The Company has authorized 5,882,353 shares of Preferred Stock, which the Company could issue without further shareholder approval and upon such terms and conditions, and having such rights, privileges and preferences, as the Board of Directors may determine. The Company has no current plans to issue any Preferred Stock. The Company is also subject to the New Jersey Shareholders Protection Act (the "Protection Act"), which prohibits certain New Jersey corporations from engaging in business combinations (including mergers, consolidations, significant asset dispositions and certain stock issuances) with any Interested Shareholder (defined to include, among others, any person that becomes a beneficial owner of 10% or more off the affected corporation's voting power) for five years after such person becomes an Interested Shareholder, unless the business combination is approved by the Board of Directors prior to the date the shareholder became an Interested Shareholder. In addition, the Protection Act prohibits any business combination at any time with an Interested Shareholder other than a transaction that (i) is approved by the Board of Directors prior to the date the Interested Shareholder became an Interested Shareholder, or (ii) is approved by the affirmative vote of the holders of two-thirds of the voting stock not beneficially owned by the Interested Shareholder, or (iii) satisfies certain "fair price" and related criteria. These provisions could have the effect of delaying, deferring or preventing a change in control of the Company and adversely affect the voting and other rights of holders of Common Stock. Further, the Company's Certificate of Incorporation and Amended and Restated By-Laws include provisions to reduce the personal liability of the Company's directors for monetary damages resulting from breaches of their fiduciary duty and to permit the Company to indemnify its directors and officers to the fullest extent permitted by New Jersey law. See "Description of Capital

Risks of Issuance of Blank Check Preferred Stock. The Company's Board of Directors is authorized by the Company's Certificate of Incorporation and Bylaws to issue, without shareholder approval, up to 5,882,353 shares of Preferred Stock in one or more classes or series. The Board of Directors, without further approval of the shareholders, is authorized to designate in any such class or series resolution, such par value and such priorities, power, preferences and relative, participating, optional or other special rights and qualifications, limitations and restrictions as it shall determine. Such characteristics may be superior to those of the Common Stock and could adversely affect the voting power or other rights of the holders of Common Stock. The issuance of Preferred Stock or of rights to purchase Preferred Stock could be used to discourage an unsolicited effort to acquire control of the Company. The potential for issuance of this "blank check preferred stock" could have an adverse impact on the market price of the Common Stock outstanding after the Offering. See "Description of Capital Stock."

Risks Arising from Substantial Dilutive Effect of the Offering. Purchasers of the Common Stock will experience immediate and substantial dilution in the net tangible book value per share of Common Stock from the initial public offering price per share. Assuming an initial public offering price of \$10.00 per share, new investors would suffer an immediate dilution of \$6.44 calculated by taking the difference in pro forma net tangible book value per share after the Offering (\$3.56) and deducting this amount from the initial public offering price. See "Dilution."

Risks of Sales of Common Stock Issuable Upon Exercise of Options and Warrants. The Company currently has outstanding stock options to purchase 464,017 shares of Common Stock and warrants to purchase 3,565,375 shares of Common Stock. Subsequent to the exercise of such options and warrants, and to the issuance of shares of Common Stock thereunder, such shares may be offered and sold by the holders thereof subject to the provisions of Rule 144 under the Securities Act, or pursuant to an effective registration statement filed by the Company. Upon expiration of certain contractual obligations between certain holders and the Underwriters, 777,657 shares of Common Stock will become eligible for sale without restrictions under Rule 144(k), and an additional 2,216,804 shares will become eligible for sale subject to the restrictions of Rule 144. Sales of substantial amounts of such shares could adversely affect the market price for the Company's Common Stock. See "Shares Eligible for Future Sale."

Risks of Sales of Common Stock Upon Expiration of Rule 144 Holding Period. After the completion of the Offering, the Company will have outstanding 5,494,461 shares of Common Stock, assuming no exercise of outstanding options or warrants. Of these shares, 2,500,000 shares sold in the Offering (plus any shares issued upon exercise of the Underwriters' overallotment option) will be freely tradeable without restriction under the Securities Act, unless purchased by "affiliates." As defined in Rule 144 under the Securities Act, an "affiliate" of an issuer is a person that directly or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with such issuer. The remaining 2,994,461 shares of Common Stock outstanding will be "restricted securities" within the meaning of Rule 144 ("Restricted Shares"). The Company is unable to estimate the number of shares that may be sold under Rule 144 or otherwise because this will depend on the market price for the Common Stock of the Company, the individual circumstances of the sellers and other factors. Prior to the Offering, there has been no public market for the Common Stock. Future sales of shares of Common Stock, or the availability for sale of substantial amounts of Common Stock, or the perception that such sales could occur, could adversely affect prevailing market prices for the Common Stock and could impair the Company's future ability to raise capital through an offering of its equity securities. Furthermore, certain holders of Restricted Shares which are issuable, under certain conditions, upon the exercise of warrants, hold rights to compel the inclusion of these Restricted Shares in registration statements filed by the Company. The inclusion of these Restricted Shares in registration statements, the availability for sale of these Restricted Shares, or the perception that such sales could occur, could adversely affect prevailing market prices for the Common Stock and could impair the Company's future ability to raise capital through an offering of its equity securities. See "Description of Capital Stock--Warrants," "--Registration Rights," and "Shares Eligible for Future Sale."

Risk of No Dividends. The Company has never declared or paid dividends on its Common Stock since its formation. The Company currently does not intend to pay dividends in the foreseeable future. The payment of dividends, if any, in the future will be at the discretion of the Board of Directors.

## USE OF PROCEEDS

The net proceeds to the Company from the sale of the 2,500,000 shares of Common Stock being offered hereby are estimated to be \$22.5 million (\$26.0 million if the underwriters' over-allotment option is exercised in full), after deducting the underwriting discounts and commissions and estimated offering expenses.

Of the net proceeds, up to \$10.0 million will be used to repay debt. The entire principal amount outstanding under the Company's demand note facility with First Union National Bank, which has been used for capital expenditures in connection with the build-out of the Company's manufacturing facility, will be paid in full. This demand note facility bears interest at a rate equal to the six month LIBOR plus 75 basis points (approximately 6.3% at December 31, 1996). The remaining net proceeds allocated to debt repayment, if any, will be used to repay a portion of the Company's outstanding subordinated notes due May 1, 2001. These subordinated notes bear interest at a rate of 6.0% per annum. Approximately \$8.0 million of the net proceeds are expected to be used for capital expenditures to expand the Company's manufacturing facility, and the balance of the net proceeds are expected to be used for general corporate purposes including working capital. The Company may also use a portion of the net proceeds to fund acquisitions of complementary businesses, products or technologies in the semiconductor sector. Although the Company periodically reviews potential acquisition opportunities, there are no current agreements with respect to any such transactions. Pending such uses, the net proceeds of the Offering will be invested in short-term, investment-grade, income producing investments.

The Company believes that the remaining net proceeds from the Offering and the funds available under its demand note facility, which after being repaid will be available in its entirety, will be sufficient to fund the Company's anticipated facility expansion, and to provide the Company with adequate working capital at least through 1997. However, there can be no assurance that events in the future will not require the Company to seek additional capital sooner or, if so required, that adequate capital will be available on terms acceptable to the Company.

## DIVIDEND POLICY

The Company has never declared or paid dividends on its Common Stock since its formation. The Company currently does not intend to pay dividends in the foreseeable future so that it may reinvest its earnings in the development of its business. The payment of dividends, if any, in the future will be at the discretion of the Board of Directors.

## CAPITALIZATION

The following table sets forth the capitalization of the Company as of December 31, 1996, and as adjusted to reflect the sale by the Company of 2,500,000 shares of Common Stock being offered hereby (at an assumed initial public offering price of \$10.00 per share) and the application of the estimated net proceeds therefrom.

	AS	AS OF DECEMBER 31, 1996			
		ACTUAL (IN THOU			
Demand note facility(1)		6,000		0	
Long-term debt, net	\$	9,063	\$	5,063	
issued or outstanding					
adjusted(2)  Notes receivable from warrant issuances and stock		22,578		45,117	
sales Accumulated deficit		(298) (21,956)			
Total shareholders' equity		324		22,863	
Total capitalization	\$ ==	9,387 =====	\$ ==:	27,926 ======	

- (1) In October 1996, the Company established a \$10.0 million demand note facility with First Union National Bank. As of December 31, 1996, the Company had drawn down approximately \$6.0 million from this facility. The Company intends to use \$10.0 million of the net proceeds of the Offering to pay down the balance outstanding under this facility. The remaining net proceeds allocated to debt repayment, if any, will be used to repay a portion of the Company's outstanding long-term indebtedness consisting of subordinated notes. See "Use of Proceeds."
- (2) Excludes: (i) 647,059 shares of Common Stock reserved for issuance under the Company's 1995 Incentive and Non-Statutory Stock Option Plan, as amended, of which 464,017 shares were subject to outstanding options at exercise prices varying from \$3.03 per share to \$10.20 per share; (ii) warrants to purchase 9,102 shares of Common Stock at an exercise price of \$17.00 per share exercisable until July 24, 1997; (iii) warrants to purchase 2,330,784 shares of Common Stock at an exercise price of \$4.08 per share, exercisable until May 1, 2001; and (iv) warrants to purchase 1,225,490 shares of Common Stock at an exercise price of \$10.20 per share, exercisable until September 1, 2001.

## **DILUTION**

The net tangible book value (deficiency) of the Company as of December 31, 1996 was (\$3.0 million) or approximately (\$0.99) per share. Net tangible book value (deficiency) per share represents the amount of the Company's shareholders' equity (net capital deficiency), less intangible assets (\$3.3 million at December 31, 1996 comprised of \$3.2 million of deferred financing and offering costs and \$68,741 of deferred patent costs), divided by 2,994,461 shares of Common Stock outstanding. Net tangible book value dilution per share represents the difference between the amount per share paid by purchasers of shares of Common Stock in the Offering made hereby and the pro forma net tangible book value per share of Common Stock immediately after completion of the Offering. After giving effect to the sale by the Company of 2,500,000 shares of Common Stock offered hereby (assuming an initial public offering price of \$10.00 per share and after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company) and the application of the estimated net proceeds therefrom, the pro forma net tangible book value of the Company as of December 31, 1996 would have been \$19.6 million or approximately \$3.56 per share. This represents an immediate increase in net tangible book value of \$4.55 per share to existing shareholders and an immediate dilution in net tangible book value of \$6.44 per share to the purchasers of Common Stock in the Offering, as illustrated in the following table:

Assumed initial public offering price per share		\$10.00
Net tangible book value per share as of December 31,		
1996	(\$0.99)	
Increase in net tangible book value per share attributable		
to new investors	4.55	
Net tangible book value per share after the Offering		3.56
Dilution per share to new investors		\$ 6.44
		======

The foregoing table assumes no exercise of any outstanding stock options or warrants.

The following table sets forth, on a pro forma basis as of December 31, 1996, the difference between the existing shareholders and the purchasers of shares in the Offering with respect to the number of shares purchased from the Company, the total consideration paid and the average price per share paid assuming an initial public offering price of \$10.00 per share:

	SHARES PUI	RCHASED	TOTAL CONSI		
					AVERAGE PRICE PER SHARE
Existing shareholders New investors	, ,		. , ,		
Total	5,494,461 ======	100.0%	\$38,070,111 =======	100.0%	

At December 31, 1996, there were outstanding: (i) stock options to purchase 464,017 shares of Common Stock at a weighted average exercise price of \$5.47 per share; (ii) warrants to purchase 9,102 shares of Common Stock at \$17.00 per share; (iii) warrants to purchase 2,330,784 shares of Common Stock at \$4.08 per share; and (iv) and warrants to purchase 1,225,490 shares of Common Stock at \$10.20 per share. To the extent that these options or warrants are exercised, there will be further dilution in the aggregate to new investors.

## SELECTED FINANCIAL DATA

The following selected financial data of the Company is qualified by reference to and should be read in conjunction with the Financial Statements and the Notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this Prospectus. The Statement of Income Data set forth below with respect to fiscal 1996, 1995 and 1994 and the Balance Sheet Data as of September 30, 1996 and 1995, are derived from the audited financial statements included elsewhere in this Prospectus which financial statements have been audited by Coopers & Lybrand L.L.P., whose report with respect thereto appears elsewhere in this Prospectus. The Statement of Income Data for fiscal 1993 and 1992 and the Balance Sheet Data as of September 30, 1994, 1993 and 1992 are derived from audited financial statements not included herein. The financial data as of December 31, 1996, and for the three months ended December 31, 1995 and 1996 are derived from unaudited consolidated financial statements that, in the opinion of the management of the Company, reflect all adjustments (consisting only of normal recurring accruals) necessary for a fair presentation of the financial position and results of operations for these periods. Operating results for the three months ended December 31, 1996 are not necessarily indicative of the results that may be expected for the entire fiscal year ending September 30,

	YE,	ARS ENDE		THREE MONTHS ENDED DECEMBER 31, (UNAUDITED)			
	1992 (II		1996 SHARE AMOU	1995			
STATEMENT OF INCOME DA- TA:							
Revenues Cost of sales				9,927	\$27,779 18,607		6,724
Gross profit Operating expenses: Selling, general and					9,172		
administrative Research and develop-	2,977	2,849	2,645	4,452	6,524	1,511	2,202
ment	909	1,024	1,064	1,852	5,401	793	2,250
Total operating expenses	3,886	3,873	3,709		11,925	2,304	4,452
Operating (loss) in- come Stated interest ex-	(907)	(465)	116	1,906	(2,753)	(831)	(2,585)
penses, net Imputed warrant inter-	283	242	286	255	297	39	197
est, non-cash Other expense (in-					126		1,016
come)	(226)	(100)					
(Loss) income before income taxes Provision for income	. ,	, ,	(170)	1,641	(3,176)	(870)	(3,798)
taxes	(6)					15 	
Net (loss) income					\$(3,176) ======		
Net (loss) income per share					\$ (0.72) ======		
Shares used in computing net (loss) income per share					4,438		

		AS OF DECEMBER 31 - 1996				
	1992	1993	1994 (IN TH	1995 DUSANDS)	1996	(UNAUDITED)
BALANCE SHEET DATA:						
Working capital	\$ 492	\$ 840	\$ 1,041	\$ 2,208	\$ 1,151	\$(1,961)
Total assets	4,233	3,171	5,415	10,143	20,434	29,283
Long-term debt	1,944	2,000	3,000	3,000	8,947	9,063
Redeemable preferred	•	•	-	•		·
stock	13,014	14,825	16,274			
Shareholders' (deficit)	•	•	,			
equity	(56)	12	(96)	1,509	522	324

# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

## OVERVIEW

EMCORE designs and develops compound semiconductor materials and process technology and is a leading manufacturer of production systems used to fabricate compound semiconductor wafers. Compound semiconductors are used in a broad range of applications in wireless communications, telecommunications, computers, and consumer and automotive electronics. EMCORE believes that its proprietary TurboDisc(TM) deposition technology is the critical enabling process step in the cost effective, high volume manufacture of high-performance electronic and optoelectronic devices. The Company was founded in 1984 to engage in advanced materials science research and development and to develop and manufacture a viable production platform for the processing of compound semiconductor materials. In 1986, the Company shipped its first TurboDisc(TM) system and, by 1990, had sold systems in the United States, Asia and Europe.

Historically, the Company's revenues have consisted primarily of the sales of MOCVD systems and components, government-sponsored research contracts and service contracts. To date, the Company has sold over 180 systems worldwide. From fiscal 1986 through fiscal 1993, the Company's systems revenues consisted principally of sales of research and development systems and small pilot production systems. Beginning in fiscal 1994, due to the increased market demand for compound semiconductor devices, the Company's systems revenues consisted principally of the sale of larger production platforms. The Company's systems sales contracts typically require partial advance payments during the design and production phases of the systems manufacturing process. Such advance payments have historically represented a significant funding source to the Company.

Prior to fiscal 1996, the Company was profitable for six consecutive quarters. In fiscal 1996, the Company expanded its product offerings to include wafers and package-ready devices and incurred a consolidated net loss of \$3.2 million, which primarily resulted from significant initial operating expenses related to the Company's expansion. The Company increased its expense levels in most operating areas to support anticipated growth in demand for each of its product offerings, including the hiring of additional manufacturing, research, engineering, sales and administrative personnel. For fiscal 1996 and the first quarter of fiscal 1997, such initial operating expenses amounted to approximately \$3.9 million and \$2.7 million, respectively, and related to employee, facility, overhead, depreciation, and research and development costs incurred to qualify certain production systems for production capability and to establish manufacturing processes. In fiscal 1996, the Company also increased its investments in inventory and capital equipment. As a result, the Company is dependent upon increasing revenues and profit margins to achieve profitability. If the Company's sales and profit margins do not increase to support the higher levels of operating expenses, the Company's business, financial condition and results of operations would be materially adversely affected. The Company currently anticipates continuing to expand its manufacturing capacity for the production of wafers and packageready devices, which entails substantial additional capital expenditures. The Company will spend approximately \$8.0 million of the net proceeds of the Offering for this purpose. The Company incurred a substantial loss in the quarter ended December 31, 1996. The loss was primarily attributable to continuing start-up expenses associated with the Company's two new product lines. In the future, the Company expects to derive significant revenues from sales of wafers and package-ready devices. However, the Company's ability to derive any such revenues is subject to certain risks and uncertainties, including yield, process and capacity related risks and risks associated with the market acceptance of such products. The Company commenced shipment of MR devices to General Motors in January 1997 and expects that it will substantially reduce its losses in the remainder of fiscal 1997 and into fiscal 1998. There can be no assurance that the Company will be successful in developing or marketing such wafers and package-ready devices. The Company's failure to develop or market such products would have a material adverse effect on the Company's business, financial condition and results of operations.

The Company sells its production systems worldwide and has generated a significant portion of its sales to customers outside the United States. In fiscal 1994, 1995, 1996 and the first fiscal quarter of 1997, international sales constituted 58.6%, 36.0%, 42.5% and 64.3%, respectively, of revenues. The Company has made

international sales in Belgium, France, Germany, Italy, Japan, Korea, the People's Republic of China, Sweden, Taiwan and the United Kingdom. In fiscal 1996, approximately two-thirds of the Company's international sales were made to customers in Asia, particularly in Japan. The Company anticipates that international sales will continue to account for a significant portion of revenues. There can be no assurance, however, that the Company will continue to derive significant revenues from international sales.

As of December 31, 1996, the Company had an order backlog of approximately \$23.8 million, consisting of \$20.7 million of production systems, \$1.0 million of research contracts and \$2.1 million of package-ready devices, compared to a backlog of \$19.0 million as of December 31, 1995, consisting of \$17.2 million of production systems and \$1.8 million of research contracts. This increase in backlog was a result of the increased market acceptance of the Company's production systems and multiple unit orders for such systems and the introduction of the Company's package-ready device products. The Company includes in backlog only customer purchase orders that have been accepted by the Company and for which shipment dates have been assigned within the twelve months to follow and research contracts that are in process or awarded. The Company receives partial advance payments or irrevocable letters of credit on most production system orders and has never experienced a purchase order cancellation.

The Company recognizes revenue upon shipment. The Company incurs certain installation and warranty costs subsequent to system shipment which are estimated and accrued at the time the sale is recognized. The Company reserves for estimated returns and allowances at the time of shipment. For research contracts with the U.S. government and commercial enterprises with durations greater than six months, the Company recognizes revenue to the extent of costs incurred plus a pro rata portion of estimated gross profit as stipulated in such contracts, based on contract performance. The Company's research contracts require the development or evaluation of new materials applications and have a duration of six to 36 months. Contracts with a duration of six months or less are accounted for on the completed contract method. A contract is considered complete when all costs have been incurred and the research reporting requirements to the customer have been met.

## RESULTS OF OPERATIONS

The following table sets forth the Statement of Income Data of the Company expressed as a percentage of total revenues for the periods indicated.

	YEARS ENDED	SEPTEMBER	30,	THREE MON ENDED DECEMBER (UNAUDIT	31,
	1994	1995	1996	1995	1996
Revenues		54.8		65.4	
Gross profit Operating expenses: Selling, general and	42.3				21.7
administrative Research and development					
Operating income (loss) Stated interest expense,	1.3	10.5	(9.9)		(30.1)
net	3.2	1.4	1.1	0.9	2.3
non-cash		0.1			11.8 
Income (loss) before income taxes	(1.9)	9.0		0.4	
Net (loss) income	(1.9)%	8.4%			(44.2)% =====

Revenues. Revenue increased 102% from \$4.3 million for the three months ended December 31, 1995 to \$8.6 million for the three months ended December 31, 1996. Revenues from international sales increased 252% from \$1.6 million in the quarter ended December 31, 1995 to \$5.5 million in the quarter ended December 31, 1996. These increases were primarily due to greater sales of the Company's compound semiconductor production systems resulting from broader acceptance of those products, coupled with an increased market demand for compound semiconductor devices. Although the Company installed production of wafers and package-ready devices in the first quarter of fiscal 1997, revenues from these products were insignificant.

Cost of Sales/Gross Profit. Cost of sales includes direct material and labor costs, manufacturing and service overhead, and installation and warranty costs. Cost of sales increased 142% from \$2.8 million for the three months ended December 31, 1995 to \$6.7 million for the three months ended December 31, 1996. Gross profit decreased from 34.6% of revenues in the guarter ended December 31, 1995 to 21.7% of revenues in the quarter ended December 31, 1996. The decrease was primarily attributable to higher than anticipated systems installation and warranty expenses and the continued start-up costs associated with the Company's new wafer and package-ready devices product lines. The Company accrues for installation and warranty costs when revenue is recognized upon shipment, which is when title passes to the customer. During the quarter ended December 31, 1996, the Company experienced an increase of \$300,000 of installation and warranty costs related to four production systems sold in fiscal 1996. The Company believes that, at December 31, 1996, it had fully accrued for installation and warranty expenses relating to shipped systems. The Company also incurred approximately \$700,000 of start-up expenses related to the establishment of its epitaxial wafer and package-ready device product offerings. The Company anticipates that it will begin generating revenue from these product offerings in the quarter ending March 31, 1997. Any delay in generating revenues could adversely affect the Company's business, financial condition and results of operations.

Selling, General and Administrative. Selling, general and administrative expenses increased 45.7% from \$1.5 million for the three months ended December 31, 1995 to \$2.2 million for the three months ended December 31, 1996. The increase was primarily due to increased marketing and administrative costs associated with the Company's higher level of revenues, including additional personnel to support the Company's expanded activities. As a percentage of revenues, selling, general and administrative expenses decreased from 35.5% for the quarter ended December 31, 1995 to 25.6% for the quarter ended December 31, 1996.

Research and Development. Research and development expenses include the costs of internally-funded research and development projects, as well as materials prototype product support expenses, which primarily include employee and material costs, depreciation of capital equipment and other engineering-related costs. Research and development expenses increased 184% from \$0.8 million in the three months ended December 31, 1995 to \$2.3 million in the three months ended December 31, 1996. This increase was primarily due to increased research and development activities relating to the process development of HB LEDs and the expenses associated with the production process controls on indium antimonide, an MR configuration. As a percentage of total revenues, research and development expenses increased from 18.6% in the quarter ended December 31, 1995 to 26.2% for the quarter ended December 31,

# COMPARISON OF FISCAL YEARS ENDED SEPTEMBER 30, 1995 AND 1996

Revenues. Revenues increased 53.6% from \$18.1 million in fiscal 1995 to \$27.8 million in fiscal 1996. Revenues derived from international sales increased 81.5% from \$6.5 million in fiscal 1995 to \$11.8 million in fiscal 1996. These increases were primarily due to greater sales of the Company's compound semiconductor production systems resulting from broader acceptance of these products, coupled with an increased market demand for compound semiconductor devices, and to a lesser extent, increased service revenues, which include parts and service contracts, resulting from the Company's growing installed base. In addition, in fiscal 1996, the Company's research contract revenues increased as a result of an arrangement with General Motors whereby General Motors paid the Company \$1.6 million to develop and enhance certain MR package-ready devices for commercial production.

Cost of Sales/Gross Profit. Cost of sales increased 87.9% from \$9.9 million in fiscal 1995 to \$18.6 million in fiscal 1996. Gross profit decreased from 45.2% of revenues in fiscal 1995 to 33.0% of revenues in fiscal 1996. This decrease was principally attributable to: (i) the sale of three systems at a loss for strategic reasons; (ii) competitive pricing conditions prevailing generally in the market and a resulting decrease in the average selling price of the Company's production systems; (iii) increased production costs associated with system enhancements; and (iv) an increase in the Company's cost of obtaining certain components. The sales for strategic reasons were made to several leading universities in key geographic areas in order to increase the Company's visibility and to enhance its reputation in the technology and research community. The Company believes that the three sales made for strategic reasons resulted in an approximately 4% decline in gross profit in fiscal 1996.

Selling, General and Administrative. Selling, general and administrative expenses increased 44.4% from \$4.5 million in fiscal 1995 to \$6.5 million in fiscal 1996. This increase was primarily due to increased marketing expenses associated with the Company's higher level of production systems sales and the hiring of additional personnel to support the Company's expanded activities. As a percentage of revenues, selling, general and administrative expenses decreased from 24.5% in fiscal 1995 to 23.5% in fiscal 1996.

Research and Development. Research and development expenses increased 184.2% from \$1.9 million in fiscal 1995 to \$5.4 million in fiscal 1996. This increase was primarily due to the Company's increased research and development activities relating to the initiation of its wafer and package-ready device product lines. As a percentage of revenues, research and development expenses increased from 10.2% in fiscal 1995 to 19.4% in fiscal 1996.

COMPARISON OF FISCAL YEARS ENDED SEPTEMBER 30, 1994 AND 1995

Revenues. Revenues increased 101.1% from \$9.0 million in fiscal 1994 to \$18.1 million in fiscal 1995. This increase was primarily due to increased sales of the Company's production systems, and to a lesser extent an increase in service revenues. Revenues derived from international sales increased 22.6% from \$5.3 million in fiscal 1994 to \$6.5 million in fiscal 1995. This increase was primarily due to broader acceptance of the Company's production systems.

Cost of Sales/Gross Profit. Cost of sales increased 90.4% from \$5.2 million in fiscal 1994 to \$9.9 million in fiscal 1995. Gross profit increased from 42.3% of revenues in fiscal 1994 to 45.2% of revenues in fiscal 1995. This increase was due to a favorable product mix consisting of a higher proportion of larger production systems with higher gross profit.

Selling, General and Administrative. Selling, general and administrative expenses increased 73.1% from \$2.6 million in fiscal 1994 to \$4.5 million in fiscal 1995. The increase was primarily due to increased marketing expenses, including customer samples, associated with the Company's higher level of systems sales and the hiring of additional personnel to support the Company's expanded activities. As a percentage of revenues, selling, general and administrative expenses decreased from 29.2% in fiscal 1994 to 24.5% in fiscal 1995 due to the growth in the Company's revenues.

Research and Development. Research and development expenses increased 72.7% from \$1.1 million in fiscal 1994 to \$1.9 million in fiscal 1995. This increase was primarily due to increased research and development activities relating to the development of new production systems for the processing of gallium nitride used in the manufacture of blue high-brightness light emitting diodes ("HB LEDs"). As a percentage of revenues, research and development expenses decreased from 11.8% in fiscal 1994 to 10.2% in fiscal 1995.

## QUARTERLY RESULTS OF OPERATIONS

The following tables present the Company's unaudited results of operations expressed in dollars and as a percentage of revenues for the nine most recently ended fiscal quarters. The Company 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 Financial Statements and Notes thereto, included herein. The Company'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.

# QUARTERS ENDED

		FISCAL	1995			FISCAL 19			FISCAL 1997
	DEC. 31	MAR. 31	JUNE 30		DEC. 31 THOUSANDS)	MAR. 31	JUNE 30	SEPT. 30	DEC. 31
Revenues Cost of sales	\$3,394 1,901	\$3,836 2,154	\$4,875 2,599	\$6,032 3,273	2,782	\$6,014 4,041	\$ 7,727 5,495	\$9,783 6,289	\$ 8,591 6,724
Gross profit Operating expenses:	1,493	1,682	2,276	2,759	1,473	1,973	2,232	3,494	1,867
Selling, general and administrative Research and	864	967	1,303	1,318	1,511	1,545	1,900	1,568	2,202
development	332	349	375	796	793	1,196	1,708	1,705	2,250
Total operating expenses	1,196	1,316	1,678	2,114	2,304	2,741	3,608	3,273	4,452
Operating income (loss)	297	366	598	645	(831)	(768)	(1,376)	221	(2,585)
Stated interest expense, net	63	77	62	63	39	55	60	127	197
interest, non-cash							44	82	1,016
Income (loss) before income taxes Provision for income	234	289	536	582	(870)	(823)	(1,480)	12	(3,798)
taxes	32	31	31	31	15				
Net income (loss)	\$ 202 =====	\$ 258 =====	\$505 =====		\$ (885) =====	\$ (823) =====	\$(1,480) ======	\$ 12 =====	\$(3,798) =====
			Α	S A PERCE	NTAGE OF R	REVENUES			
Revenues Cost of sales	100.0% 56.0	100.0% 56.2	100.0% 53.3	54.3	100.0% 65.4	100.0% 67.2	100.0% 71.1	100.0% 64.3	100.0% 78.3
Gross profit Operating expenses:	44.0	43.8	46.7	45.7	34.6	32.8	28.9	35.7	21.7
Selling, general and administrative Research and	25.4	25.2	26.7	21.9	35.5	25.7	24.6	16.0	25.6
development	9.8	9.1	7.7	13.2	18.6	19.9	22.1	17.5	26.2
Total operating expenses	35.2	34.3	34.4	35.1	54.1	45.6	46.7	33.5	51.8
Operating income (loss)	8.8	9.5	12.3	10.7	(19.5)	(12.8)	(17.8)	2.2	(30.1)
Stated interest expense, net	1.9	2.0	1.3	1.0	0.9	0.9	0.8	1.3	2.3
interest, non-cash							0.6	0.8	11.8
Income (loss) before income taxes	6.9	7.5	11.0	9.6	(20.4)	(13.7)	(19.2)	0.1	(44.2)
taxes	0.9	0.8	0.6	0.5	0.4				
Net income (loss)	6.0%	6.7%	10.4%	9.1%	` ,	(13.7)% =====	(19.2)% =====		(44.2)% ======

The Company has experienced a significant increase in demand for its products as a result of greater demand for compound semiconductor wafers and devices, materials and devices. Accordingly, during the nine quarters ended December 31, 1996, the Company's quarterly revenues increased on average by 61.0% when comparing the corresponding quarterly revenues for the immediately preceding fiscal year.

Historically, the Company has experienced less demand for its products during the spring and summer, resulting in lower revenues during the Company's

first fiscal quarter. However, the Company's backlog has continually increased throughout the nine quarters ended December 31, 1996.

The cost of sales remained relatively constant as a percentage of revenues during fiscal 1995. Gross profit ranged from a high of 46.7% to a low of 43.8%. The Company experienced a decline in gross profit beginning in fiscal 1996. Gross profit ranged from a high of 35.7% to a low of 28.9%, and in the first quarter of fiscal 1997 was 21.7%. This decline was principally attributable to (i) the sale of three systems at a loss for strategic reasons; (ii) competitive pricing conditions prevailing generally in the market and a resulting decrease in the average selling price of the Company's production systems; (iii) increased production costs associated with system enhancements; and (iv) an increase in the Company's cost of obtaining certain components.

Operating expenses have generally increased in absolute dollars over the quarters shown as the Company has increased staffing in research and development, sales and marketing and general and administrative functions. This increase was due to activities relating to the development of new systems for the processing of gallium nitride used in the manufacture of blue HB LEDs, the development and enhancement of the Company's volume production systems and the initiation of the Company's wafer and package-ready device products. Selling, general and administrative expenses have increased as a result of increased marketing and sales related activities, including the hiring of additional personnel, commissions and customer samples, with the exception of the quarter ended September 30, 1996, during which selling, general and administrative expenses decreased as a result of a reduction in the production of sales samples. As a percentage of total revenues, operating expenses in fiscal 1995 generally increased ranging from a low of 34.3% to a high of 35.2%. In fiscal 1996, operating expenses as a percentage of total revenues fluctuated from a low of 33.5% to a high of 54.1%. This general trend has continued, and for the first quarter of fiscal 1997, operating expenses were 51.8% of total revenues.

In connection with the establishment of the Company's demand note facility in the quarter ended December 31, 1996, the Company issued warrants to purchase 980,392 shares of Common Stock to JLMP in consideration for a guaranty by the Chairman of the Company (who was also Chairman of JLMP) and collateral for the demand note facility. The Company assigned a fair value of \$3.67 per warrant (\$3,600,000), and, accordingly, has accounted for such warrants as debt issuance costs, which are amortized over the estimated period that the facility will be in place (approximately four months). Consequently, for the quarter ended December 31, 1996, the Company recognized debt issuance cost amortization of approximately \$900,000 of this amount, which was charged to imputed warrant interest, non-cash.

The Company has experienced and expects to continue to experience significant fluctuations in its quarterly results. Factors which have had an influence on and may continue to influence the Company's operating results in a particular quarter include the timing of receipt of orders, cancellation, rescheduling or delay in product shipment or supply deliveries, product mix, competitive pricing pressures, the Company's ability to design, manufacture and ship products on a cost effective and timely basis, including the ability of the Company to achieve and maintain acceptable production yields for its wafers and package-ready devices, and the announcement and introduction of new products by the Company and by its competitors. The timing of sales of the Company's larger, volume production systems may cause substantial fluctuations in quarterly operating results due to the substantially higher per unit price of these products relative to the Company's other products. There can be no assurance that the compound semiconductor industry will not experience downturns or slowdowns, which may materially and adversely affect the Company's business, financial condition and results of operations.

# LIQUIDITY AND CAPITAL RESOURCES

Since inception, the Company has funded its operations through the private sale of equity securities, issuance of subordinated debt, capital equipment leases, bank and other third party borrowings, as well as advance payments by customers, and in fiscal 1994 and fiscal 1995, cash flow generated from operations. As of December 31, 1996, the Company had \$1.9 million in cash, a working capital deficit of \$2.0 million and subordinated debt with a carrying value of \$9.1 million.

Net cash provided from operations was \$573,000 and \$3.1 million during fiscal 1994 and fiscal 1995, respectively. The cash provided in fiscal 1994 and 1995 was the result of improved operating performance, as

evidenced by profitable operations in fiscal 1995. Net cash used in operating activities was \$1.9 million in fiscal 1996 and \$4.3 million in the first fiscal quarter of 1997 and was primarily attributable to the loss from operations and an increase in inventories and receivables, which was offset in part by increases in current liabilities particularly advance billings and accounts payable.

Net cash used for investing activities was \$1.2 million, \$1.3 million, \$7.1 million and \$1.1 million in fiscal 1994, 1995, 1996 and the first fiscal quarter of 1997, respectively. These expenditures included the manufacture or purchase of capital equipment, including TurboDisc(TM) production systems manufactured for the Company's own use, and the purchases of characterization and test equipment, computer equipment, research and development tools, and, particularly during fiscal 1996, tenant improvements in the Company's facility, including construction and refurbishment of two clean rooms. The Company anticipates making additional capital expenditures primarily for manufacturing expansion and improvements including additional cleanroom space, TurboDisc(TM) production systems, research and development tools and office equipment, including computers, furniture and fixtures. The Company estimates its capital needs will be approximately \$13 million in fiscal 1997.

The Company's financing activities provided net cash of approximately \$967,000, \$90,000, \$8.0 million and \$6.0 million in fiscal 1994, 1995, 1996 and the first fiscal quarter of 1997, respectively. In fiscal 1994, financing cash proceeds were primarily derived from the issuance of \$1.0 million of 7.5% Notes to Hakuto. In fiscal 1995, cash proceeds were generated from the sale of equity securities to senior management. During fiscal 1996, the Company raised \$11.0 million from the issuance of 6.0% subordinated notes due 2001. Of this amount, \$3.0 million was used to repay the outstanding 7.5% Notes held by Hakuto including \$3.0 million borrowed in fiscal 1993.

For the quarter ended December 31, 1996, the Company's level of accounts receivable increased approximately \$3.6 million, or 119.1%, to \$6.6 million, principally due to the timing of shipments. During the final month of the quarter, the Company shipped three TurboDisc production systems, which represented 31.7% of the Company's revenues for the fiscal quarter. Approximately 90% of this amount, or \$2.4 million, was due from customers as of December 31, 1996. With respect to the Company's December 31, 1996 accounts receivable, the Company collected approximately \$5 million during January 1997, substantially reducing its balance of accounts receivable. At December 31, 1996, the Company's inventories increased approximately \$1.7 million, or 21.7%, to \$9.3 million, which was primarily attributable to work-in-process in production systems scheduled to be shipped in the second quarter of fiscal 1997.

On October 25, 1996, the Company entered into a \$10.0 million demand note facility with First Union National Bank. The facility bears interest at the rate of the six-month LIBOR plus 75 basis points (approximately 6.3% at December 31, 1996) and is due and payable on demand. The facility has been guaranteed by JLMP, the Company's majority shareholder. Collateral for the facility, in the form of a custodial account containing marketable equity securities, has been provided by Thomas J. Russell, the Chairman of the Company's Board of Directors and Chairman of JLMP. The Company anticipates using the borrowing under the demand note facility to finance a portion of its capital expenditure requirements in fiscal 1997. As of December 31, 1996, the Company had borrowed \$6.0 million under the demand note facility. The Company is presently in discussions with certain lenders to put in place a revolving credit facility in place of the demand note facility.

The Company believes that its cash on hand, the receipt of customer deposits and the net proceeds from the Offering will be sufficient to repay the borrowings under the demand note facility and to provide the Company with adequate working capital at least through 1997. However, there can be no assurance that events in the future will not require the Company to seek additional capital sooner or, if so required, that adequate capital will be available on terms acceptable to the Company.

The Company's net operating loss tax carryforwards and research credits are subject to annual limitations under Sections 382 and 383 of the Internal Revenue Code due to a change in ownership. A change in control as defined by Section 381 of the Internal Revenue Code occurred in May 1995. As of that date, the approximate net operating loss tax carryforward of \$7.2 million will be limited to annual usage of approximately \$680,000

per year. The net operating loss tax carryforward of approximately \$2.4 million as of September 30, 1996 generated after the change in ownership will have no limits on annual usage.

## RECENT ACCOUNTING PRONOUNCEMENTS

In March 1995, the Financial Accounting Standards Board (the "FASB") issued Statement of Financial Accounting Standards No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of" ("SFAS 121"). This pronouncement establishes accounting standards for when impairment losses relating to long-lived assets, identifiable intangibles and goodwill related to those assets should be recognized and how the losses should be measured. The Company plans to implement SFAS 121 in fiscal 1997. The adoption of SFAS 121 is not expected to have an impact on the Company's financial position or results of operations, since the Company's current policy is to monitor assets for impairment and record any necessary write-

In October 1995, the FASB issued Statement of Financial Accounting Standards No. 123 "Accounting for Stock Based Compensation" ("SFAS 123"). The provisions of SFAS 123 set forth the method of accounting for stock based compensation based on the fair value of stock options and similar instruments, but do not require the adoption of this preferred method. SFAS 123 also requires the disclosure of additional information about stock compensation plans, even if the preferred method of accounting is not adopted. The Company plans to implement SFAS 123 in fiscal 1997. The Company does not intend to change its method of accounting for stock based compensation to the method under SFAS 123, but instead will continue to apply the provisions of Statement of Financial Accounting Standards No. 25 "Accounting for Stock Issued to Employees." However, the Company will disclose the pro forma effect of SFAS 123 on its net income and earnings per share.

## COMPANY OVERVIEW

EMCORE designs and develops compound semiconductor materials and process technology and is a leading manufacturer of production systems used to fabricate compound semiconductor wafers. Compound semiconductors are used in a broad range of applications in wireless communications, telecommunications, computers, and consumer and automotive electronics. EMCORE believes that its proprietary TurboDisc(TM) deposition technology is the critical enabling process step in the cost-effective, volume manufacture of high-performance electronic and optoelectronic devices. The Company has recently capitalized on its technology base by expanding into the design and production of compound semiconductor wafers and package-ready devices. The Company offers its customers a complete, vertically-integrated solution for the design, development and production of compound semiconductor wafers and devices. EMCORE's production systems and process technology have been purchased by, among others: Hughes-Spectrolab, General Motors, Hewlett Packard Co., Lucent Technologies, Inc., Motorola, Inc., Rockwell, Samsung Co., Siemens AG, L.M. Ericsson AB, Texas Instruments Incorporated, Thomson CSF and thirteen of the largest electronics manufacturers in Japan. In fiscal 1996, only one customer, Hughes-Spectrolab, accounted for more than 10% of the Company's revenues; sales to this customer accounted for 23.6% of the Company's revenues. In fiscal 1996, no other customer individually accounted for more than 7.5% of the Company's revenues.

## INDUSTRY OVERVIEW

Recent advances in information technologies have created a growing need for power efficient, high-performance electronic systems that operate at very high frequencies, have increased storage capacity and computational and display capabilities, and can be produced cost-effectively in commercial volumes. In the past, electronic systems manufacturers have relied on advances in silicon semiconductor technology to meet many of these demands. However, the newest generation of high-performance electronic and optoelectronic applications require certain functions which are generally not achievable using siliconbased components. To address these market demands, electronic system manufacturers are increasingly incorporating new electronic and optoelectronic devices into their products in order to improve performance or enable new applications.

Compound semiconductors have emerged as an enabling technology to meet the complex requirements of today's advanced information systems. Compound semiconductor devices can be used to perform individual functions as discrete devices, such as HB LEDs, lasers and solar cells, or can be combined into integrated circuits, such as transmitters, receivers and alpha-numeric displays. Many compound semiconductor materials have unique physical properties that allow electrons to move at least four times faster than through silicon-based devices. This higher electron mobility enables a compound semiconductor device to operate at much higher speeds than silicon devices with lower power consumption and less noise and distortion. In addition, unlike silicon-based devices, compound semiconductor devices have optoelectronic capabilities that enable them to emit and detect light. As a result, electronics manufacturers are increasingly integrating compound semiconductor devices into their products in order to achieve higher performance in a wide variety of applications, including wireless communications, telecommunications, computers, and consumer and automotive electronics.

Wireless Communications. Compound semiconductor devices have multiple applications in wireless communication products, including cellular telephones, pagers, PCS handsets, DBS systems and global positioning systems ("GPS"). Compound semiconductor devices are used in high frequency transmitters, receivers and power amplifiers to increase capacity, improve signal to noise performance and lower power consumption, which in turn reduces network congestion, increases roaming range and extends battery life. In addition, HB LEDs are used in electronic displays on these products in order to reduce size, weight and power consumption and to improve display visibility. In satellite communications, compound semiconductor devices are used in ultra-high frequency satellite up-converters and down-converters to cost-effectively deliver information to fixed and mobile users over wide geographic areas. In addition, compound semiconductor solar cells are used to power these satellites because they are more tolerant to radiation levels in space and have higher power-to-weight ratios than silicon-based solar cells, thereby increasing satellite life and payload capacity.

Telecommunications. To accommodate the exponential growth in voice, data and video traffic and the increased demand for higher transmission rates, telecommunications companies and Internet service providers are relying on fiber optic networks utilizing high speed switching technologies. Compound semiconductor components such as lasers and LEDs, coupled with optical detectors, are used within these networks to enable high speed data transmission, increase overall network capacity and reduce equipment costs.

Computers. Computer manufacturers are increasingly seeking to achieve higher clock speeds than the architecture prevalent in today's advanced multimedia computer systems. Higher processing speeds necessitate the use of larger cache memory to enable higher transmission rates. Computer manufacturers are increasingly utilizing compound semiconductor devices to achieve these results. In addition, today's advanced multimedia applications require increased data storage capacity, which is commonly addressed by the use of CD ROMs. To achieve these higher storage capabilities, computer manufacturers are increasingly utilizing compound semiconductor lasers and optical detectors. As a result of the migration of multimedia applications into consumer products, computer manufacturers are also incorporating compound semiconductor infrared emitters into their products to replace bulky wires and cables.

Consumer Electronics. Consumer electronics manufacturers are using compound semiconductor devices to improve the performance of many existing products and to develop new applications. For example, next generation compact disc players are utilizing shorter wavelength compound semiconductor lasers to read and record information on high density DVDs which store at least four times more information than a conventional compact disc. In addition, compound semiconductor devices are increasingly being used in advanced display technologies. Ultra-thin LED flat panel displays are being used in a variety of applications, including point-of-purchase displays and outdoor advertising with live-action billboards, and are being developed for use in laptop computers and flat panel television screens.

Automotive Electronics. Compound semiconductor devices are increasingly being used by automotive manufacturers to improve vehicle performance while reducing weight and costs through lower power consumption. These devices are utilized in a wide variety of applications, including dashboard displays, indicator lights, engine sensors, anti-lock braking systems and other electronic systems. In addition, the Company believes that the use of electronic components within automobiles is likely to increase as manufacturers design vehicles to comply with state and federal environmental and safety regulations. Automotive production cycles generally last three to five years, providing a relatively predictable source of demand for compound semiconductor devices once an electronic component is designed into a specific vehicle model.

The high-performance characteristics of compound semiconductors, combined with the requirements of advanced information systems, have led to the widespread deployment of compound semiconductor devices within a broad range of electronic systems. The Company believes that the following factors have resulted in an increased demand for compound semiconductor production systems, wafers and devices which enable electronic systems manufacturers to reach the market faster with high volumes of high-performance products and applications:

- . Launch of new wireless services such as PCS and wireless high speed data systems;
- . Rapid build-out of satellite communications systems;
- Widespread deployment of fiber optic networks and the increasing use of optical systems within these networks;
- . Increasing use of infrared emitters and optical detectors in computer systems to replace bulky interconnect wires and cables;
- . Emergence of advanced consumer electronics applications, such as DVDs and flat panel displays; and
- . Increasing use of high-performance electronic devices in automobiles.

## COMPOUND SEMICONDUCTOR PROCESS TECHNOLOGY

Compound semiconductors are composed of two or more elements and usually consist of a metal such as gallium, aluminum or indium and a non-metal such as arsenic, phosphorous or nitrogen. The resulting

compounds include gallium arsenide, indium phosphide, gallium nitride, indium antimonide and indium aluminum phosphide. The performance characteristics of compound semiconductors are uniquely dependent on the composition of these compounds. For example, the electrical and optical properties of gallium arsenide are substantially changed by adding aluminum as a third element. Many of the unique properties of compound semiconductor devices are achieved by the layering of different compound semiconductor materials in the same device. For example, infrared compound semiconductor lasers and LEDs are fabricated by depositing ultra-thin layers of gallium arsenide between layers of gallium aluminum arsenide. This layered structure creates an optimal configuration to permit the conversion of electricity into light.

Accordingly, the composition and properties of each layer and the control of the layering process, or epitaxy, are fundamental to the performance of advanced electronic and optoelectronic compound semiconductor devices. The variation of thickness and composition of layers determines the intensity and color of the light emitted or detected and the efficiency of power conversion. The ability to vary the intensity, color and efficiency of light generation and detection uniquely enables compound semiconductor devices to be used in a broad range of advanced information systems.

Compound semiconductor device manufacturers have predominantly used three methods to deposit compound materials: molecular beam epitaxy ("MBE"), vapor phase epitaxy ("VPE") and liquid phase epitaxy. ("LPE"). Compound semiconductor materials fabricated using LPE or VPE technologies often have high electronic and optical properties. The use of MBE technology can yield wafers having high thickness uniformity. However, the Company believes that these traditional methods are subject to a number of inherent chemical process or volume production limitations. While these methods are successfully used for a variety of applications, they are not easily scaled up to high volume commercial production of complex materials, such as those used for optoelectronic devices.

A fourth method, metal organic chemical vapor deposition overcomes these limitations. Using MOCVD, a number of elements can be easily combined into a broad range of compounds. Currently, MOCVD technology is being used to manufacture a number of devices, including high efficiency solar cells, HB LEDs, heterojunction bipolar transistors ("HBTs"), vertical cavity surface emitting lasers ("VCSELs") and MR sensors. The Company believes that compound semiconductor wafers fabricated using MOCVD generally possess a better combination of uniformity and optical and electronic properties, than wafers manufactured by more traditional methods. The successful use of MOCVD technology does, however, pose technical, training and safety challenges. MOCVD-based production systems typically require: (i) expensive reactant materials, (ii) the use of certain toxic chemicals, and (iii) tight control over numerous manufacturing parameters by a well-trained production staff. Notwithstanding these requirements, the Company believes that MOCVD has gained broad acceptance as the preferred methodology for the production of complex device structures in commercial volumes.

Historically, developers of compound semiconductor devices have met research, pilot production and capacity needs with in-house systems and technologies. However, the requirements for the production of commercial volumes of high-performance compound semiconductor devices have often exceeded the capabilities of such in-house solutions. Simultaneously, the growth of new applications for compound semiconductor devices has challenged manufacturers to develop processes for new applications while simultaneously meeting demand for existing products. In response to these growing demands for higher volumes of higher performance devices, manufacturers are increasingly turning to outside vendors to meet their needs for compound semiconductor wafers and devices.

## THE EMCORE SOLUTION

EMCORE provides its customers with materials science expertise, process technology and MOCVD production systems that enable the manufacture of commercial volumes of high-performance compound semiconductor wafers and devices. EMCORE believes that its proprietary TurboDisc(TM) deposition technology makes possible one of the most cost-effective production systems for the commercial volume manufacture of high-performance compound semiconductor wafers and devices. EMCORE is capitalizing on its technology base

to address the critical need of electronics manufacturers to cost-effectively get to market faster with high volumes of new and improved high-performance products. EMCORE offers its customers a broad range of products and services and a vertically integrated product line which includes device design, materials and process development, MOCVD production systems, epitaxial wafers and package-ready devices. The Company believes that its knowledge base and materials science expertise uniquely position the Company to become a valuable source for a broad array of solutions for the compound semiconductor industry.

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## STRATEGY

The Company believes that its close collaborations with its customers over the past twelve years have contributed to its position in the MOCVD process technology and production systems market. The Company's objective is to capitalize on this position to become a leading supplier of compound semiconductor wafers and package-ready devices. The key elements of the Company's strategy include:

Provide Complete Compound Semiconductor Solutions. The Company's vertically-integrated product offerings allow it to provide complete compound semiconductor solutions to a broad range of electronics manufacturers in order to meet their diverse technology requirements. The Company plans to capitalize on the growing need of electronics manufacturers to reach the market faster and more cost-efficiently with high volumes of end products. The Company assists its customers with device design, process development and optimal configuration of production systems. Moreover, the Company can also serve its customers as a reliable source for high-volume production of wafers or package-ready devices. Through its materials science expertise, process technology and commercial production systems, the Company intends to become an integral part of its customers' compound semiconductor product life cycle.

Form Strategic Relationships with Customers. By developing enabling technologies, the Company seeks to form strategic alliances with its customers in order to obtain long-term development and high volume

production contracts. For example, the Company currently has a strategic relationship with General Motors under which it has developed and enhanced the device structure and production process for, and has received a purchase order to manufacture, MR sensor products for use in General Motors' automotive applications. In addition, the Company has been integrally involved with a large telecommunication concern in connection with the development of solar cell technologies for satellites. Throughout its association with this customer, the Company has successfully customized its production systems to meet the customer's special high-performance device requirements. The Company intends to actively seek similar strategic relationships with other key customers in order to further expand its technological and production base.

Expand Technology Leadership. The Company has developed and optimized its compound semiconductor processes and has developed higher performance production systems through substantial investments in research and development. The Company works closely with its customers to identify specific performance criteria in its production systems, wafers and package-ready devices. The Company intends to continue to expend substantial resources in research and development in order to enhance the performance of its production systems and to further expand its process and materials science expertise, including the development of new low cost, high volume wafers and package-ready devices for its customers. The Company employs 15 persons holding Ph.D.s in various science applications, nine of whom work in research and development.

## **PRODUCTS**

Production Systems and Materials Processes. The Company is a leading supplier of MOCVD compound semiconductor production systems, and, in 1995, had a 26% share of this market, according to VLSI Research Inc. which regularly publishes research on this market. The Company has shipped more than 180 systems to date and believes that its TurboDisc(TM) systems offer significant cost of ownership advantages over competing systems. The Company believes that its MOCVD production systems produce materials with superior uniformity of thickness, electrical properties and material composition. Each system is designed for the customer's particular applications and can be customized for the customer's throughput, wafer size and process chemistry requirements.

The Company's proprietary TurboDisc(TM) technology utilizes a unique high speed rotating disk in a stainless steel growth chamber with integrated vacuum-compatible loading chambers. To produce an epitaxial wafer, a bare substrate, such as gallium arsenide, indium phosphide or germanium, is placed on a wafer carrier in the TurboDisc(TM) growth chamber and subjected to high temperatures. Based on a predetermined formula, metal organic gases are released into the growth chamber. These gases decompose on the hot, rapidly spinning wafer. Semiconductor materials then become deposited on the substrate in a highly uniform manner. The resulting epitaxial wafer thus carries one or more ultra-thin layers of compound semiconductor material such as gallium arsenide, gallium nitride, or indium aluminum phosphide. The TurboDisc(TM) technology not only ensures uniformity of deposition across the wafer, but also offers flexibility for diverse applications with improved material results and increased production rates. The unique precision control of reactant gas flow in the TurboDisc(TM) technology platform allows users to scale easily from research to commercial volumes with substantially reduced time and effort. Wafers from two inches to 14 inches in diameter can be prepared using the same platform technology.

Upon removal from the growth chamber, the epitaxial wafer is then transferred to a device processing facility for various steps such as photolithography, etching, masking, metallization and dicing. Upon completion of these steps, the package-ready devices are then sent to the customer's facility for the attachment of leads and encapsulation in resin prior to the ultimate inclusion in the customer's product. The production of such compound semiconductor devices is substantially less complex than that of silicon integrated circuits.

32

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Wafers are loaded on a multiple wafer holder into the growth chamber, where they are subjected to high-temperature vacuum conditions and spun at high speeds. Gases are then introduced into the vacuum growth chamber, and semiconductor materials become deposited onto the substrate in a highly uniform manner.

Compound semiconductor manufacturers, much like their counterparts in the silicon semiconductor industry, place great pressure on process equipment suppliers to decrease the cost of ownership of production systems. Cost of ownership is determined by yield, throughput, direct costs and capital. Yield is primarily determined by material uniformity, which is a function of the precision of the physical and chemical processes by which atomic layers are deposited. Throughput, the volume of wafers produced per unit of time, includes both the time required for a process cycle and the handling time between process steps. Direct costs include consumables used in manufacturing and processing and the clean room space required for the equipment. Capital costs include the cost of acquisition and installation of the process equipment. The Company believes that the high throughput capabilities of its TurboDisc(TM) systems make possible the lowest cost of ownership for the manufacture of compound semiconductor materials as well as superior reproducibility of thickness, composition, electrical profiles and layer accuracy required for electronic and optoelectronic devices. The Company's production systems also achieve a high degree of reliability with an average time available for production, based on customer data, of approximately 95%.

The Company offers the following family of systems:

MODEL	LIST PRICE	APPLICATION
Explorer	\$ 350,000- 450,000	Research
Discovery	\$ 600,000-1,100,000	Development/Pilot Production
Enterprise	\$1,300,000-2,500,000	Volume Production

Wafer and Device Fabrication. Since its inception, the Company has worked closely with its customers in designing and developing materials processes to be used in production systems for its customers' end-use applications. When a customer orders a production system, the customer provides the Company with certain performance criteria. The Company then determines the chemistry and process to meet these requirements and

manufactures and configures the production system to produce the materials needed by the customer. The Company has recently begun to leverage its process and materials science knowledge base to manufacture wafers and package-ready devices in its own facility. The Company's expansion into wafer and package-ready device production has been spurred almost entirely by requests from customers whose epitaxial wafer needs exceed their available in-house production capabilities.

The Company fabricates package-ready devices on four-inch diameter wafers at its facility in Somerset, New Jersey with a combined clean room area totalling 3,500 square feet. Production capacity is currently 3,000 wafers per year. The Company currently anticipates utilizing a significant portion of the net proceeds of the Offering to expand this facility to approximately 7,500 square feet.

The Company is working with its customers to design, engineer and manufacture commercial quantities of wafers and/or package-ready compound semiconductor devices such as MR sensors, HBTs, HEMTs, FETs, HB LEDs, solar cells and other electronic and optoelectronic devices. An example of the Company's close collaboration with its customers is the Company's ongoing relationship with General Motors. In 1985, General Motors was the Company's first customer for compound semiconductor MOCVD production systems. Over the last twelve years, General Motors has frequently consulted the Company for assistance in developing its materials process solutions. In 1995, General Motors asked the Company to determine if it could develop the capability to manufacture high-performance position sensors for use in a variety of automotive applications. Following a close working collaboration, General Motors asked the Company to assess and develop a plan to manufacture commercial volumes of an indium antimonide device that can operate at automotive temperatures. In 1996, General Motors and the Company entered into an agreement under which General Motors paid the Company approximately \$1.6 million to develop and enhance certain MR position sensors for commercial production. In June 1996, the Company achieved positive test results in its development of MR sensors. The Company successfully completed the General Motors Pre-Production Approval Process in September 1996. On November 11, 1996, the Company received a purchase order from General Motors, pursuant to which it began production of these package-ready position sensors.

In addition, the Company is working closely with several large telecommunications concerns to assist these customers in developing solar cell process technology for use as the power source on their communications satellites. After extensive working collaborations, the Company has developed the materials process and a production system for solar cell materials with outstanding performance characteristics. As a result of this collaboration, the Company's technology has produced gallium arsenide solar cells that are not only approximately 50% more efficient in light-to-power conversion than silicon-based solar cells but also are more radiation-resistant. The resulting advance allows a satellite manufacturer to increase the useful life and payload capacity of its satellites. Over the last two years, the Company's customers have purchased several MOCVD production systems for this purpose. In the summer of 1996, a customer requested the Company to begin producing fourinch epitaxial wafers for use in the manufacture of solar cells for space satellites. Additionally, the Company has completed an initial process development phase with a large telecommunications concern. This collaboration has resulted in prototype solar cells that may lead to more efficient solar cells than those currently being used.

34

# **CUSTOMERS**

The Company's customers include several of the largest semiconductor, telecommunications and computer manufacturing companies in the world and 13 of the largest electronics manufacturers in Japan. In fiscal 1996, only one customer, Hughes-Spectrolab, accounted for more than 10% of the Company's revenues. In fiscal 1996, sales to this customer accounted for 23.6% of the Company's revenues. In fiscal 1996, no other customer individually accounted for more than 7.5% of the Company's revenues. A number of the Company's customers are listed below:

General Motors
Hewlett Packard Co.
Honeywell Inc.
Hughes-Spectrolab
Hyundai Electronics
International Business
Machines Corporation

LG Semiconductor Corp.

L.M. Ericsson AB
Lucent Technologies, Inc. Siemens AG
Motorola, Inc.
Philips AG
Polaroid Corporation
Rockwell

Samsung Co.
Sharp U.S.A
Texas Instr.
Incorporate
Thomson CSF
Westinghous

Samsung Co.
Sharp U.S.A., Inc.
Siemens AG
Texas Instruments
Incorporated
Thomson CSF
Westinghouse Electric
Corn.

In fiscal 1996, the Company adopted a comprehensive Total Quality Management Program with special emphasis on total customer satisfaction. The Company seeks to encourage active customer involvement with the design and operation of its production systems. To accomplish this, the Company conducts user group meetings among its customers on three continents. At annual meetings, the Company's customers provide valuable feedback on key operations, process oriented services, problems and recommendations to improve the Company's products. This direct customer feedback has enabled the Company to constantly update and improve the design of its systems and processes. Changes that affect the reliability and capabilities of the Company's systems are embodied in new designs to enable current and future customers to utilize systems which the Company believes are high quality and cost-efficient. As of December 31, 1996, the Company employed 18 field service engineers who install the Company's systems and provide on-site support for all of the customers' needs. In its continuing effort to maintain and enhance its relationships with its customers, the Company is seeking ISO and QS 9000 quality certification.

# SALES AND MARKETING

The Company markets and sells its products through its direct sales force in Europe and North America, and through representatives and distributors in Asia. In 1996, the Company signed a seven year exclusive distributorship agreement with Hakuto, its Asian distributor, whose territory encompasses seven Asian countries. The Company has reached preliminary agreement with Hakuto to replace the existing distributorship agreement with a new distributorship agreement whose term will be five years and under which Hakuto will distribute additional products of the Company. The material terms of the agreement will otherwise remain the same. Hakuto has marketed and serviced the Company's products since 1988 and is a minority shareholder in the Company. As of December 31, 1996, the Company employed 13 persons in sales and marketing.

The Company's sales and marketing staff, senior management and technical staff work closely with existing and potential customers to provide compound semiconductor solutions for its customers' problems. The sales process begins by understanding the customer's requirements and then attempting to match them with the most optimal solution. Typically, the Company will first try to match the customer's requirements to an existing design or a modification of a standard design. Such modifications often involve changing platform or process design. When necessary, the Company will work with the customer to develop the appropriate design process and to configure and manufacture the production system to meet the customer's needs. The Company will also frequently produce customized samples and aid the customer in matching the customized sample to the customer's requirement. The amount of time from the initial contact with the customer to the customer's placement of an order for a production system is typically two to nine months or longer. In addition, the Company expects that the sales cycle for wafers and package-ready devices will also include a period of two to

six months during which the Company develops the formula of materials necessary to meet the customer's specifications and qualifies the materials, which may also require the delivery of samples. The Company believes that the high level of marketing, management and engineering support involved in this process is beneficial in developing competitive differentiation and long-term relationships with its customers.

International sales as a percentage of total sales in fiscal 1994, 1995, 1996 and the first fiscal quarter of 1997 were 58.6%, 36.0%, 42.5% and 64.3%, respectively. Sales to customers in the U.S. in fiscal 1994, 1995 and 1996 were approximately, \$3.7 million, \$11.6 million and \$16.0 million, respectively, while the Company's sales in Asia for the same time periods were \$4.9 million, \$4.0 million and \$8.2 million, respectively, and sales in Europe were \$0.3 million, \$2.5 million and \$3.6 million, respectively. The Company receives all payments for all products and services in U.S. dollars.

#### SERVICE AND SUPPORT

The Company maintains an international service and support network responsible for on site maintenance and process monitoring on either a contractual or time-and-materials basis. Customers may purchase annual service contracts under which the Company is required to maintain an inventory of replacement parts and to service the equipment upon the request of the customer. The Company also sells replacement parts from inventory for customer needs. The Company pursues a program of system upgrades for customers to increase the performance of older systems. The Company generally does not offer extended payment terms to its customers and generally adheres to a warranty policy of one year. Consistent with industry practice, the Company maintains an inventory of components for servicing systems in the field and it believes that its inventory is sufficient to satisfy foreseeable short-term customer requirements.

# RESEARCH AND DEVELOPMENT

To maintain and improve its competitive position, the Company's research and development efforts are focused on designing new proprietary products, improving the performance of existing systems, wafers and package-ready devices and reducing costs in the product manufacturing process. In addition, the Company has developed a research and development production system for thin film ferroelectric oxide applications intended for use in large area memory and embedded logic devices. The Company has developed this experimental production system for the deposition of thin-film ferroelectric materials onto silicon. Ferroelectric oxides are anticipated to be necessary for the production of advanced memory chips for one-gigabit memory devices. As of December 31, 1996, the Company had sold two such systems.

The Company has dedicated six EMCORE TurboDisc(TM) systems for both research and production which are capable of processing virtually all compound semiconductor materials. The research and development staff utilizes state-of-the-art x-ray, optical and electrical characterization equipment which provide instant data allowing for shortened development cycles and rapid customer response. The Company's research and development expenses in fiscal 1994, 1995, 1996 and the first fiscal quarter of 1997 were approximately \$1.1 million, \$1.9 million, \$5.4 million and \$2.3 million, respectively. The Company expects that it will continue to expend substantial resources on research and development. As of December 31, 1996, the Company employed 26 persons in research and development, nine of whom hold Ph.D.s in materials science or related fields.

The Company also competes for research and development funds. In view of the high cost of development, the Company solicits research contracts that provide opportunities to enhance its core technology base or promote the commercialization of targeted products. The Company presently has three such contracts in process. The contracts fall under the Small Business Innovative Research programs or similar government sponsored programs. From inception until December 31, 1996, government and other external research contracts have provided approximately \$11.0 million to support the Company's research and development efforts. The Company is also positioned to market technology and process development expertise directly to customers who require it for their own product development efforts.

36

# INTELLECTUAL PROPERTY

The Company's success and competitive position both for production systems, wafers and package-ready devices depend materially on its ability to maintain trade secrets, patents and other intellectual property protections. Trade secrets are routinely employed in the Company's manufacturing 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. In order to protect its trade secrets, the Company takes certain measures to ensure their secrecy, such as executing non-disclosure agreements with its employees, customers and suppliers. Sales of the Company's production systems are substantially dependent upon the Company's ability to maintain its trade secrets relating to production system technology and operation. Sales of the Company's wafers and package-ready devices depend heavily on the Company's trade secrets related to its MOCVD technology and processes to give the Company a competitive advantage for winning new customer orders.

To date, the Company has been issued six U.S. patents. Provided that all requisite maintenance fees are paid, these U.S. patents will expire between 2005 and 2013. None of these U.S. patents claim any material aspect of the current or planned commercial versions of the Company's systems, or wafers or devices.

To permit sales of its MOCVD production systems, the Company was in 1992 granted the Rockwell License under the Rockwell Patent issued on January 11, 1983 to Rockwell. The Rockwell Patent claimed, among other things, intellectual property rights in the use of MOCVD generally in unspecified applications and expires in 2000. In October 1996, the Company initiated discussions with Rockwell to receive additional licenses to permit the Company to utilize MOCVD technology to manufacture and sell certain wafers and package-ready devices. On November 15, 1996, in litigation not involving the Company, the Rockwell Patent was declared invalid by the U.S. Court of Federal Claims. The Company believes that Rockwell will appeal this judgment. In the event the foregoing judgment is reversed by a court of appeal, the Company may be liable to Rockwell for royalty payments, as well as other amounts which the Company may ultimately be deemed to owe Rockwell in connection with the sales of its systems, wafers and package-ready devices. Moreover, the Company may require additional licenses from Rockwell under the Rockwell Patent in order to manufacture and sell certain wafers and package-ready devices. There can be no assurance that the foregoing judgment will not be reversed, that the Rockwell License can be maintained or that licenses for wafers and packageready devices can be obtained or maintained on commercially feasible terms, if at all. The failure to maintain or obtain such licenses could have a material adverse effect on the Company's business, financial condition and results of operations.

# **ENVIRONMENTAL REGULATIONS**

The Company 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 research and development and production operations, as well as laws and regulations concerning environmental remediation and employee health and safety. The Company has retained an environmental consultant to advise it in complying with applicable environmental and health and safety laws and regulations, and believes that it is currently, and in the past has been, in substantial compliance with all such laws and regulations. The Company also believes that the costs of complying with existing environmental and health and safety laws and regulations are not likely to have a material adverse effect on its business, financial position or results of operations. There can be no assurance, however, that future changes in such laws and regulations will not result in expenditures or liabilities, or in restrictions on the Company's operation, that could have such an effect. The production of wafers and package-ready devices involves the use of certain hazardous raw materials, including, but not limited to, ammonia, phosphine and arsenic. The Company's expansion to offer wafers and package-ready devices will require the increased usage and maintenance of these materials on the Company's premises. While the Company believes it currently has and will continue to have in place sufficient control systems for the safe use and maintenance of these raw materials, there can be no assurance that the Company's control systems will be successful in preventing a release of these materials or other adverse environmental conditions, which could cause a substantial interruption in the Company's operations. Such an interruption could have a material adverse effect on the Company's business, financial condition and results of operation.

# **BACKLOG**

As of December 31, 1996, the Company had an order backlog of approximately \$23.8 million consisting of \$20.7 million of production systems, \$1.0 million of research contracts and \$2.1 million of package-ready devices, compared to backlog of \$19.0 million as of December 31, 1995 consisting of \$17.2 million of production systems and \$1.8 million of research contracts. This increase in backlog was a result of increased market acceptance of the Company's production systems and multiple unit orders for such systems, and the introduction of the Company's wafer and package-ready device product lines. The Company includes in backlog only customer purchase orders which have been accepted by the Company and for which shipment dates have been assigned within the twelve months to follow and research contracts that are in process or awarded. The Company receives partial advance payments or irrevocable letters of credit on most production system orders and has never experienced an order cancellation. The Company recognizes revenue upon shipment. For research contracts with the U.S. government and commercial enterprises with durations greater than six months, the Company recognizes revenue to the extent of costs incurred plus a portion of estimated gross profit as stipulated in such contracts, based on contract performance. The Company is seeking to increase capacity to meet anticipated continuing increased production needs; however, there can be no assurance that the Company will increase its capacity to meet its scheduled needs.

# MANUFACTURING

The Company's manufacturing operations are located at the Company's headquarters in Somerset, New Jersey and include systems engineering and production, wafer fabrication, and design and production of package-ready devices. Many of the Company's manufacturing operations are computer monitored or controlled, enhancing reliability and yield. The Company manufactures its own systems and outsources some components and sub-assemblies, but performs all final system integration, assembly and testing. Since nearly all steps in the production process are performed by the Company, any interruption in manufacturing resulting from earthquake, fire, equipment failures or other causes would have a material adverse effect on the Company. As of December 31, 1996, the Company employed 119 persons in its manufacturing operations.

Outside contractors and suppliers are used to supply raw materials and standard components and to assemble portions of end systems from Company specifications. The Company depends on sole or a limited number of suppliers of components and raw materials. The Company generally purchases these single or limited source products through standard purchase orders. The Company also seeks to maintain ongoing communications with its suppliers to guard against interruptions in supply and has, to date, generally been able to obtain sufficient supplies in a timely manner and maintains inventories it believes are sufficient to meet its near term needs. The Company has recently implemented a vendor program through which it inspects quality and reviews supplies and prices in order to standardize purchasing efficiencies and design requirements to maintain as low a cost of sales as possible. However, operating results could be materially adversely affected by a stoppage or delay of supply, receipt of defective parts or contaminated materials, and increase in the pricing of such parts or the Company's inability to obtain reduced pricing from its suppliers in response to competitive pressures.

In fiscal 1996, the Company began to increase its manufacturing capacity to meet demand for compound semiconductor production systems and wafers and package-ready devices. The Company currently anticipates utilizing a significant portion of the net proceeds from the Offering for this purpose.

# COMPETITION

The markets in which the Company competes are highly competitive. The Company competes with several companies for sales of MOCVD systems including Aixtron, Nippon-Sanso and Thomas Swann. The primary competitors for the Company's wafer foundry include Epitaxial Products Inc., Kopin Corporation and Q.E.D. The Company also faces competition from manufacturers that implement in-house systems for their own use. The Company may experience competition from corporations that have been in business longer than the Company and have greater capital resources, more experience with high volume manufacturing, broader name recognition, substantially larger installed bases, alternative technologies which may be better established than

the Company's and significantly greater financial, technical and marketing resources than the Company. The Company competes with many research institutions and universities for research contract funding. The Company also sells its products to current competitors and companies with the capability of becoming competitors. As the markets for the Company's products grow, new competitors are likely to emerge, and present competitors may increase their market share.

The Company believes that the primary competitive factors in the markets in which the Company's products compete are yield, throughput, capital and direct costs, system performance, size of installed base, breadth of product line and customer satisfaction, as well as customer commitment to competing technologies. While the Company believes it is in a position to deliver lowcost and reliable solutions to its customers, many of the Company's competitors have significantly greater financial, technical, manufacturing, marketing, sales and other resources than the Company. The Company believes that in order to remain competitive, it must invest significant financial resources in developing new product features and enhancements and in maintaining customer satisfaction worldwide. In marketing its products, the Company may face competition from suppliers employing new technologies in order to extend the capabilities of competitive products beyond their current limits or increase their productivity. In addition, increased competitive pressure could lead to intensified price-based competition, resulting in lower prices and margins, which would materially adversely affect the Company's business, financial condition and results of operations.

#### LEGAL PROCEEDINGS

The Company is aware of no pending or threatened litigation against it which would have a material adverse effect on its business, financial condition and results of operations.

# **EMPLOYEES**

As of December 31, 1996, the Company employed 204 persons. None of the Company's employees is covered by a collective bargaining agreement. The Company considers its relationship with employees to be good.

# **FACILITIES**

The Company's executive office and manufacturing facility are located in Somerset, New Jersey, where the Company leases a 75,000 square foot facility. This facility lease expires on February 29, 2000. The Company has two five-year renewal options.

# MANAGEMENT

The executive officers and directors of the Company and their ages as of the date of this Prospectus are as follows:

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	President, Chief Executive Officer and Director Vice PresidentFinance and Administration, Chief Financial Officer, Secretary, and Director
40	Vice PresidentTechnology and Director
52	Executive Vice PresidentBusiness Development
32	Vice PresidentEngineering
52	Vice PresidentDevice Manufacturing
36	Vice PresidentElectronic Materials
35	Controller
65	Chairman of the Board
57	Director
31	Director
50	Director-nominee
	40 52 32 52 36 35 65 57 31

POSTTION(S)

(1) Member of Audit Committee

NAME

(2) Member of Compensation Committee

All directors of the Company hold office until the next annual meeting of shareholders or until their successors are duly elected and qualified. All officers serve at the discretion of the Board of Directors.

Reuben F. Richards, Jr.--Mr. Richards 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 the present, Mr. Richards has been a Senior Managing Director of Jesup & Lamont Capital Markets Inc. ("Jesup & Lamont") (an affiliate of a registered broker-dealer). From December 1994 to the present, he has been a member of and President of JLMP, the Company's largest shareholder. From 1992-1994, Mr. Richards was a principal with Hauser, Richards & Co., a firm engaged in corporate restructuring and management turnarounds. From 1986-1992, Mr. Richards was a Director at Prudential-Bache Capital Funding in its Investment Banking Division. Mr. Richards also serves as a director of S.A. Telecommunications, Inc., a full service long distance telecommunications company, located in Richardson, Texas.

Thomas G. Werthan--Mr. Werthan joined the Company in 1992 as its Chief Financial Officer, Vice President--Finance and Administration and a director. Mr. Werthan is a Certified Public Accountant and has over fourteen 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 is affiliated with Thomas J. Russell, a member of and Chairman of JLMP and 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 multi-media and computer graphics equipment.

Richard A. Stall, Ph.D.--Dr. Stall became a director of the Company in December 1996. Dr. Stall helped found the Company in 1984 and has been 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 four patents on MBE and MOCVD technology and the characterization of compound semiconductor materials.

William J. Kroll--Mr. Kroll joined the Company in 1994 as Vice President--Business Development and in 1996 became Executive Vice President--Business Development. Prior to 1994, Mr. Kroll served for seven years as Senior Vice President of Sales and Marketing for Matheson Gas Products, Inc., a manufacturer and distributor of specialty gases and gas control and handling equipment. In that position, Mr. Kroll was responsible for \$100 million in sales and 700 employees worldwide. Prior to working at Matheson Gas Products, Mr. Kroll was Vice President of Marketing for Machine Technology, Inc., a manufacturer of semiconductor equipment for photoresist or applications, plasma strip, and related equipment.

Paul T. Fabiano--Mr. Fabiano joined the Company in 1985 as a process engineer and has served as Vice President--Engineering since March 1996. Mr. Fabiano has experience in all critical phases of the Company's operations including sales, service, manufacturing and engineering. During his tenure at the Company, Mr. Fabiano has held various managerial positions including Vice President, Manufacturing and Director of Field Engineering.

Louis A. Koszi--Mr. Koszi joined the Company in 1995 as Vice President--Device Manufacturing. Prior to 1995, Mr. Koszi was a member of AT&T Bell Laboratories for 25 years. Mr. Koszi has experience in all phases of semiconductor device design and manufacturing processes and associated quality programs. Mr. Koszi holds 17 U.S. patents, five foreign patents, and is a co-author of 35 publications. He was named a Distinguished Member of Technical Staff in 1989. In 1992, he was presented with the Excellence in Engineering from the Optical Society of America.

Laurence P. Wagner--Mr. Wagner joined the Company in March 1996 as Vice President--Wafer Manufacturing, and has more than twelve years experience in operations, engineering and research in the electronic and semiconductor materials industries. Before joining EMCORE, he spent seven years at Shipley Company, L.L.C., a subsidiary of Rohm & Haas, where he served successively as Corporate Projects Manager, Product Engineer, Engineering Manager, Manufacturing Manager, and, from 1994 to 1996, Operating Unit Manager.

David D. Hess--Mr. Hess joined the Company in 1989 as General Accounting Manager. He was named Controller in 1990. He has more than ten years experience in monitoring and controlling all phases of product and process cost and general accounting systems. Prior to his employment at EMCORE, he held several positions as cost accounting manager, divisional accountant and inventory control supervisor in manufacturing firms such as Emerson Quiet Kool (air conditioner manufacturers), Huls, North America (paint/solvent processors), and Brintec Corporation (screw machine manufacturers).

Thomas J. Russell, Ph.D.--Dr. Russell 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. Since 1992, he has been an investor and director of several companies. Dr. Russell currently serves as a director of Cordiant plc, Adidas AG, and Uniroyal Technology Corporation ("UTC"). Dr. Russell is one of three trustees of the AER 1997 Trust, which is a member of JIMP.

Howard R. Curd--Mr. Curd has been a director of the Company since May 1995. Mr. Curd has been Chairman and Chief Executive Officer of UTC from September 1992 to the present. From 1986 to 1992, he was Chairman of Uniroyal Plastics Corp. He is the founder of UTC's predecessor business, Polycast Technology Corporation. He also sits on the advisory board for Investment Seminars, Inc., a provider of independent investment advice. Mr. Curd is a member of and Vice President of JLMP, the Company's majority shareholder. Mr. Curd is the father of Howard F. Curd, a director of the Company.

Howard F. Curd--Mr. Curd has been a director of the Company since May 1995. Since 1991, Mr. Curd has been president and chief executive officer and a director of Jesup & Lamont Group Holdings, Inc., a

41

diversified financial holding company. Mr. Curd is a director of S.A. Telecommunications, Inc., a long distance telecommunication company, located in Richardson, Texas. Mr. Curd is the son of Howard R. Curd, a director of the Company.

Robert Louis-Dreyfus--Mr. Louis-Dreyfus has been nominated to serve on the Company's Board of Directors. It is expected that immediately following the Offering, the Board will elect Mr. Louis-Dreyfus to serve as a Director. Mr. Louis-Dreyfus has been the Chairman of the Board of Directors and Chief Executive Officer of Adidas AG since April 1993. Prior to that time, he had been from 1990 until 1993 the Chief Executive Officer of Saatchi & Saatchi plc (now Cordiant plc) and a director of Saatchi & Saatchi plc from January 1990 until December 1994. Since 1992, he has been an investor and a director of several other companies. 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.

Within 90 days after completion of the Offering, the Company intends to expand the Company's Board of Directors to nine persons and to elect at least two outside directors to the Company's Board. It is the intention of the Company that such outside directors will be appointed to and replace the existing members of each of the Company's Audit Committee and Compensation Committee. The two outside directors will not be affiliates of JLMP, the Company's majority shareholder. Additionally, the Company intends to elect Robert-Louis Dreyfus to serve as a member of the Company's Board of Directors. Mr. Louis-Dreyfus controls a company which is a member of JLMP.

#### COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The Company's Compensation Committee, which consists of Dr. Thomas J. Russell, Howard F. Curd and Howard R. Curd, reviews and recommends to the Board of Directors the compensation and benefits of all officers of the Company, reviews general policy matters relating to compensation and benefits of 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. See "Certain Transactions."

# AUDIT COMMITTEE

The Company's Audit Committee currently consists of Thomas J. Russell, Howard F. Curd and Howard R. Curd. The Audit Committee recommends the engagement of the Company's independent accountants, approves the auditing services performed, and reviews and evaluates the Company's accounting policies and systems of internal controls.

# EXECUTIVE COMPENSATION

The following Summary Compensation Table sets forth certain information concerning the annual and long-term compensation for services in all capacities to the Company in fiscal 1996 of those persons who during such fiscal year (i) served as the Company's chief executive officer or (ii) were the five most highly-compensated officers (other than the chief executive officer) (collectively, the "Named Executive Officers"):

# SUMMARY COMPENSATION TABLE

			ANNUAL COMPENS	LONG TERM COMPENSATION		
NAME AND PRINCIPAL POSITION	FISCAL YEAR	SALARY	ADDITIONAL COMPENSATION	OTHER ANNUAL (1) COMPENSATION(2)	SECURITIES UNDERLYING	ALL OTHER COMPENSA -TION
Reuben F. Richards, Jr. (3) President and Chief Operating Officer	1996	\$193,750(4)	\$	\$		
Thomas G. Werthan Vice President-Finance and Administration and Chief Financial Offi- cer	1996	120,487	29,000	6,000		
Richard A. Stall Vice President-Technol- ogy	1996	126,871	44,000			
William T. Kroll Executive Vice President- Business Development	1996	104,610	110,000	6,000		
Paul T. Fabiano Vice President-Engi- neering	1996	98,303	15,000			
Norman E. Schumaker Chairman and Chief Executive Officer(5)	1996	180,330	103,055	6,750		

No options were issued to any of the Named Executive Officers in fiscal 1996. There were no option exercises by the Named Executive Officers in fiscal 1996.

<sup>(1)</sup> Consists of bonuses, commissions and vacation pay.

<sup>(2)</sup> Consists of insurance premiums and automobile allowances paid by the Company.

<sup>(3)</sup> Mr. Richards became Chief Executive Officer in December, 1996.

<sup>(4)</sup> Of this amount, \$145,000 was received from Jesup & Lamont. Mr. Richards' salary is now paid by the Company and his base annual compensation is \$195,000. See "Certain Transactions."
(5) Dr. Schumaker served as Chairman and Chief Executive Officer until his

retirement in December 1996.

The following table sets forth the number of shares covered by exercisable and unexercisable options held by the Named Executive Officers on September 30, 1996 and the aggregate gains that would have been realized had these options been exercised on September 30, 1996, even though these options had not been exercised by the Named Executive Officers.

# AGGREGATED OPTION EXERCISES IN FISCAL 1996 AND OPTION VALUES AT FISCAL YEAR END

	NUMBER OF SEC UNDERLYING UNE OPTIONS AT FISCA	XERCISED	VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT FISCAL YEAR END(1) EXERCISABLE UNEXERCISABLE				
NAME	EXERCISABLE	UNEXERCISABLE					
Reuben F. Richards, Jr Thomas G. Werthan Richard A. Stall William J. Kroll Paul T. Fabiano Norman E. Schumaker	20, 294 5, 882 8, 824	11,765 13,529 8,824 5,882 17,647(2)	\$211,000 126,600 145,590 42,200 63,300 189,900	\$84,400 97,060 63,300 42,200 126,600			

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(2) Pursuant to Dr. Schumaker's retirement from the Company, these options have been cancelled and will not become exercisable.

#### STOCK OPTION PLAN

In 1995, the Company's Board of Directors and its shareholders approved the Company's 1995 Incentive and Non-Statutory Stock Option Plan (the "Plan"). Under the terms of the Plan, as amended by the shareholders of the Company in March 1996, options to acquire 647,059 shares of Common Stock may be granted. Options with respect to 339,412 shares were outstanding as of September 30, 1996, at exercise prices of \$3.03 to \$10.20 per share. Options granted generally become exercisable over five years. As of September 30, 1996, options with respect to 162,765 shares were exercisable.

The purpose of the Plan is to give officers and executive personnel, and consultants or non-employee directors, of the Company and its subsidiaries an opportunity to acquire Common Stock, to provide an incentive for key employees and other participants to continue to promote the best interests of the Company and enhance its long-term performance, and to provide an incentive for key employees and other participants to join or remain with the Company and its subsidiaries.

Incentive stock options ("ISOs") intended to qualify for special tax treatment in accordance with Section 422 of the Internal Revenue Code of 1986, as amended, ("Code") and non-statutory stock options ("NSOs"), which do not qualify for such special tax treatment, may be granted under the Plan. In addition, stock appreciation rights ("SARs") may be granted under the Plan in conjunction with ISOs.

The Plan is administered by the Board of directors which, to the extent it shall determine, may delegate its administrative powers (other than its power to amend or terminate the Plan) to a committee (the "Committee") appointed by the Board of Directors and composed of not less than three members of the Board of Directors. The Board of Directors is authorized to determine (i) the persons to whom awards under the Plan shall be granted, (ii) the time or times at which such awards shall be granted, (iii) the form and amount of the awards, and (iv) the limitations, restrictions and conditions applicable to any such award. In general, the Board of Directors also may interpret the Plan, prescribe, amend, and rescind rules and regulations relating to it, and make all other determinations it deems necessary or advisable for the administration of the Plan.

<sup>(1)</sup> Options are in-the-money if the market value of the shares covered thereby is greater than the option exercise price. This calculation is based on the fair market value at September 30, 1996 of \$10.20 per share, less the exercise price.

The Board of Directors may from time to time alter, amend or suspend the Plan or any award granted thereunder, or may at any time terminate the Plan, except that it may not, without the approval of the Company's shareholders (except with respect to certain changes in corporate structure), (i) materially increase the total number of shares of Common Stock available for grant under the Plan, (ii) materially modify the class of eligible employees or participants under the Plan, (iii) materially increase benefits to any key employee who is subject to the restrictions of Section 16 of the Securities Exchange Act of 1934, as amended, (the "Exchange Act") or (iv) effect a change relating to ISOs granted thereunder which is inconsistent with Section 422 of the Code and the regulations issued thereunder. No action taken by the Board of Directors in connection with the Plan, either with or without shareholder approval, may materially and adversely affect any outstanding award without the consent of the holder thereof. No award under the Plan may be granted after September 19, 2005.

A stock option granted under the Plan will be exercisable and subject to such terms and conditions as the Board of Directors or the Committee determines and which may be set forth in a written option agreement. In general, the option price for ISOs shall not be less than 100% of the fair market value of the Common Stock on the date of the grant, and such ISO shall not be exercisable within one year of the date of grant. The option price for NSOs shall not be less than 10% of the fair market value of the Common Stock on the date of the grant. For purposes of the Plan, "fair market value" means, in general, the average of the mean between the bid and asked price for the Common Stock at the close of trading for the ten consecutive trading days immediately preceding a given date.

ISOs granted under the Plan may include a SAR, either at the time of the granting of the ISO or while the ISO is outstanding, which shall be exercisable only (i) to the extent that the underlying ISO is exercisable and (ii) for such period of time as determined by the Board of Directors. A SAR is exercisable only when the fair market value of a share of Common Stock exceeds the option price specified for the ISO under which the SAR was granted. A SAR shall entitle the participant to surrender to the Company unexercised the ISO, or portion thereof, to which such SAR is related, and to receive from the Company in exchange therefor that number of shares of Common Stock having an aggregate fair market value equal to the excess of the fair market value on the date of exercise of one share of Common Stock over the option price per share specified in such ISO, multiplied by the number of shares of Common Stock subject to the ISO, or portion thereof, which is so surrendered, or, at the election of the Board, cash in such amount.

ISOs, NSOs, and SARs shall not be exercisable more than ten years after the date of grant. Upon the termination of employment of an employee, or if the contractual relationship between a non-employee participant and the Company terminates, options and SARs granted to such participant shall expire no later than 30 days after such termination although the Board of Directors, in its sole discretion, may permit the exercise of such option or SAR to occur up to three months following such termination; provided, that if such termination occurs as a result of the participant's death or disability, outstanding options and SARs shall expire no later than one year thereafter; and provided further, that outstanding options and SARs held by a former employee participant shall earlier expire on the date that such participant violates the terms of any covenant not to compete, if any, in effect between the Company and such participant. Upon notice of an intent to exercise an option, the option price shall be paid in full in cash or by certified check or, in the Board of Directors' discretion, in shares of Common Stock already owned by the participant.

In the sole discretion of the Board of Directors, adjustments will be made in the number of shares of Common Stock available under the Plan, and the number of shares of Common Stock and the option price of shares subject to outstanding grants of options and SARs to reflect increases or decreases in the number of shares of issued Common Stock resulting from a reorganization, recapitalization, stock split-up, stock distribution or combination of shares, or the payment of a stock dividend or other increase or decrease in the number of such shares outstanding effected without receipt of consideration by the Company.

# COMPENSATION OF DIRECTORS

All non-employee directors will receive 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. Payment of all fees will be made in Common Stock of the Company at the average of the last reported bid and ask prices as of the close of trading that day on the Nasdaq National Market. No director who is an employee of the Company will receive compensation for services rendered as a director.

LIMITATION OF OFFICERS' AND DIRECTORS' LIABILITY AND INDEMNIFICATION MATTERS

The Company's 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. Prior to the consummation of this Offering, the Company intends to enter into indemnification agreements with each of its directors and executive officers and to obtain a policy of 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 officer.

# CERTAIN TRANSACTIONS

In May 1995, 52.0% of the Company's outstanding shares of Common Stock were purchased by JLMP, a limited liability company whose five members are The AER 1997 Trust, Howard R. Curd, Howard F. Curd, Reuben F. Richards, Jr. and Gallium Enterprises, Inc. Gallium Enterprises Inc. is controlled by Robert Louis-Dreyfus, a nominee to become a director of the Company. Howard F. Curd and Reuben F. Richards, Jr. together control a minority of the membership interests in JLMP and are co-owners of Jesup & Lamont Group Holdings, Inc., which owns all the shares of Jesup & Lamont Group notatings, Inc., which owns all the shares of Jesup & Lamont Securities Co., a registered broker-dealer and of Jesup & Lamont Capital Markets, Inc. ("Jesup & Lamont"), a financial services advisory concern. Since 1995, four of the Company's six directors have been members of JLMP. In May 1995, the Company entered into a consulting agreement with Jesup & Lamont (herein, the "Agreement") pursuant to which Jesup & Lamont agreed to provide financial advisory services for the Company for one year. The Agreement provided for a monthly retainer to be paid to Jesup & Lamont of \$12,500 per month. In October 1995, Reuben F. Richards, Jr. joined the Company's management team as President and Chief Operating Officer. On that date, the retainer to Jesup & Lamont was increased to \$25,000 per month to cover Mr. Richards' salary. At that time, Mr. Richards received no compensation directly from the Company. Jesup & Lamont covered all employee benefits and taxes for Mr. Richards until October 1, 1996 when Mr. Richards became a full-time employee of the Company, and the monthly retainer paid by the Company to Jesup & Lamont was decreased to \$10,000. The Agreement will terminate upon completion of the Offering.

In May 1996, the Company issued \$9.5 million of Subordinated Notes (the "Subordinated Notes") and warrants to purchase 2,328,432 shares of Common Stock at \$4.08 per share (the "\$4.08 Warrants"). The \$4.08 Warrants became exercisable on November 1, 1996. JLMP holds 78.5% of the Subordinated Notes and \$4.08 Warrants. In addition, Thomas G. Werthan, Vice President--Finance and Administration, Chief Financial Officer, Secretary and a director, currently holds \$96,233 of the Subordinated Notes and 23,587 of the \$4.08 Warrants; Dr. Richard Stall, Vice President--Technology and a director currently holds \$122,450 of the Subordinated Notes and 30,012 of the \$4.08 Warrants; William Kroll, Executive Vice President--Business Development, currently holds \$65,828 of the Subordinated Notes and 16,134 of the \$4.08 Warrants; Paul Fabiano, Vice President--Engineering, currently holds \$60,407 of the Subordinated Notes and 14,806 of the \$4.08 Warrants; and David Hess, Controller, currently holds \$4,753 of the Subordinated Notes and 1,165 of the \$4.08 Warrants.

In connection with the offering of the Subordinated Notes and \$4.08 Warrants on May 1, 1996, the Company executed a registration rights agreement (the "Registration Rights Agreement") with the holders of the \$4.08 Warrants (the "Warrant Holders"). Upon written notice given by a majority in interest of the Warrant

Holders, the Company is obligated to use its best efforts to register all or part of the Common Stock issuable upon exercise of each Warrant Holders' \$4.08 Warrants, and to keep such registration open for period of not less than nine months. Pursuant to the Registration Rights Agreement, the Company must give notice to, and include if requested within 30 days of such notice, the Warrant Holders in any registration statement filed by the Company under the Securities Act, subject to certain exceptions. See "Description of Capital Stock--Registration Rights."

On September 1, 1996, the Company issued to JLMP \$2,500,000 additional subordinated notes (the "Additional Notes") with terms identical to those of the Subordinated Notes, and warrants to purchase 245,098 shares of Common Stock at \$10.20 per share (the "Additional Warrants"). The Additional Warrants become exercisable six months after issuance. In December 1996, the Company issued to JLMP warrants to purchase 980,392 shares on the same terms as the Additional Warrants in consideration for the grant by Thomas Russell, the Chairman of the Company's Board of Directors, of a security interest over certain assets he controls, in order to guarantee the Company's \$10.0 million demand note facility from First Union National Bank. The Company expects to use a portion of the proceeds of the Offering to pay down this facility. In connection with the issuance of the warrants in September and December of 1996, the Company has entered into a registration rights agreement with JLMP similar to the Registration Rights Agreement.

Upon completion of the Offering, three of the Company's eight directors will be members of JLMP. In addition, Mr. Russell, the Chairman of the Company's Board of Directors, is a trustee of a trust that is a member of JLMP and Mr. Louis-Dreyfus, a director-nominee, controls a company which is a member of JLMP. Following the Offering JLMP will retain an ownership interest in the Company of approximately 48.9%. Within 90 days of the Offering, the Company will elect two independent directors, neither of whom will have any affiliation with JLMP.

From time to time, the Company has lent money to certain of its executive officers and directors. Between October and December 1995, pursuant to the due authorization of the Company's Board of Directors, the Company lent \$85,000 to Thomas G. Werthan, Vice President--Finance and Administration, Chief Financial Officer and a director of the Company. The promissory note executed by Mr. Werthan provides for forgiveness of the loan via bonuses payable to Mr. Werthan over a period of 25 years.

On December 4, 1996, Norman E. Schumaker, a founder of the Company and a beneficial holder of more than 5% of the Company's Common Stock, retired as Chairman and Chief Executive Officer. The Company and Dr. Schumaker have entered into a Consulting Agreement dated as of December 6, 1996, pursuant to which the Company agreed to retain Dr. Schumaker as a consultant for \$250,000 per year. The Company also agreed to pay Dr. Schumaker \$103,055 in full satisfaction of accrued bonuses and vacation time. Dr. Schumaker has agreed to provide consulting services for eight, eight-hour work days per month (approximately two days per week less vacation time) for a term of two years commencing January 1, 1997 and ending December 31, 1998. The Agreement will automatically renew for one successive two-year term unless either party gives the other notice of his or its intention not to renew the Agreement. The Company has also agreed to forgive \$115,300 of indebtedness of Dr. Schumaker to the Company and to provide him with a monthly automobile allowance of \$750 during the term of the Agreement. The Company has agreed to provide Dr. Schumaker with participation, during the period ending on December 31, 2001, in the Company's plan of medical benefits and to assign to Dr. Schumaker a disability insurance policy and two life insurance policies in the aggregate face amount of \$1.1 million. To the extent that these policies may not be so assigned, the Company has agreed to establish similar policies for Dr. Schumaker. The Company has also agreed to extend the exercise of Dr. Schumaker's vested stock options to March 4, 1997. Dr. Schumaker has agreed during the term of the Agreement not to become involved, directly or indirectly, in any business activity which the Company's Board of Directors determines to be competitive with the Company. Dr. Schumaker has also agreed, among others, to refrain from engaging in any business competing with the Company in the United States for an additional period of two years after the termination of the Agreement.

47

# PRINCIPAL SHAREHOLDERS

The following table sets forth certain information known to the Company with respect to beneficial ownership of the Company's Common Stock as of February 1, 1997 and as adjusted to reflect the sale of shares offered pursuant to this Prospectus by: (i) each person who is known by the Company to be the beneficial owner of five percent or more of the Company's Common Stock; (ii) each of the Company's directors; (iii) each Named Executive Officer; and (iv) all officers and directors of the Company as a group.

# PERCENTAGE OF SHARES BENEFICIALLY OWNED

	NUMBER OF SHARES	PRIOR TO	AFTER
NAME OF BENEFICIAL OWNER	BENEFICIALLY OWNED(1)(2)	OFFERING	OFFERING
Reuben F. Richards,			
Jr.(3)	3,724,034	73.1%	49.0%
Richard A. Stall(4)	129,870	4.3	2.3
Thomas G. Werthan(5)	103,763	3.4	1.9
Paul T. Fabiano(6)	62,879	2.1	1.1
William J. Kroll(7)	64,789	2.2	1.2
Howard R. Curd(8)	3,694,622	72.9	48.9
Howard F. Curd(8)	3,694,622	72.9	48.9
Gallium Enterprises			
Inc.(8)	3,694,622	72.9	48.9
The AER 1997 Trust(9)	3,694,622	72.9	48.9
Jesup & Lamont Merchant			
Partners L.L.C.(10)	3,694,622	72.9	48.9
All directors and			
executive officers as a			
group (12 persons)(11)	4,090,470	78.1	52.9
Norman E. Schumaker(12)	533, 347	16.9	9.4

- (1) Unless otherwise indicated in these footnotes, the persons named in the table above have sole voting and investment power with respect to all shares beneficially owned.
- (2) Based on 2,994,461 shares outstanding prior to the Offering and 5,494,461 shares to be outstanding after the Offering, except that shares underlying warrants and options exercisable within 60 days of February 1, 1997, are deemed to be outstanding for purposes of calculating shares beneficially owned and percentages owned by the holder of such warrants and options.
- (3) Consists of options to purchase 29,412 shares, and 1,621,557 shares and warrants to purchase 2,073,065 shares held by JLMP. See Note 10.
- (4) Includes options to purchase 20,294 shares and warrants to purchase 30,012 shares.
- (5) Includes options to purchase 17,647 shares and warrants to purchase 23,587 shares.
- (6) Includes options to purchase 8,824 shares and warrants to purchase 14,806 shares.
- (7) Includes options to purchase 5,882 shares and warrants to purchase 16,134 shares.
- (8) Consists of 1,621,557 shares and warrants to purchase 2,073,065 shares of Common Stock held by JLMP. Gallium Enterprises Inc. is controlled by Robert Louis-Dreyfus, a nominee to become a member of the Board of Directors of the Company. See Note 10.
- (9) Consists of 1,621,557 shares and warrants to purchase 2,073,065 shares of Common Stock held by JLMP. The AER 1997 Trust is one of the five members of JLMP. Its three trustees are John Timoney, Robert Louis-Dreyfus, and Thomas J. Russell, the Chairman of the Company. The trustees share authority over the assets of the trust. After January 13, 2002, Avery E. Russell, the daughter of Thomas J. Russell, will be the primary beneficiary of the trust. See Note 10.
- (10) Includes warrants to purchase 2,073,065 shares of Common Stock. Does not include warrants to purchase 980,392 shares of Common Stock which become exercisable after May 6, 1997. JLMP is a limited liability company whose five members are The AER 1997 Trust, Howard R. Curd, Howard F. Curd, Reuben F. Richards, Jr. and Gallium Enterprises Inc. The members share voting and investment power. JLMP's address and its members' addresses are c/o JLMP, 650 Fifth Avenue, New York, New York 10019.
- (11) Includes options to purchase 82,941 shares and warrants to purchase 1,913,671 shares. See Notes 3 through 8 above.
- (12) Includes options to purchase 26,471 shares and warrants to purchase 138,831 shares. Pursuant to Dr. Schumaker's consulting agreement with the Company dated December 6, 1996, the warrants to purchase 138,831 shares of Common Stock have been placed in escrow until January 6, 1998. See "Certain Transactions." Dr. Schumaker's business address is 20 Upper Warren Way, Warren, New Jersey 07059.

# DESCRIPTION OF CAPITAL STOCK

The authorized capital stock of the Company consists of 23,529,411 shares of Common Stock, no par value, of which 2,994,461 shares are outstanding prior to completion of this Offering, which shares are held by a total of 86 shareholders and 5,882,353 shares of Preferred Stock, none of which are outstanding. In addition, there are outstanding warrants to purchase 2,330,784 shares of Common Stock at \$4.08 per share, warrants to purchase 9,102 shares of Common Stock at \$17.00 a share, and warrants to purchase 1,225,490 shares of Common Stock at \$10.20 per share. Moreover, options to purchase 464,017 shares have been granted under the Plan ranging from \$3.03 per share to \$10.20 a share.

# COMMON STOCK

Holders of Common Stock are entitled to one vote per share on matters to be voted upon by the shareholders of the Company. Subject to the preferences that may be applicable to any outstanding shares of Preferred Stock, the Holders of Common Stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors out of funds legally available therefor. See "Dividend Policy." In the event of liquidation, dissolution or winding up of the Company, the holders of Common Stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to the prior liquidation rights of any outstanding shares of Preferred Stock. The Common Stock has no preemptive, redemption, conversion or other subscription rights. The outstanding shares of Common Stock are, and the shares offered by the Company in the Offering will be, when issued and paid for, fully paid and nonassessable. The rights, preferences and privileges of holders of Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of Preferred Stock currently or outstanding or which the Company may designate and issue in the future.

The Company has applied for listing of the Common Stock on the Nasdaq National Market under the symbol "EMKR."

#### PREFERRED STOCK

The Company is authorized to issue up to 5,882,353 shares of Preferred Stock that may be issued from time to time in one or more classes or series upon authorization of the Board of Directors. The Board of Directors, without further approval of the shareholders, is authorized to designate in any such class or series resolution, such par value and such priorities, power, preferences and relative, participating, optional or other special rights and qualifications, limitations and restrictions as it shall determine.

The ability of the Company to issue Preferred Stock in this manner, while providing flexibility in connection with possible acquisitions and other corporate purposes, could adversely effect the voting power of the voters of the Common Stock and could have the effect of making it more difficult for a person to acquire, or of discouraging a person from seeking to acquire, control of the Company. The potential for issuance of this "blank check preferred stock" may have an adverse impact on the market price of the Common Stock outstanding after the Offering. The Company has no present plans to issue any of the Preferred Stock.

# WARRANTS

The Company has outstanding the following warrants: warrants to purchase a total of 9,102 shares of Common Stock at a purchase price of \$17.00 per share, which warrants expire in July 1997; warrants to purchase a total of 2,330,784 shares of Common Stock at a purchase price of \$4.08 per share which expire in May 2001 and warrants to purchase 1,225,490 shares of Common Stock at \$10.20 per share, which warrants expire in September 2001. The last two classes of warrants may be repurchased by the Company at \$0.85 per share after May 1997 and September 1997, respectively. The Company will not call the warrants unless it can issue registered securities therefor and the average daily market price of the Company's Common Stock exceeds 150% of the warrant exercise price for each of thirty consecutive days.

NEW JERSEY LAW AND OTHER LIMITATIONS UPON TRANSACTIONS WITH "INTERESTED SHAPEHOLDERS"

The New Jersey Business Corporation Act provides that in determining whether a proposal or offer to acquire a corporation is in the best interest of the corporation, the Board of Directors may, in addition to considering the effects of any action on shareholders, consider any of the following: (a) the effects of the proposed action on the corporation's employees, suppliers, creditors and customers, (b) the effects on the community in which the corporation operates and (c) the long-term as well as short-term interests of the corporation and its shareholders, including the possibility that these interests may best be served by the continued independence of the corporation. The statute further provides that if, based on these factors, the Board of Directors determines that any such offer is not in the best interest of the corporation, it may reject the offer. These provisions may make it more difficult for a shareholder to challenge the Board of Directors' rejection of, and may facilitate the Board of Directors' rejection of, an offer to acquire the Company.

The Company is also subject to the Protection Act, which prohibits certain New Jersey corporations such as the Company from engaging in business combinations (including mergers, consolidations, significant asset dispositions and certain stock issuances) with any Interested Shareholder (defined to include, among others, any person that after the Offering becomes a beneficial owner of 10% or more of the affected corporation's voting power) for five years after such person becomes an Interested Shareholder, unless the business combination is approved by the Board of Directors prior to the date the shareholder became an Interested Shareholder. In addition, the Protection Act prohibits any business combination at any time with an Interested Shareholder other than a transaction that (i) is approved by the Board of Directors prior to the date the Interested Shareholder became an Interested Shareholder, or (ii) is approved by the affirmative vote of the holders of two-thirds of the voting stock not beneficially owned by the Interested Shareholder, or (iii) satisfies certain "fair price" and related criteria. The New Jersey Act does not apply to certain business combinations, including those with persons who acquired 10% or more of the voting power of the corporation prior to the time the corporation was required to file periodic reports pursuant to the Exchange Act, or prior to the time the corporation's securities began to trade on a national securities exchange.

# REGISTRATION RIGHTS

Following the closing of the Offering, persons who hold warrants to purchase 3,556,275 shares of Common Stock (herein, the "Holders") will be entitled to certain rights with respect to the registration of such shares under the Securities Act. Pursuant to terms of registration rights agreements between the Company and the Holders, the Holders have the right on written notice given by a majority of the Holders, to require the Company, on only one occasion, to file a registration statement under the Securities Act in order to register all or any part of their shares of Common Stock. The Company may in certain circumstances defer such registrations, and the underwriters have the right, subject to certain limitations, to limit the number of shares included in such registrations. In the event that the Company proposes to register any of its securities under the Securities Act, either for its own account or the account of other security holders, the Holders are also entitled to include their shares of Common Stock in such registration, subject to certain marketing and other limitations. Generally, the Company is required to bear the expense of all such registrations.

# TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for the Common Stock is American Stock Transfer & Trust Company.

50

# SHARES ELIGIBLE FOR FUTURE SALE

Upon completion of the Offering, the Company will have outstanding 5,494,461 shares of Common Stock assuming no exercise of outstanding options or warrants. Of these shares, 2,500,000 shares sold in the Offering (plus any shares issued upon exercise of the Underwriters' over-allotment options) will be freely tradeable without restriction under the Securities Act, unless purchased by "affiliates" of the Company. As defined in Rule 144, an "affiliate" of an issuer is a person that directly or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with such issuer. The remaining 2,994,461 shares of Common Stock outstanding will be "restricted securities" within the meaning of Rule 144 under the Securities Act ("Restricted Shares"). Restricted Shares may not be sold in the absence of registration under the Securities Act unless an exemption from registration is available, including the exemptions contained in Rule 144. Sales of the Restricted Shares in the public market, or the availability of such shares for sale, could adversely affect the market price of the Common Stock.

In general, under Rule 144 as currently in effect, a person (or persons whose shares are aggregated), including an "affiliate," who has paid for shares is entitled, beginning two years from the later of the date of acquisition of the shares from the Company or from an affiliate of the Company, to sell within any three-month period up to that number of shares that does not exceed the greater of (i) one percent of the shares outstanding, as shown by the most recent report or statement published by the Company, or (ii) the average weekly reported volume of trading in the shares during the four calendar weeks preceding the date on which notice of sale is filed with the Commission. A person (or persons whose shares are aggregated) who is not deemed an affiliate of the Company, who has not been an affiliate within three months prior to the sale and who has paid for his shares is entitled, beginning three years from the later of the date of the acquisition from the Company or from an affiliate of the Company, to sell such shares under Rule 144(k) without regard to the volume limitations described above. Affiliates continue to be subject to such volume limitations after the three-year holding period. Pursuant to certain amendments recently adopted by the Securities and Exchange Commission, the holding periods under Rule 144 and Rule 144(k) will be reduced to one year and two years, respectively.

On May 1, 1996, the Company issued warrants to purchase 2,330,784 shares of Common Stock. The exercise price of the warrants sold in May 1996 is \$4.08 per share. The Company has entered into a Registration Rights Agreement in connection with the issuance of such warrants. If such registration rights are exercised, the shares covered thereunder can be sold in the open market. On September 1, 1996, the Company issued warrants to purchase 245,097 shares of Common Stock to JLMP. The exercise price of the warrants sold in September is \$10.20 per share. On December 20, 1996, the Company issued warrants to purchase 980,392 shares of Common Stock to JLMP. The exercise price of the warrants issued in December is \$10.20 per share. These warrants are first exercisable on July 1, 1997. In connection with the issuance of the warrants in September and December, 1996, the Company has entered into a registration rights agreement similar to the Registration Rights Agreement. See "Description of Capital Stock--Warrants" and "--Registration Rights."

The Company, executive officers and directors of the Company and certain shareholders of the Company have agreed that they will not sell any shares of Common Stock (other than by operation of law or pursuant to bona fide gifts or other transactions not involving a public distribution to a person or other entity who agrees in writing not to so sell) for a period of 180 days after the date of the final Prospectus (the "lock-up period") without the written consent of Donaldson, Lufkin & Jenrette Securities Corporation. Upon expiration of the lock-up period, or earlier upon the consent of Donaldson, Lufkin & Jenrette Securities Corporation, 777,657 shares previously subject to the lock-up period will become eligible for sale without restriction under Rule 144(k), and an additional 2,216,804 shares previously subject to the lock-up period will become eligible for sale subject to the restrictions of Rule 144

Any employee or director of or consultant to the Company who has been granted options to purchase shares or who has purchased shares pursuant to a written compensatory plan or written contract prior to the effective date of this Offering pursuant to Rule 701 will be entitled to rely on the resale provisions of Rule 701, which permits non-affiliates to sell their Rule 701 shares without having to comply with the public information, holding-

period, volume-limitation or notice provisions of Rule 144 and permits affiliates to sell their Rule 701 shares without having to comply with the Rule 144 holding period restrictions, in each case commencing 90 days after the date of this Prospectus.

Following the Offering, the Company intends to file a registration statement under the Securities Act to register shares of Common Stock issuable upon the exercise of stock options granted under the Plan. Shares issued upon the exercise of stock options after the effective date of such registration statement generally will be available for sale in the open market. Immediately following the completion of the Offering, the Company estimates that there will be 464,017 shares issuable upon the exercise of options outstanding under the Plan and 183,042 shares of Common Stock reserved for future grants of options.

The Company is unable to estimate the number of shares that may be sold under Rule 144 or otherwise because this will depend on the market price for the Common Stock of the Company, the individual circumstances of the sellers and other factors. Prior to the Offering, there has been no public market for the Common Stock. Future sales of shares of Common Stock, or the availability for sale of substantial amounts of Common Stock, or the perception that such sales could occur, could adversely affect prevailing market prices for the Common Stock and could impair the Company's future ability to raise capital through an offering of its equity securities.

# UNDERWRITING

Subject to the terms and conditions set forth in an underwriting agreement (the "Underwriting Agreement") the Underwriters named below, for whom Donaldson, Lufkin & Jenrette Securities Corporation and Needham & Company, Inc. are acting as representatives (the "Representatives") have severally agreed to purchase from the Company 2,500,000 shares of Common Stock. The number of shares of Common Stock that each underwriter has agreed to purchase is set forth opposite its name below:

	NI	JMBER
NAME	0F	SHARES
Donaldson, Lufkin & Jenrette Securities Corporation		
Needham & Company, Inc		
Total		===

The Underwriting Agreement provides that the obligation of the several Underwriters to purchase all of the shares of Common Stock is subject to the approval of certain legal matters by counsel and as to certain other conditions. If any of the shares of Common Stock are purchased pursuant to the Underwriting Agreement, all such shares of Common Stock (other than the overallotment option described below) must be so purchased.

Prior to the Offering, there has been no established trading market for the Common Stock. The initial price to the public for the Common Stock offered hereby has been determined by negotiations between the Company and the Representatives. The factors considered in determining the initial price to the public include the history of and the prospects for the industry in which the Company competes, the ability of the Company's management, the past and present future earnings of the Company, the historical results of operations of the Company, the prospects for future earnings of the Company, the general condition of the securities markets at the time of this Offering and the recent market prices of generally comparable companies. Under Rule 2720 of the Conduct Rules (the "Conduct Rules") of the National Association of Securities Dealers, Inc. (the "NASD"), the Company is considered an affiliate of Jesup & Lamont Securities Corporation, an NASD member, which is expected to participate in the distribution of the Common Stock offered hereby. This Offering is being conducted in accordance with Rule 2720, which provides that, among other things, when an NASD member participates in the underwriting of an affiliate's securities, the offering price can be no higher than that recommended by a "qualified independent underwriter" ("QIU") meeting certain standards. In accordance with this requirement, Donaldson, Lufkin & Jenrette Securities Corporation ("DLJ") has assumed the responsibilities of acting as QIU and will recommend a price in compliance with the requirements of Rule 2720. In connection with this Offering, DLJ is performing due diligence investigations and reviewing and participating in this preparation of this Prospectus and Registration Statement of which this Prospectus forms a part. As compensation for the services of DLJ as QIU, the Company has agreed to pay DLJ \$5,000.

Jesup & Lamont Securities Corporation has informed the Company that it will not confirm sales to any account over which it exercises discretionary authority without prior written approval of such transactions by the customer.

The Company has agreed to indemnify the Underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the Underwriters may be required to make in respect thereof.

The Company has been advised by the Representatives that the Underwriters propose to offer the shares of Common Stock to the public initially at the public offering price set forth on the cover page of this Prospectus, and to certain securities dealers (who may include the Underwriters) at such price less a concession not in excess

of \$ per share. The Underwriters may allow, and such dealers may re-allow, discounts not in excess of \$ per share to any other Underwriter and certain other dealers.

The Company has granted to the Underwriters an option to purchase up to an aggregate of 375,000 additional shares of Common Stock at the initial public offering price less the underwriting discounts and commissions solely to cover over-allotments. Such option may be exercised at anytime until 30 days after the date of this Prospectus. To the extent that the Underwriters exercise such options, each of the Underwriters will be committed, subject to certain conditions, to purchase a number of option shares proportionate to such Underwriter's initial commitment as indicated in the preceding table.

In connection with the offering, the Underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the Common Stock. Specifically, the Underwriters may overallot the Offering, creating a syndicate short position. In addition, the Underwriters may bid for and purchase shares of Common stock in the open market to cover syndicate short positions or to stabilize the price of the Common Stock. Finally, the underwriting syndicate may reclaim selling concessions from syndicate members in the offering, if the syndicate repurchases previously distributed Common Stock in syndicate covering transactions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the Common Stock above independent market levels. The Underwriters are not required to engage in these activities, and may end any of these activities at any time.

The Company, all directors and executive officers of the Company and certain shareholders, have agreed that, without the prior written consent of Donaldson, Lufkin & Jenrette Securities Corporation, they will not, directly or indirectly, offer, sell, contract to sell, grant any option to purchase or otherwise dispose of any share of Common Stock or any securities convertible into or exercisable for such Common Stock, or in any other manner transfer all or a portion of the economic consequence associated with ownership of such Common Stock, except to the Underwriters pursuant to the Underwriting Agreement, for a period of 180 days after the date of this Prospectus.

#### LEGAL MATTERS

The validity of the Common Stock offered hereby will be passed upon for the Company by White & Case, New York, New York, who may rely upon Dillon, Bitar & Luther, New Jersey counsel for the Company as to matters of New Jersey law. Certain legal matters in connection with the Offering will be passed upon for the Underwriters by Brobeck, Phleger & Harrison LLP, New York, New York.

# **EXPERTS**

The balance sheets as of September 30, 1996 and 1995, and the statements of operations, shareholders' (deficit) equity and cash flow for the three years in the period ended September 30, 1996, included in this Registration Statement, have been included herein in reliance on the report of Coopers & Lybrand L.L.P., independent accountants, given on the authority of that firm as experts in accounting and auditing.

The statements in this Prospectus set forth under the captions "Risk Factors--Risks From Reliance on Trade Secrets; No Assurance of Continued Intellectual Property Protections," "--Risks Arising From Reversal of Declaratory Judgment in Rockwell Patent Litigation" and "Business--Intellectual Property" have been reviewed and approved by Lerner David Littenberg Krumholz & Mentlik, Westfield, New Jersey, patent counsel for the Company, as experts on such matters, and are included herein in reliance upon such review and approval.

# ADDITIONAL INFORMATION

The Company has filed with the Commission a Registration Statement on Form S-1 under the Securities Act with respect to the Common Stock offered hereby. This Prospectus does not contain all the information set forth in the Registration Statement and the exhibits and schedules thereto. For further information with respect to the Company and such Common Stock, reference is made to the Registration Statement and the exhibits and schedules filed as part thereof. Statements contained in this Prospectus as to the contents of any contract or other document referred to are materially complete, and, in each instance, if such contract or document is filed as an exhibit, reference is made to the copy of such contract or other document filed as an exhibit to the Registration Statement. The Registration Statement, including exhibits and schedules thereto, may be inspected without charge at the Commission's principal office, the Public Reference Room of the Securities and Exchange Commission, Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549, and at regional offices of the Commission at Seven World Trade Center, 13th Floor, New York, New York 10048 and Northwestern Atrium Center, Suite 1400, 500 West Madison Street, Chicago, Illinois 60661. Copies of all or any part thereof may be obtained from the Commission at its principal office  $\ensuremath{\mathsf{Commission}}$ in Washington, D.C. and its public reference facilities in Chicago, Illinois and New York, New York after payment of fees prescribed by the Commission.

The Company intends to furnish to its shareholders annual reports containing consolidated financial statements audited by its independent public accountants, and quarterly reports containing unaudited consolidated financial statements for the first three quarters of each fiscal year.

Upon completion of the Offering, the Company shall be subject to the informational requirements of the Exchange Act, and in accordance therewith will file reports and other information with the Securities and Exchange Commission. Such reports, proxy and information statements and other information filed by the Company can be inspected and copied at the public reference facilities maintained by the Commission in Washington, D.C., and at its regional offices set forth above, and copies of such material can be obtained from the Public Reference Section of the Commission, 450 Fifth Street, N.W., Washington, D.C. 20549 at prescribed rates. The Commission maintains a Web site that contains reports, proxy and information statements and other information regarding the Company and other registrants that file electronically with the Commission. The address of such site is: http://www.sec.gov.

# INDEX OF FINANCIAL STATEMENTS

Report of Coopers & Lybrand L.L.P., Independent Accountants	F-2
FINANCIAL STATEMENTS:	
Balance Sheets as of September 30, 1996 and 1995	F-3
Statements of Operations for the Years Ended September 30, 1996, 1995 and	
1994	F-4
Statements of Shareholders' (Deficit) Equity as of September 30, 1996,	
1995 and 1994	F-5
Statements of Cash Flows for the Years Ended September 30, 1996, 1995 and	
1994	F-6
Notes to Financial Statements	F-7

# REPORT OF COOPERS & LYBRAND L.L.P., INDEPENDENT ACCOUNTANTS

To the Board of Directors and Shareholders of EMCORE Corporation:

We have audited the accompanying balance sheets of EMCORE Corporation (the "Company") as of September 30, 1996 and 1995, the related statements of operations, shareholders' equity (deficit) and cash flows for each of the three years in the period ended September 30, 1996. We have also audited the financial statement schedule listed in Item 16(b). These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and the financial statement schedule based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. 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, the financial statements referred to above present fairly, in all material respects, the financial position of EMCORE Corporation as of September 30, 1996 and 1995, and the consolidated results of its operations and its cash flows for each of the three years in the period ended September 30, 1996, in conformity with generally accepted accounting principles. In addition, in our opinion, the financial statement schedule taken as a whole, presents fairly, in all material respects, the information required to be included therein.

Coopers & Lybrand L.L.P.

Parsippany, New Jersey November 1, 1996, except for Notes 13 and 15 as to which the date is December 6, 1996 and Note 16 as to which the date is February 3, 1997

# EMCORE CORPORATION BALANCE SHEETS

	AS OF SEPT	AS OF DECEMBER 31,	
	1995	1996	1996 (UNAUDITED)
ASSETS			
Current assets: Cash and cash equivalents Accounts receivable, net of allowance for doubtful accounts of approximately \$164,000, \$310,000 and \$370,000 at September 30, 1995	\$ 2,322,896	\$ 1,367,386	\$ 1,901,453
and 1996 and December 31, 1996, respectively	2,129,633	3,025,171	6,626,935
Inventories, net	3,339,474	7,645,040	
uncompleted contracts  Prepaid expenses and other current	16,440		
assets	33,151	59,935	
Total current assets	7,841,594		
Property and equipment, net	2,120,784		
Other assets, net	180,365	520,735	3,407,609
Total assets	\$ 10,142,743 =======	\$ 20,434,421	\$ 29,283,375
LIABILITIES AND SHAREHOLDERS' EQUITY Current liabilities:			
Accounts payable	\$ 1,934,360 1,208,747 2,183,795	\$ 5,660,438 1,986,646 3,306,462	2,255,952
uncompleted contracts	306,359		
Unearned service revenue	´	12,315	
Demand note			6,000,000
Total current liabilities			
Long-term debt:		========	
Subordinated notes, net	3,000,000	8,946,971 	9,062,957
issued and outstanding shares 2,994,461 at September 30, 1995 and 1996 and December 31, 1996 Accumulated deficit	16,637,566 (14,981,977)	18,977,566 (18,158,291)	
	1,655,589	819,275	621,203
Notes receivable from warrant issuances and stock sales		(297,686)	
Total shareholders' equity	1,509,482	521,589	323,517
Total liabilities and shareholders' equity	\$ 10,142,743		\$ 29,283,375

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

# EMCORE CORPORATION STATEMENTS OF OPERATIONS

	YEARS E	NDED SEPTEMBI	THREE MONTHS ENDED DECEMBER 31,				
	1994	1995	1996	1995	1996 DITED)		
Revenues: Systems and materials Services	1,685,388	1,520,431	3,712,379	565,039	51,879		
Total revenues	9,038,201	18,136,667		4,255,442	8,591,356		
Cost of Sales: Systems and materials Services	3,793,042	8,782,674	16,132,335 2,474,085	2,379,620	6,716,547		
Total cost of sales		9,926,971		2,782,289	6,723,818		
Gross profit		8,209,696		1,473,153			
Operating expenses: Selling, general and administrative Research and	2,697,172	4,451,534	6,524,482	1,511,124	2,202,742		
development Amortization of deferred gain on sale/leaseback transactions				792,727	2,250,221		
Operating income (loss)				(830,698)	(2,585,425)		
Other expense: Interest expense Stated interest, net of interest income of \$12,468, \$84,101 and \$71,460 for the years ended September 30, 1994, 1995 and 1996 and \$21,555 and \$657 for the periods ended December 31, 1995 and							
1996, respectively Imputed warrant	•		297,093		•		
interest, non-cash Other		10,000			1,015,987 		
(Loss) income before income taxes				(870,043)	(3,798,072)		
Provision for income taxes		125,000		15,000			
Net (loss) income	\$ (169,809)	\$ 1,515,980	\$(3,176,314)	\$ (885,043)			
Per share data: Shares used in computation of net (loss) income	1,502,300	3,145,292	4,438,403	4,438,403			
Net (loss) income per share	\$ (0.11)	\$ 0.48	\$ (0.72)	\$ (0.20)			

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

# EMCORE CORPORATION STATEMENTS OF SHAREHOLDERS' (DEFICIT) EQUITY

AS OF SEPTEMBER 30, 1994, 1995, 1996 AND DECEMBER 31, 1996 (UNAUDITED)

	COMMON	STOCK	CLASS I	PREFERRED S				SHAREHOLDERS'	
	SHARES	AMOUNT	SHARES	AMOUNT	DISCOUNT	ACCUMULATED DEFICIT	TREASURY STOCK	NOTES RECEIVABLE	EQUITY (DEFICIT)
BALANCE AT SEPTEMBER 30,									
1993 Current year accretion to redemption value of Class III redeemable, convertible preferred stock, redeemable at \$2.50 per	58,364	\$ 301,924	693,900	\$1,235,142	\$(934,454)	\$(15,087,291)	\$(28,104)		\$(14,512,783)
share Notes receivable due from shareholders in connection with issuance of 146,107 shares of Class IV redeemable, convertible preferred						(1,240,857)			(1,240,857)
stock Net loss						(169,809)		\$(146,107)	(146,107) (169,809)
BALANCE AT SEPTEMBER 30, 1994	58,364	301,924	693,900	1,235,142	(934, 454)	(16,497,957)	(28,104)	(146,107)	(16,069,556)
Warrants exercised and conversions Repurchase of	30,586	92,554	528,450						92,554
Class I Preferred Stock							(12,645)		(12,645)
November 1994 preferred stock conversions into common stock and retirement of preferred treasury							, , ,		, , ,
shares August 1995 conversion of Class A preferred stock into common	149,572	15,350,689	(1,222,350)	(1,235,142)	934, 454		40,749		15,090,750
stock Net income	2,755,939	892,399				1,515,980			892,399 1,515,980
BALANCE AT SEPTEMBER 30, 1995 Issuance of common stock	2,994,461	16,637,566				(14,981,977)		(146,107)	1,509,482
purchase warrants Notes receivable due from shareholders in connection with issuance of		2,340,000							2,340,000
detachable warrants Net loss						(3,176,314)		(151,579)	(151,579) (3,176,314)
BALANCE AT SEPTEMBER 30, 1996 Issuance of common stock	2,994,461	18,977,566				(18, 158, 291)		(297,686)	521,589
purchase warrants		3,600,000				(3,798,072)			3,600,000 (3,798,072)

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

# EMCORE CORPORATION STATEMENTS OF CASH FLOWS

	YEARS E	NDED SEPTEMBE	R 30,	. THREE MONTHS ENDED DECEMBER 31,			
	1994	1995	1996	1995 (UNAUD	1996		
CASH FLOWS FROM OPERATING ACTIVITIES: Net (loss) income Adjustments to reconcile net (loss) income to net cash provided by (used for) operating activities:	\$ (169,809)	\$ 1,515,980	\$(3,176,314)	·	,		
Depreciation and amortization	599,114	887,132	1,871,016	314,927	1,017,060		
Provision for doubtful accounts	•	95, 430	146,418	•	60,000		
Provision for inventory valuation	24,849	15,379	105,000	9,000	60,000		
Detachable warrant accretion			125,792		1,015,987		
Amortization of deferred gain on sale/leaseback			,		_, ===, ===		
transactions Change in assets and liabilities:	(51,846)						
Accounts receivable Inventories Costs in excess of billings on			(1,041,956) (4,410,566)				
uncompleted contracts Prepaid expenses and other current	25,876	17,282	(2,882)	(29,013)	(37,925)		
assets Other assets	(2,319) (74,333)		(26,784) (468,565)	7,220 (80)	17,027 (191,584)		
Accounts payable Accrued expenses	408,039 82,617	1,100,338 538,719	3,398,078 777,899	1,659,614 201,311	1,054,632 269,306		
Advanced billings Billings in excess of costs on uncompleted	1,006,984	1,176,831	1,122,667	•			
contracts		306,359	(306,359)				
revenue			12,315		(12,315)		
Total adjustments	743,212	1,546,189	1,302,073	2,109,503	(521,988)		
Net cash and cash equivalents provided by (used for) operating activities CASH FLOWS FROM INVESTING ACTIVITIES:	573,403	3,062,169	(1,874,241)	1,224,460	(4,320,060)		
Purchase of property and equipment	(1,153,722)	(1,316,968)	(7,090,869)	(2,044,216)	(1,145,873)		
Net cash and cash							
equivalents used for investing activities CASH FLOWS FROM FINANCING ACTIVITIES: Proceeds from demand	(1,153,722)	(1,316,968)	(7,090,869)	(2,044,216)	(1,145,873)		
note facility Proceeds from subordinated note					6,000,000		
issuance Proceeds from the			11,009,600				
exercise of stock purchase warrants Repurchase of Class I		102,554					
preferred stock Proceeds from the issuance of Class IV		(12,645)					
Preferred Stock Payments on long-term debt and capital lease	61,583						
obligations Proceeds from 7.5%	(94,287)		(3,000,000)				
convertible notes payable	1,000,000						
Net cash and cash equivalents provided by financing activities	967,296	89,909			6,000,000		

	 	 	-		 	 
Net increase (decrease) in cash and cash equivalents Cash and cash equivalents at	386,977	1,835,110		(955,510)	(819,756)	534,067
beginning of period	100,809	487,786		2,322,896	2,322,896	1,367,386
Cash and cash equivalents at end of period	487,786	2,322,896		1,367,386		1,901,453
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:						
Cash paid for interest Cash paid for income	\$ 170,174	\$ 285,413	\$	276,012	\$ 14,499	\$ 280,000
taxes	\$ 		\$	55,000		
accounts payable Reference is made to Note 11Preferred Stockfor disclosure relating to certain non-cash equity transactions Reference is made to Note 8Long-term debt for disclosure relating to certain non-cash warrant issuances	\$ 		\$	328,000		\$ 338,000

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

# NOTES TO FINANCIAL STATEMENTS

# NOTE 1. DESCRIPTION OF BUSINESS

EMCORE is a designer and developer of compound semiconductor materials and process technology and a manufacturer of production systems used to fabricate compound semiconductor wafers. Compound semiconductors are used in a broad range of applications in wireless communications, telecommunications, computers, and consumer and automotive electronics. The Company has recently capitalized on its technology base by expanding into the design and production of compound semiconductor wafers and package-ready devices. The Company offers its customers a complete, vertically-integrated solution for the design, development and production of compound semiconductor wafers and devices.

For the year ended September 30, 1996, the Company generated an operating loss and a negative cash flow from operations. The Company's operations are subject to a number of risks, including but not limited to a history of losses, future capital needs, dependence on key personnel, competition and risk of technological obsolescence, governmental regulations and approvals and limited compound semiconductor manufacturing and marketing capabilities. The Company's operations for the year ended September 30, 1996, were primarily funded through two subordinated debt issuances completed in May and September of 1996, amounting to \$8.5 million and \$2.5 million, respectively, of cash proceeds (see Note 8). A portion of the proceeds was used to extinguish \$3 million of debt due under a convertible debt agreement. The Company's operating and financing plans include, among other things, (i) attempting to improve operating cash flow through increased sales of compound semiconductor systems, wafers and package-ready devices, (ii) managing its cost structure to its anticipated level of revenues and (iii) seeking equity and debt financing sufficient to meet its obligations on a long-term basis in order to fund its business expansion plans. On October 25, 1996, the Company entered into a \$10.0 million demand note facility to finance its operating and capital requirements.

# NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Interim Financial Information. The financial information as of December 31, 1996 and for the three-month periods ended December 31, 1995 and 1996 is unaudited but includes all adjustments (consisting only of normal recurring accruals) that the Company considers necessary for a fair presentation of the financial position at such date and the operating results and cash flows for those periods. Operating results for the three months ended December 31, 1996 are not necessarily indicative of the results that may be expected for the entire year.

Cash and Cash Equivalents. The Company considers all highly liquid short-term investments purchased with an original maturity of three months or less to be cash equivalents. The Company had approximately \$1,205,000 and \$106,000 in cash equivalents at September 30, 1995 and 1996, respectively.

Inventories. Inventories are stated at the lower of FIFO (first-in, first-out) cost or market. Reserves are established for slow moving or obsolete inventory based upon historical and anticipated usage.

Property and Equipment. Property and equipment are stated at cost. Significant renewals and betterments are capitalized. Maintenance and repairs which do not extend the useful lives of the respective assets are expensed.

Depreciation is recorded using the straight-line method over the estimated useful lives of the applicable assets, which range from three to five years. Leasehold improvements are amortized using the straight-line method over the term of the related leases or the estimated useful lives of the improvements, whichever is less.

When assets are retired or otherwise disposed of, the assets and related accumulated depreciation accounts are adjusted accordingly, and any resulting gain or loss is recorded in current operations.

# NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

# NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES -- (CONTINUED)

In the event that facts and circumstance indicate that the value of assets may be impaired an evaluation of recoverability is performed. If an evaluation is required, the estimated future undiscounted cash flows associated with the asset would be compared to the assets carrying amount to determine if an adjustment to the carrying amount is required.

Deferred Costs. Included in other assets are deferred costs related to obtaining product patents and long-term debt refinancing. Such costs are being amortized over a three to five year period, respectively. Amortization expense amounted to approximately \$56,000, \$58,000 and \$128,000 for the years ended September 30, 1994, 1995 and 1996, respectively.

As of December 31, 1996 deferred cost also included \$2,700,000 associated with the warrants issued in connection with the guarantee of the October demand note facility (See Note 8). It is the Company's intention to pay down its outstanding notes and to terminate the demand note facility upon the closing of the initial public offering. Therefore, the Company is amortizing such debt issuance costs over the estimated period that the facility will be in place (approximately four months) from December 6, 1996, the date the Company's Board of Directors approved the issuance of the warrants and instructed management that the facility could be utilized. Amortization expense for the quarter ending December 31, 1996 was \$900,000, which was reflected as interest expense.

Income Taxes. During fiscal 1994, the Company adopted Statement of Financial Accounting Standards ("SFAS") No. 109, "Accounting for Income Taxes." SFAS No. 109 required a change from the deferred method to the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred income taxes are recognized for the tax consequences of "temporary differences" by applying enacted statutory tax rates applicable to future years to differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities. Under SFAS No. 109, the effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date. Under the deferred method, deferred taxes were recognized at the tax rate applicable to the year in which the difference between financial statement carrying amounts and the corresponding tax bases arose.

Revenue and Cost Recognition--Systems, Components and Service Revenues. Revenue from systems sales is recorded by shipment, when title passes to the customer. Subsequent to product shipment, the Company incurs certain installation costs at the customer's facility and warranty costs which are estimated and accrued at the time the sale is recorded.

Component sales and service revenues are recognized when goods are shipped or services are rendered to the customer. Service revenue under contracts with specified service terms is recognized as earned over the service period in accordance with the terms of the applicable contract. Costs in connection with the procurement of the contracts are charged to expense as incurred.

Revenue and Cost Recognition--Contract Revenue. The Company's research contracts require the development or evaluation of new materials applications and have a duration of six to 36 months. For research contracts with the U.S. Government and commercial enterprises with durations greater than six months, the Company recognizes revenue to the extent of costs incurred plus the estimated gross profit as stipulated in such contracts, based upon contract performance.

# NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

# NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES -- (CONTINUED)

Contracts with a duration of six months or less are accounted for on the completed contract method. A contract is considered complete when all costs, except insignificant items, have been incurred, and the research reporting requirements to the customer have been met.

Contract costs include all direct material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, tools, repairs and depreciation costs, as well as coverage of certain general and administrative costs. Provisions for estimated losses on uncompleted contracts are made in the period in which such losses are determined. Revenues from contracts amounted to approximately \$1,295,000, \$1,321,000, \$3,295,000 for the years ended September 30, 1994, 1995 and 1996, respectively.

Research and Development. Research and development costs related to the development of both present and future products and Company sponsored materials application research are charged to expense as incurred.

Fair Value of Financial Instruments. The Company has estimated fair value based upon discounted cash flow analyses using the Company's incremental borrowing rate on similar instruments as the discount rate. As of September 30, 1996, the carrying values of the Company's cash and cash equivalents, receivables and accounts payable recorded on the accompanying balance sheets approximate fair value. As of September 30, 1996, the fair value of the Company's subordinated debt exceeded the carrying value by approximately \$387,000.

Use of Estimates. The preparation of financial statements in conformity with generally accepted accounting principles 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. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates.

The Company's most significant estimates relate to accounts receivable and inventory valuation reserves, warranty and installation reserves, estimates of cost and related gross profits on certain research contracts and the valuation of long-lived assets.

Net (Loss) Income Per Share. Net (loss) income per share data included in accompanying statement of operations was calculated pursuant to the Securities and Exchange Commission Staff Accounting Bulletin No. 64 ("SAB No. 64"). Under the provisions of SAB No. 64, common stock and common equivalent shares issued by the Company at prices below the initial public offering price within one year or in contemplation of the Company's offering are treated as if they were outstanding for all periods presented (using the treasury stock method). Accordingly, the weighted average number of shares outstanding has been increased by 1,443,936 equivalent shares, reflecting the common stock purchase warrants and stock options issued during the twelve months preceding the filing date of the registration statement relating to the Company's initial public offering.

The historic per share data, in the following table, has been computed based on the income or loss for the period divided by the weighted average number of shares of common stock outstanding and common share equivalents, if dilutive. The weighted average number of shares outstanding excludes the number of common shares issuable upon the exercise of outstanding stock options and warrants and preferred stock in such periods since such inclusion would be anti-dilutive.

# NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

THREE MONTHS ENDED

# NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES--(CONTINUED)

	YEARS ENDED SEPTEMBER 30,			DECEMBER 31,		
	1994 1995 1996		1995 (UNAUD	1996 ITED)		
Weighted average number of common shares						
outstanding	58,364 =====	1,701,355	2,994,461	2,994,461	2,994,461 ======	
Net income (loss) per						
share	\$(2.91)	\$ 0.89	\$ (1.06)	\$ (0.30)	\$ (1.27)	
	======	========	=======	=======	========	

Reclassifications. Prior period balances have been reclassified to conform with the current period financial statement presentations.

New Accounting Standards. In March 1995, the Financial Accounting Standards Board ("FASB") issued SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of" ("SFAS No. 121"). This pronouncement establishes accounting standards for when impairment losses relating to long-lived assets, identifiable intangibles and goodwill related to those assets should be recognized and how the losses should be measured. The Company plans to implement SFAS No. 121 in fiscal 1997. The adoption of SFAS No. 121 is not expected to have an impact on the Company's financial position or results of operations since Emcore's current policy is to monitor assets for impairment and record any necessary write-downs.

In October 1995, the FASB issued SFAS No. 123 "Accounting for Stock Based Compensation" ("SFAS No. 123"). The provision of SFAS No. 123 sets forth the method of accounting for stock based compensation based on the fair value of stock options and similar instruments, but does not require the adoption of this preferred method. SFAS No. 123 also requires the disclosure of additional information about stock compensation plans, even if the preferred method of accounting is not adopted. The Company plans to implement SFAS No. 123 in fiscal 1997. The Company does not intend to change its method of accounting for stock based compensation to the preferred method under SFAS No. 123, but instead will continue to apply the provisions of No. 25 "Accounting for Stock Issued to Employees." However, the Company will disclose the pro forma effect of SFAS No. 123 on net income and earnings per share.

# NOTE 3. CONCENTRATION OF CREDIT RISK

The Company sells its compound semiconductor systems domestically and internationally. The Company's international sales are generally made under letter of credit arrangements.

For the years ended September 30, 1994, 1995 and 1996, the Company sold 59%, 36%, and 43% of its products to foreign customers, respectively.

The Company's sales to major customers were as follows:

	AS OF SEPTEMBER 30,					
		1995				
Customer A Customer B Customer C Customer D	1,870,871  749,000	887,390 1,036,000 2,092,986	2,075,722 1,530,000			
Total		\$9,254,996 ======				

# NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

# NOTE 3. CONCENTRATION OF CREDIT RISK--(CONTINUED)

The Company's performs material application research under contract with the U.S. Government or as a subcontractor of U.S. Government funded projects.

The Company performs ongoing credit evaluations of its customers' financial condition and collateral is not requested. The Company maintains reserves for potential credit losses based upon the credit risk of specific customers, historical trends and other information. To reduce credit risk, and to fund manufacturing costs, the Company requires periodic prepayments on equipment orders. Credit losses have generally not exceeded the Company's expectations.

The Company has temporary cash investments with financial institutions in excess of the \$100,000 insured limit of the Federal Deposit Insurance Corporation.

# NOTE 4. INVENTORIES

The components of inventories consisted of the following:

	AS OF SEP			
	1995	1996	1996 (UNAUDITED)	
Raw materials	646,696		\$4,978,786 4,328,083 	
	\$3,339,474	\$7,645,040	\$9,306,869	
	========	========	========	

# NOTE 5. PROPERTY AND EQUIPMENT

Major classes of property and equipment are summarized below:

	AS OF SEPT	AS OF	
		DECEMBER 31,	
	1995	1996	1996
			(UNAUDITED)
Equipment		\$11,748,577	\$12,661,667
Furniture and fixtures	904,326	1,650,488	1,859,317
Leasehold improvements	605,890	2,147,034	2,180,987
	8,127,230	15,546,099	16,701,971
Less: accumulated depreciation and			
amortization	(6,006,446)	(7,749,267)	(8,761,617)
	\$ 2,120,784	\$ 7,796,832	\$ 7,940,354
	========	========	========

The provisions for depreciation and amortization amounted to approximately \$543,000, \$829,000 and \$1,743,000 for the years ended September 30, 1994, 1995 and 1996, respectively and \$300,270 and \$1,012,350 for the three-month periods ended December 31, 1995 and 1996, respectively.

Included in equipment above are twelve systems, ten systems and eight systems with a combined net book value of approximately \$1,220,000, \$2,124,000 and \$2,792,000 at September 30, 1995 and 1996 and December 31, 1996, respectively. Such systems are utilized for systems demonstration purposes, in-house materials applications research, contract research funded by third parties, system sales support and the production of compound semiconductor wafers and package-ready devices for sale to third parties.

# NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

# NOTE 6. COSTS AND BILLINGS ON UNCOMPLETED CONTRACTS

Costs incurred and billings on uncompleted contracts are summarized below:

AS OF SEPTEMBER 30,

	1995	1996
Costs incurred on uncompleted contracts	178,081 (468,000)	\$ 19,322
	\$ (289,919) ======	\$ 19,322
The uncompleted contract costs and billings are classified in the accompanying balance sheets under the following captions:		
Costs in excess of billings on uncompleted contracts Billings in excess of costs on uncompleted contracts	16,440 (306,359)	\$ 19,322
	\$ (289,919) ======	\$ 19,322

# NOTE 7. ACCRUED EXPENSES

Accrued expenses consisted of the following:

				R 30,	AS OF	
	199			1996	DECEMBER 31 1996 (UNAUDITED)	6
Accrued payroll, vacation and other						
employee expenses	\$ 476	,505	\$ 9	990,538	\$1,192,	898
Installation and warranty costs	389	,676	5	62,231	747,	472
Interest	177	,048	2	269,315	156,	835
Other	165	,518	1	164,562	158,	747
	\$1,208	,747	\$1,9	86,646	\$2,255,	952
	=====	====	====	=====	======	====

# NOTE 8. LONG-TERM DEBT

On May 1, 1996, the Company issued subordinated notes (the "Subordinated Notes") in the amount of \$9,500,000 to its existing shareholders, \$1,000,000 of which were exchanged for notes receivable from officers and certain employees with identical payment and interest provisions. The Subordinated Notes are scheduled to mature on May 1, 2001, have a stated interest rate of 6.0% which is payable semi-annually on May 1 and November 1. In addition, the noteholders were issued 2,328,432 common stock purchase warrants with an exercise price of \$4.08 per share which expire on May 1, 2001. The warrants are exercisable after November 1, 1996 and are callable at the Company's option, after May 1, 1997, at \$0.85 per warrant. The Company has the legal right of offset with respect to the note receivable from officers and certain key employees, and it is their full intention to offset the corresponding notes receivable and payable upon maturity. As such, the Company reflected \$848,000 of the officers' and employees' notes receivable as a contra liability, reducing the Company's Subordinated Notes balance. The remaining \$152,000 note receivable has been reflected in the contra equity note receivable account, representing the portion of the employee note receivable associated with common stock purchase warrants issued to them. The Company received cash proceeds of \$8,500,000 in connection with this Subordinated Notes issuance.

On September 1, 1996, the Company issued a subordinated note in the amount of \$2,500,000 to the Company's majority shareholder with terms identical to the Subordinated Notes issued on May 1, 1996. In

### NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

### NOTE 8. LONG-TERM DEBT--(CONTINUED)

addition, under the terms of this offering, 245,098 common stock purchase warrants were issued to purchase common stock at \$10.20 per share which expire September 1, 2001. These warrants are exercisable after March 1, 1997 and are callable at the Company's option after September 1, 1997 at \$0.85 per warrant.

The Company assigned a value of \$1,440,000 to the May 1, 1996 detachable warrants and \$900,000 to the September 1, 1996 detachable warrants. These valuations were based upon the Company's application of a commonly recognized option pricing model and the Company's assessment of the underlying valuation factors, as well as an assessment of the terms of the subordinated notes issuances. The carrying value of the Subordinated Notes will be subject to periodic accretions, using the interest method, in order for the carrying amount to equal the Company's obligation upon maturity. As a result, the May 1, 1996 and September 1, 1996 Subordinated Notes have an effective interest rate of approximately 9.3% and 15.0%, respectively.

A portion of the proceeds from the May 1, 1996 Subordinated Notes issuance was used to extinguish \$3,000,000 of debt due to Hakuto & Co. Ltd. ("Hakuto"), the Company's Asian distributor, under a convertible debt agreement (the "Agreement") scheduled to expire on June 2, 1998. Under the June 2, 1993 Agreement, the Company was permitted to borrow up to \$3,000,000 at an interest rate of 7.5%. As of September 30, 1995, the entire \$3,000,000 was outstanding. In connection with the payment of all amounts due to Hakuto, the Agreement terminated.

In connection with the Agreement, the Company issued 10,000 warrants to Hakuto to purchase shares of the Company's Class IV Preferred Stock at \$1.00 per share (See Note 11). The warrants were exercised on January 1, 1995.

Under the Agreement, the \$3,000,000 of debt was convertible into preferred stock subject to the Company authorizing a new Class V series of preferred stock prior to March 31, 1998. The debt was convertible in \$1,000,000 increments at a conversion rate of \$2.50 per share of Class V Preferred Stock. In addition, Hakuto had certain rights of first refusal, with respect to the purchase of the Company through June 2, 1998, and the distribution of the Company's products in Asia, excluding Taiwan and Korea.

The Agreement was collateralized by all the Company's assets. The New Jersey Economic Development Authority ("NJEDA") had guaranteed 90% of the Company's obligation pertaining to \$1,000,000 of its outstanding debt. Under the terms of the Agreement, the Company was required to repay \$1,000,000 of the debt upon expiration of the NJEDA guarantee. The NJEDA guarantee expired on August 31, 1995, however, the lender permanently waived the \$1,000,000 repayment requirement through the expiration date of the Agreement.

The Agreement contained certain covenants which required that the Company's Chief Executive Officer remain employed for a period of five years, and required a personal guarantee from the Chief Executive Officer in the amount of \$100,000.

The Company had a \$250,000 revolving loan agreement (the "Revolving Loan") with the NJEDA which expired on February 14, 1996. The Revolving Loan provided for the advancement of funds upon the Company's receipt of an export sales contract and required repayment upon receipt of payment from such customer or one hundred twenty days from the date of the advance. The loan bore interest at a rate of the Federal Discount Rate (5.25% at September 30, 1995). The Revolving Loan was collateralized by applicable outstanding letters of credit. As of September 30, 1995, there were no amounts outstanding under this facility.

The Revolving Loan Agreement contained restrictive covenants which included among other restrictions, the Company could not issue any additional stock, declare dividends, purchase its own stock, transfer excess funds to an affiliated entity, borrow any funds or grant a collateral position without the expressed written consent of the NJEDA. The Company did not obtain the required written consent of the NJEDA for the fiscal year 1995 capital restructuring activities as described in Note 11.

### NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

### NOTE 8. LONG-TERM DEBT--(CONTINUED)

On October 25, 1996, the Company entered into a \$10.0 million demand note facility (the "Facility"). The Facility bears interest at the rate of LIBOR plus 75 basis points, has a term of one year and is due and payable on demand. The Facility has been guaranteed by a director of the Company who is also affiliated with the Company's majority shareholder, who has provided collateral for the Facility. In return for guaranteeing the facility, in December 1996 the Company granted the majority shareholder 980,392 common stock purchase warrants at \$10.20 per share which expire September 1, 2001. These warrants are exercisable after July 1, 1997 and are callable at the Company's option after December 1, 1997 at \$0.85 per warrant. As of December 31, 1996, the Company has utilized \$6.0 million of the Facility.

The Company assigned a value of \$3,600,000 to the warrants issued to the guarantor. This valuation was based upon the Company's application of the Black-Scholes Option Pricing Model. This value has been accounted for as debt issuance cost and is reflected as a deferred cost in the accompanying December 31, 1996 balance sheet.

# NOTE 9. COMMITMENTS AND CONTINGENCIES

On November 16, 1992, the Company entered into a three-year lease agreement with a bank for 34,000 square feet of space in the building the Company presently occupies. On March 31, 1995, the agreement was renewed for 5 years for 49,000 square feet.

The Company leases certain equipment under non-cancelable operating leases.

Facility and equipment rent expense amounted to approximately \$298,000, \$292,000 and \$350,000 for the years ended September 30, 1994, 1995 and 1996, respectively.

Future minimum rental payments under the Company's non-cancelable operating leases with an initial or remaining term of one year or more as of September 30, 1996 are as follows:

PERIOD ENDING SEPTEMBER 30,	OPERATING
1997. 1998. 1999. 2000.	301,120 296,794 126,250
Total minimum lease payments	\$1,046,913 =======

In November 1996, the Company signed an agreement to occupy the remaining 26,000 square feet that they previously had not occupied, which will increase the total future minimum lease payments over the remaining 4 years of the lease by approximately \$863,000.

The Company is from time to time involved in litigation incidental to the conduct of its business. Management and its counsel believe that such pending litigation will not have a material adverse effect on the Company's results of operations, cash flows or financial condition.

# NOTE 10. INCOME TAXES

As described in Note 2, effective October 1, 1993, the Company adopted SFAS No. 109. The adoption of SFAS No. 109 did not have an impact on the financial position of the Company, as a full valuation allowance was provided against the net deferred tax asset position, as of the date of adoption, due to the uncertainty of the ultimate realization of such assets.

# NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

# NOTE 10. INCOME TAXES--(CONTINUED)

Income tax expense consists of the following:

	YEARS ENDED SEPTEMBER 30,		
	1994	1995	1996
Current:			
Federal	\$	\$ 70,000	\$
State		\$ 70,000 55,000	
Deferred:			
Federal			
State			
Total	\$	\$ 125,000	\$
		========	-=====

	YEARS ENDED SEPTEMBER 30,			
	1994	1995	1996	
U.S. statutory income tax (benefit) expense rate	(34.0)%	34.0 % (45.4)	(34.0)%	
Expenses not yet deductible for tax purposes	34.0	11.4 7.6	6.3	
Effective tax rate	0.0%	7.6%	0.0%	

The components of the Company's net deferred taxes were as follows:

	YEARS ENDED SEPTEMBER 30,			
	1995	1996		
Deferred tax assets: Federal net operating loss carryforwards Research credit carryforwards Inventory reserves Accounts receivable reserves Interest payable Accrued installation reserve Accrued warranty reserve. State net operating loss carryforwards Other Valuation reservefederal. Valuation reservestate.	\$ 2,489,641 237,177 77,313 55,601 68,000 57,721 576,095 85,597 (3,057,926) (576,095)	,		
Total deferred tax assets  Deferred tax liabilities: Fixed assets and intangibles  Total deferred tax liabilities	13,124 (13,124) (13,124)	91,401		
Net deferred taxes	\$ ========	\$ =======		

### NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

### NOTE 10. INCOME TAXES -- (CONTINUED)

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

As of September 30, 1996, the Company has net operating loss carryforwards for regular tax purposes of approximately \$9,600,000 which expire in the years 2003 through 2011. The Company believes that the consummation of certain equity transactions and a significant change in the ownership, during fiscal year 1995, has constituted a change in control under Section 382 of the Internal Revenue Code ("IRC"). Due to the change in control, the Company's ability to use its net operating loss carryovers and research credit carryovers to offset future income and income taxes, respectively, are subject to substantial annual limitations under IRC Section 382 and 383.

### NOTE 11. PREFERRED STOCK

Preferred Stock Restructuring Activities. In October 1994, the Company offered the holders of 1,399,333 Class III preferred stock purchase warrants the right to convert such warrants into 528,450 shares (representing a reduced ratio of 1 to .38) of the Company's Class I preferred stock. All the warrant holders exercised such rights. This transaction increased the outstanding number of Class I preferred stock to 1,222,350 shares.

In November 1994, in an effort to simplify its capital structure, the Company's Board of Directors and shareholders approved a capital restructuring plan (the "Plan"). Pursuant to this Plan, a newly formed and wholly-owned subsidiary of the Company was formed and merged with and into the Company. Under the Plan, shares of the Company's Class IV preferred stock were exchanged for shares of Class A senior convertible preferred stock at an exchange rate of 1.5 to 1.0. The shares of all other classes of preferred stock were exchanged into common stock at the following ratios; Class I preferred stock at 100 to 1.18 and Class III preferred stock at 100 to 2.94. In addition, the Company effected a reverse stock split of .29 for one hundred and retired its preferred treasury stock. Prior to this exchange, the Class I preferred stockholders were given the right to have their stock repurchased for \$.09 per share. The holders of approximately 140,000 shares exercised this right, resulting in a stock repurchase amounting to \$12,645.

In August 1995, the outstanding shares of Class A senior convertible preferred stock were exchanged for shares of common stock on the basis of seven shares of common stock for each Class A security. This transaction reduced the classes of stock outstanding to common stock.

As part of the August 1995 restructuring activities, holders of warrants to purchase common stock were allowed to exercise their warrants at \$3.03 per share, resulting in the exercise of 30,588 warrants for aggregate cash consideration of \$92,554.

In January 1995, the holder of 15,000 warrants to purchase Class A senior convertible preferred stock exercised their rights by paying \$0.67 per share, or \$10,000. In August 1995, these 15,000 shares of Class A preferred stock were converted into 30,882 shares of common stock.

The basis of all exchanges were approved by the Company's Board of Directors and its shareholders and reflected the priorities of the Class A securities upon liquidation and other factors.

### NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

# NOTE 11. PREFERRED STOCK--(CONTINUED)

The following table summarizes the Company's preferred stock activities from October 1, 1993 through September 30, 1995.

	CLASS I			CLASS	CLASS III		IV	CLASS A	
	PREFERRED STOCK			PREFERRED STOCK		PREFERRED STOCK		PREFERRED STOCK	
	SHARES	AMOUNT	DISCOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT
Balance at September 30, 1993 Current year accretion to redemption value of Class III redeemable, convertible preferred stock, redeemable at \$2.50 per		\$1,235,142	\$(934,454)	6,617,227	\$13,849,893	674,709	\$674,709		
share Issuance of 207,690 shares of Class IV redeemable, convertible preferred stock, redeemable at \$2.50 per					1,240,857				
share						207,690	207,690		
Balance at September 30, 1994	693,900	1,235,142	(934, 454)	6,617,227	15,090,750	882,399	882,399		
exercised and conversions November 1994 preferred stock conversions into common stock and Class A	528,450							15,000	15,000
preferred stock	(1,222,350)	(1,235,142)	934,454	(6,617,227)	(15,090,750)	(882,399)	(882, 399)		882,399
stock								(1,338,599)	(897,399)
Balance at September 30, 1995		\$	\$		\$ ========		\$		\$ ======

Class I Preferred Stock. In connection with the restructuring described above, as of September 30, 1995 and 1996, there were no issued or outstanding shares of Class I preferred stock.

Each share of 9% cumulative convertible \$1.78 par value preferred stock was entitled to one vote, a cumulative of 9% annual dividend and certain preference rights in the event of liquidation. Each preferred share was convertible into .36 shares of the common stock and could be redeemed for .36 shares of common stock upon an initial public offering of the Company's common stock.

Class III Preferred Stock. In connection with the restructuring described above, as of September 30, 1995 and 1996, there were no issued or outstanding shares of Class III preferred stock.

Each share of the no par, Class III preferred stock was entitled to one vote, an annual dividend, when and as declared by the Company's Board of Directors, of \$0.225 per share and had a liquidation preference senior to the Company's Class I preferred stock. This liquidation preference entitled each shareholder of the Class III preferred stock to \$2.50 per share, \$16,543,068, and an amount equal to such amount received by the Company's common stock shareholders upon liquidation. The Class III preferred stock had a mandatory redemption feature which required one-third of the outstanding stock to be redeemed on December 31, 1994, one-third on December 31, 1995 and one-third on December 31, 1996, for \$2.50 per share and 0.29 share of the Company's common stock. Further, in

the event the Company was acquired, the Class III preferred stock was required to be redeemed at \$2.50 per share plus one share of the acquiring Company's common stock. The Class III preferred stock mandatory redemption amount of \$16,543,068 was in excess of the \$10,210,678 carrying amount of such stock as of the Company's March 28, 1990 recapitalization. Accordingly, the carrying amount was subject to periodic accretions, using the interest rate method, in order for the carrying amount to equal the mandatory redemption amount upon redemption. Each Class III preferred share was convertible into 1 share of common stock.

### NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

### NOTE 11. PREFERRED STOCK--(CONTINUED)

Class IV Preferred Stock. In connection with the restructuring described above, as of September 30, 1995 and 1996, there were no issued or outstanding shares of Class IV preferred stock.

During fiscal year 1993, the Company issued 674,709 shares of Class IV preferred stock in connection with the conversion of \$674,709 of then outstanding 90-day notes. Each share of the Class IV Stock was entitled to five (5) votes, an annual dividend, when and as declared by the Company's Board of Directors, of \$0.09 per share, which dividend was cumulative, and had a liquidation preference senior to all other existing classes of stock. This liquidation preference entitled each shareholder of Class IV Preferred Stock to an amount equal to the sum of (i) \$1.00 per share, (ii) all accrued and unpaid dividends, and (iii) 95% of the proceeds up to \$14.00 per share.

The Class IV preferred stock had a mandatory redemption feature which required one-third of the outstanding stock to be redeemed on November 30, 1994, one-third on November 30, 1995 and one-third on November 30, 1996, for \$1.00 per 0.29 share plus 0.29 share of common stock. Each share of Class IV Preferred Stock was convertible into one share of common stock.

During fiscal year 1994, the Company issued 207,690 shares of Class IV preferred stock for \$1 per share. In connection with such issuance, the Company entered into notes receivable agreements with certain employees amounting to \$146,107. Such notes have been recorded as a reduction to equity. The notes bear interest at a rate of 6.0%.

Class A Preferred Stock. In connection with the restructuring described above, as of September 30, 1995 and 1996, there were no issued or outstanding shares of Class A preferred stock.

In August 1995, all 1,338,599 shares of Class A preferred stock were converted into 2,755,939 shares of common stock. The Class A stock was issued in connection with the Company's plan to exchange the Class IV preferred stock at a ratio of 1.5 shares of Class A for each share of Class IV. The rights and preferences attached to the Class A preferred stock were similar to the Class IV preferred stock.

# NOTE 12. STOCK OPTIONS AND WARRANTS

Stock Option Plan. In November 1994, the Company's Incentive Stock Option Plan, initiated in 1987, was eliminated. On June 5, 1995, the Board of Directors approved the 1995 Incentive and Non-Statutory Stock Option Plan (the "Option Plan") and such plan was subsequently approved at the annual meeting of shareholders held on June 23, 1995. Under the terms of the Option Plan, options to acquire 323,529 shares of common stock may be granted to eligible employees, as defined, at no less than 100 percent of the fair market value on the date of grant. In March 1996, options to acquire an additional 323,530 shares of common stock was approved.

Certain options under the Option Plan are intended to qualify as incentive stock options pursuant to Section 422A of the Internal Revenue Code. Options with respect to 281,470 and 339,412 shares were outstanding at September 30, 1995 and 1996 at an exercise prices ranging from \$3.03 to \$10.20 per share. At September 30, 1994, options with respect to 32,794 shares were outstanding under previous plan at exercise prices ranging from \$1.70 to \$8.50 per share.

During the first quarter of fiscal 1997, options with respect to 139,512 shares were granted at an exercise price of \$10.20 per share.

Stock options granted generally vest over three to five years and are exercisable over a six year period. As of September 30, 1994, 1995 and 1996, options with respect to 28,618, 100,382 and 162,764 shares were exercisable, respectively.

# NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

# NOTE 12. STOCK OPTIONS AND WARRANTS--(CONTINUED)

The following table summarizes the activity under the plan:

Outstanding as of September 30, 1994	
Exercised	,
Cancelled	(32,794)
Outstanding as of September 30, 1995	281,470
Granted	57,942
Exercised	
Cancelled	
Outstanding as of September 30, 1996	339,412
Granted	139,512
Exercised	
Cancelled	(14,907)
Outstanding as of December 31, 1996	464,017

Warrants. In connection with the capital restructuring plan described in Note 11 above, certain of the Company's outstanding preferred stock purchase warrants were exchanged for common stock purchase warrants. Set forth below is a summary of the Company's outstanding warrants at September 30, 1996:

SECURITY	PREVIOUS SECURITY	EXERCISE PRICE		EXPIRATION DATE
Common Stock	Class III preferred stock	\$17.00	9,102	July 24, 1997
Common Stock		\$ 4.08	2,330,784	May 1, 2001
Common Stock		\$10.20	245,097	September 1, 2001

The above table excludes: (i) Class III preferred stock purchase warrants which were exchanged for Class I preferred stock in October 1994, (ii) warrants exercised in August 1995, as described in Note 11 and (iii) warrants to purchase 15,000 shares of Class A senior convertible preferred stock which were exercised in January 1995, as described in Note 8 and 11.

As described in Note 8 in December 1996, the Company issued an additional 980,392 common stock purchase warrants with a \$10.20 exercise price and September 1, 2001 expiration date.

# NOTE 13. RELATED PARTIES

In May 1995, 52% of the Company's outstanding shares of Common Stock were purchased by Jesup & Lamont Merchant Partners, L.L.C. ("JLMP"). Since that date four of the Company's six directors have been members of JLMP. As of September 30, 1996, JLMP has an ownership interest in the Company of approximately 59.8%. In May 1995, the Company entered into a consulting agreement with Jesup & Lamont Capital Markets, Inc. ("Jesup & Lamont") (the "Agreement") pursuant to which Jesup & Lamont agreed to provide financial advisory and employee services for the Company for one year. Total fees paid to Jesup & Lamont amounted to approximately \$241,697 and \$288,385 for the years ended September 30, 1995 and 1996, respectively.

In December 1996, the Company's chairman and chief executive officer retired. The Company has entered into a consulting agreement with him for a term of two years and will provide compensation of \$250,000 per annum. In addition, the Company has also forgiven \$115,300 of his indebtedness to the Company and has agreed to extend the period for the exercise of his vested stock options to March 4, 1997.

# NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)

# NOTE 14. EXPORT SALES

The information below summarizes the Company's export sales by geographic area

The Company's export sales are as follows:

					FAR EAST EUROPE		IUIAL	
Year	ended	September	30,	1994	\$4,974,957	\$ 319,788	\$ 5,294,745	
Year	ended	September	30,	1995	\$3,978,118	\$2,546,301	\$ 6,524,419	
Year	ended	September	30,	1996	\$8,209,309	\$3,588,066	\$11,797,375	

# NOTE 15. SUBSEQUENT EVENT

On December 6, 1996, the Board of Directors authorized management of the Company to file a Registration Statement with the Securities and Exchange Commission permitting the Company to sell shares of its common stock to the public.

# NOTE 16. REVERSE STOCK SPLIT

On February 3, 1997, the Board of Directors approved a 3.4:1 reverse stock split of its Common Stock and approved a decrease in the number of shares of Common Stock authorized. All references in the accompanying financial statements to the number of Common Stock and per-share amounts have been restated to reflect the reverse split.

[Illustrations and descriptions of the registrant's technology]

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NO DEALER, SALESPERSON, OR OTHER PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY OR ANY OF THE UNDERWRITERS. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY ANY SECURITIES OTHER THAN THE SECURITIES TO WHICH IT RELATES OR ANY OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY SUCH SECURITIES IN ANY JURISDICTION WHERE SUCH AN OFFER OR SOLICITATION WOULD BE UNLAWFUL. NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY SALE MADE HEREUNDER SHALL, UNDER ANY CIRCUMSTANCES, CREATE ANY IMPLICATION THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY TIME SUBSEQUENT TO THE DATE HEREOF.

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### TABLE OF CONTENTS

	PAGE
Prospectus Summary. Risk Factors. Use of Proceeds. Dividend Policy. Capitalization. Dilution. Selected Financial Data. Management's Discussion and Analysis of Financial Condition and Results of Operation. Business. Management. Certain Transactions. Principal Shareholders. Description of Capital Stock. Shares Eligible for Future Sale. Underwriting. Legal Matters. Experts. Additional Information. Index to Financial Statements.	3 6 16 16 17 18 19 20 28 40 46 48 49 51 53 54 54 54 F-1
UNTIL , 1997 (25 DAYS AFTER THE DATE OF THIS PROSPECTUS), ALL DEALERS FECTING TRANSACTIONS IN THE REGISTERED SECURITIES, WHETHER OR NOT PARTICIFING IN THIS DISTRIBUTION, MAY BE REQUIRED TO DELIVER A PROSPECTUS. THIS IS ADDITION TO THE OBLIGATION OF DEALERS TO DELIVER A PROSPECTUS WHEN ACTING UNDERWRITERS AND WITH RESPECT TO THEIR UNSOLD ALLOTMENTS OR SUBSCRIPTIONS.	PAT- S IN AS
2,500,000 SHARES LOGO	
[OF EMCORE]	
COMMON STOCK	
PROSPECTUS	
PROSPECTOS	
DONALDSON, LUFKIN & JENRETTE SECURITIES CORPORATION	
DONALDOON, LUININ & SENNETTE SECONTITES CONFORMITON	
NEEDHAM & COMPANY, INC.	
FEBRUARY , 1997	

# INFORMATION NOT REQUIRED IN PROSPECTUS

# ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the various expenses in connection with the sale and distribution of the securities being registered, other than underwriting discounts and commissions. All amounts shown are estimates except the Securities and Exchange Commission registration fee, the NASD filing fee and the Nasdaq National Market application fee.

	TO BE PAID BY THE REGISTRANT*
Securities and Exchange Commission registration fee	3,500.00 19,375.00 180,000.00 35,000.00 2,000.00 5,000.00 450,000.00 6,034.09

# ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Company's Certificate of Incorporation provides that the Company shall indemnify its directors and officers to the full extent permitted by New Jersey law, including in circumstances in which indemnification is otherwise discretionary under New Jersey law.

Section 14A:2-7 of the New Jersey Business Corporation Act provides that a New Jersey corporation's:

"certificate of incorporation may provide that a director or officer shall not be personally liable, or shall be liable only to the extent therein provided, to the corporation or its shareholders for damages for breach of any duty owed to the corporation or its shareholders, except that such provision shall not relieve a director or officer from liability for any breach of duty based upon an act or omission (a) in breach of such person's duty of loyalty to the corporation or its shareholders, (b) not in good faith or involving a knowing violation of law or (c) resulting in receipt by such person of an improper personal benefit. As used in this subsection, an act or omission in breach of a person's duty of loyalty means an act or omission which that person knows or believes to be contrary to the best interests of the corporation or its shareholders in connection with a matter in which he has a material conflict of interest."

In addition, Section 14A:3-5 (1995) of the New Jersey Business Corporation Act (1995) provides as follows:

Indemnification of directors, officers and employees

- (1) As used in this section,
- (a) "Corporate agent" means any person who is or was a director, officer, employee or agent of the indemnifying corporation or of any constituent corporation absorbed by the indemnifying corporation in a consolidation or merger and any person who is or was a director, officer, trustee, employee or agent of any other enterprise, serving as such at the request of the indemnifying corporation, or of any such constituent corporation, or the legal representative of any such director, officer, trustee, employee or agent;

<sup>\*</sup> Estimated

- (b) "Other enterprise" means any domestic or foreign corporation, other than the indemnifying corporation, and any partnership, joint venture, sole proprietorship, trust or other enterprise, whether or not for profit, served by a corporate agent;
  - (c) "Expenses" means reasonable costs, disbursements and counsel fees;
- (d) "Liabilities" means amounts paid or incurred in satisfaction of settlements, judgments, fines and penalties;
- (e) "Proceeding" means any pending, threatened or completed civil, criminal, administrative or arbitrative action, suit or proceeding, and any appeal therein and any inquiry or investigation which could lead to such action, suit or proceeding; and
- (f) References to "other enterprises" include employee benefit plans; references to "fines" include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the indemnifying corporation" include any service as a corporate agent which imposes duties on, or involves services by, the corporate agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner the person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.
- (2) Any corporation organized for any purpose under any general or special law of this State shall have the power to indemnify a corporate agent against his expenses and liabilities in connection with any proceeding involving the corporate agent by reason of his being or having been such a corporate agent, other than a proceeding by or in the right of the corporation, if
  - (a) such corporate agent acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation; and
  - (b) with respect to any criminal proceeding, such corporate agent had no reasonable cause to believe his conduct was unlawful. The termination of any proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not of itself create a presumption that such corporate agent did not meet the applicable standards of conduct set forth in paragraphs 14A:3-5(2)(a) and 14A:3-5(2)(b).
- (3) Any corporation organized for any purpose under any general or special law of this State shall have the power to indemnify a corporate agent against his expenses in connection with any proceeding by or in the right of the corporation to procure a judgment in its favor which involves the corporate agent by reason of his being or having been such corporate agent, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation. However, in such proceeding no indemnification shall be provided in respect of any claim, issue or matter as to which such corporate agent shall have been adjudged to be liable to the corporation, unless and only to the extent that the Superior Court or the court in which such proceeding was brought shall determine upon application that despite the adjudication of liability, but in view of all circumstances of the case, such corporate agent is fairly and reasonably entitled to indemnity for such expenses as the Superior Court or such other court shall deem proper.
- (4) Any corporation organized for any purpose under any general or special law of this State shall indemnify a corporate agent against expenses to the extent that such corporate agent has been successful on the merits or otherwise in any proceeding referred to in subsections 14A:3-5(2) and 14A:3-5(3) or in defense of any claim, issue or matter therein.
- (5) Any indemnification under subsection 14A:3-5(2) and, unless ordered by a court, under subsection 14A:3-5(3) may be made by the corporation only as authorized in a specific case upon a determination that indemnification is proper in the circumstances because the corporate agent met the applicable standard of conduct

set forth in subsection 14A:3-5(2) or subsection 14A:3-5(3). Unless otherwise provided in the certificate of incorporation or bylaws, such determination shall be made

- (a) by the board of directors or a committee thereof, acting by a majority vote of a quorum consisting of directors who were not parties to or otherwise involved in the proceeding; or
- (b) if such a quorum is not obtainable, or, even if obtainable and such quorum of the board of directors or committee by a majority vote of the disinterested directors so directs, by independent legal counsel, in a written opinion, such counsel to be designated by the board of directors; or
- (c) by the shareholders if the certificate of incorporation or bylaws or a resolution of the board of directors or of the shareholders so directs.
- (6) Expenses incurred by a corporate agent in connection with a proceeding may be paid by the corporation in advance of the final disposition of the proceeding as authorized by the board of directors upon receipt of an undertaking by or on behalf of the corporate agent to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified as provided in this section.
- (7) (a) If a corporation upon application of a corporate agent has failed or refused to provide indemnification as required under subsection 14A:3-5(4) or permitted under subsections 14A:3-5(2), 14A:3-5(3) and 14A:3-5(6), a corporate agent may apply to a court for an award of indemnification by the corporation, and such court
  - (i) may award indemnification to the extent authorized under subsections 14A:3-5(2) and 14A:3-5(3) and shall award indemnification to the extent required under subsection 14A:3-5(4), notwithstanding any contrary determination which may have been made under subsection 14A:3-5(5); and
  - (ii) may allow reasonable expenses to the extent authorized by, and subject to the provisions of, subsection 14A:3-5(6), if the court shall find that the corporate agent has by his pleadings or during the course of the proceeding raised genuine issues of fact or law.
  - (b) Application for such indemnification may be made:
  - (i) in the civil action in which the expenses were or are to be incurred or other amounts were or are to be paid; or
  - (ii) to the Superior Court in a separate proceeding. If the application is for indemnification arising out of a civil action, it shall set forth reasonable cause for the failure to make application for such relief in the action or proceeding in which the expenses were or are to be incurred or other amounts were or are to be paid.

The application shall set forth the disposition of any previous application for indemnification and shall be made in such manner and form as may be required by the applicable rules of court or, in the absence thereof, by direction of the court to which it is made. Such application shall be upon notice to the corporation. The court may also direct that notice shall be given at the expense of the corporation to the shareholders and such other persons as it may designate in such manner as it may require.

(8) The indemnification and advancement of expenses provided by or granted pursuant to the other subsections of this section shall not exclude any other rights, including the right to be indemnified against liabilities and expenses incurred in proceedings by or in the right of the corporation, to which a corporate agent may be entitled under a certificate of incorporation, bylaw, agreement, vote of shareholders, or otherwise; provided that no indemnification shall be made to or on behalf of a corporate agent if a judgment or other final adjudication adverse to the corporate agent establishes that his acts or omissions (a) were in breach of his duty of loyalty to the corporation or its shareholders, as defined in subsection (3) of N.J.S.14A:2-7, (b) were not in good faith or involved a knowing violation of law or (c) resulted in receipt by the corporate agent of an improper personal benefit.

- (9) Any corporation organized for any purpose under any general or special law of this State shall have the power to purchase and maintain insurance on behalf of any corporate agent against any expenses incurred in any proceeding and any liabilities asserted against him by reason of his being or having been a corporate agent, whether or not the corporation would have the power to indemnify him against such expenses and liabilities under the provisions of this section. The corporation may purchase such insurance from, or such insurance may be reinsured in whole or in part by, an insurer owned by or otherwise affiliated with the corporation, whether or not such insurer does business with other insureds.
- (10) The powers granted by this section may be exercised by the corporation, notwithstanding the absence of any provision in its certificate of incorporation or bylaws authorizing the exercise of such powers.
- (11) Except as required by subsection 14A:3-5(4), no indemnification shall be made or expenses advanced by a corporation under this section, and none shall be ordered by a court, if such action would be inconsistent with a provision of the certificate of incorporation, a bylaw, a resolution of the board of directors or of the shareholders, an agreement or other proper corporate action, in effect at the time of the accrual of the alleged cause of action asserted in the proceeding, which prohibits, limits or otherwise conditions the exercise of indemnification powers by the corporation or the rights of indemnification to which a corporate agent may be entitled.
- (12) This section does not limit a corporation's power to pay or reimburse expenses incurred by a corporate agent in connection with the corporate agent's appearance as a witness in a proceeding at a time when the corporate agent has not been made a party to the proceeding.

The Underwriting Agreement provides for indemnification by the Underwriters of the Registrant and its officers and directors for certain liabilities, including liabilities under the Securities Act.

### ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

Since December 1, 1993, the Company has sold and issued the following unregistered securities:

- 1. November 30, 1994. Exchange of 198,439 shares of common stock, 1,081,850 shares of Class I Stock, 6,617,227 shares of Class III Stock, and 882,399 shares of Class IV Stock pursuant to a merger by EMCORE Merger Subsidiary Corporation with and into EMCORE Corporation. All purchasers of these shares were existing shareholders of the Company. The exchange ratio was as follows: 100 shares of Class IV Stock for 150 shares of Class A Stock; 100 shares of Class III Stock for 10 shares of Common Stock; 100 shares of Class I Stock for 4 shares of Common Stock; and, 100 shares of old Common Stock for 1 share of new Common Stock. No cash was involved in this transaction. The transaction was exempt from registration pursuant to Section 3(a)(9) of the Securities Act.
- 2. October 25, 1995. The issuance of 9,370,200 shares of Common Stock in exchange for 1,338,600 shares of Class A Common Stock pursuant to a merger of EMCORE Merger Subsidiary Two Corporation with and into EMCORE Corporation. All purchasers of these shares were existing shareholders of the Company. No cash was involved in this transaction. This exchange was exempt from registration pursuant to Section 3(a)(9) of the Securities Act.
- 3. October 25, 1995. Sale of 103,993 shares at \$0.89 a share to five holders of the Company's warrants to purchase the Company's Common Stock at \$5.00 a share until 1997. The consideration received included the surrender of warrants plus a total cash consideration of \$92,554. The purchasers were knowledgeable and able to bear the risk and had access to the information relevant to their investment. No general selling efforts were made. Transfer restrictions were imposed. This transaction was exempt from registration pursuant to Section 4(2) of the Securities Act.

The following description of share exchanges or issuances indicate share numbers and warrant exercise prices that reflect the 3.4:1 reverse stock split effective February 3, 1997.

- 4. December 1, 1995. Issuance of 30,882 shares of Common Stock to Hakuto, a Japanese corporation, upon exercise of warrants. The warrants had been issued in connection with a Distributorship Agreement with Hakuto. The total amount of cash consideration was \$10,000. The offer was made in Japan; the buyer was in Japan and is not a U.S. person, and no directed selling efforts were made. This transaction was exempt from registration pursuant to Regulation S under the Securities Act.
- 5. May 1, 1996. Issuance to nineteen persons of \$9,500,000 of 6% Subordinated Notes due 2001 in a unit paired with warrants to purchase 2,328,432 shares of Common Stock at \$4.08 a share. Purchasers of the Notes were all current shareholders of the Company. Holders have the right to use the principal amount of the Note to exercise the warrants until the expiration date. The warrants expire on the maturity date of the Notes. In this Offering, \$9,500,000 was raised, of which \$1,000,000 was in the form of notes from officers of the Company. The purchasers were knowledgeable and able to bear the risk and had access to the information relevant to their investment. No general selling efforts were made. Transfer restrictions were imposed. This transaction was exempt from registration pursuant to Section 4(2) of the Securities Act.
- 6. July 12, 1996. Sale to Dane C. Scott. \$9,600 6% Subordinated Notes due 2001 in a unit paired with warrants to purchase 2,353 shares of Common Stock at \$4.08 a share in the aggregate amount of \$9,600. Mr. Scott is a Senior Design Engineer of the Company. This transaction was exempt from registration pursuant to Section 4(2) of the Securities Act.
- 7. Employee stock options were granted at various times after the adoption of the Plan in 1995 at prices ranging from \$3.03 a share to \$10.20. These transactions were exempt from registration pursuant to Section 4(2) of and Rule 701 under the Securities Act.
- 8. September 1996. Sale to JLMP of \$2.5 million 6% Subordinated Note and warrants to purchase 2,450,098 shares at \$10.20 a share. This transaction was exempt from registration pursuant to Section 4(2) of the Securities Act.
- 9. December 1996. Issuance to JLMP of warrants to purchase 980,392 shares at \$10.20 a share in consideration for guaranteeing and securing the guarantee of a \$10 million demand note facility. This transaction was exempt from registration pursuant to Section 4(2) of the Securities Act. JLMP was a shareholder of the Company; no general selling efforts were made.

(a) The following exhibits are filed with this Registration Statement:

# EXHIBIT NO. DESCRIPTION

1.1 Form of Underwriting Agreement\*\* 3.1 Restated Certificate of Incorporation, amended February 3, 1997\* 3 2 Amended By-Laws, as amended January 11, 1989\*\* 4.1 Specimen certificate for shares of Common Stock\*\* 5.1 Opinion of White & Case 10.1 . 1995 Incentive and Non-Statutory Stock Option Plan\*\* 1996 Amendment to Option Plan\*\* 10.2 Specimen Incentive Stock Option Agreement\*\* 10.3 Hakuto Distributorship Agreement' 10.4 Amendment to Lease for premises at 394 Elizabeth Avenue, 10.5 Somerset, New Jersey 08873\* 10.6 Registration Rights Agreement relating to September 1996 warrant issuance\*\* 10.7 Registration Rights Agreement relating to December 1996 warrant issuance\* 10.8 Form of 6% Subordinated Note Due May 1, 2001\*\* Form of 6% Subordinated Note Due September 1, 2001\*\* 10.9 Form of \$4.08 Warrant\* 10.10 Form of \$17.00 Warrant\*\* 10.11 10.12 Form of \$10.20 Warrant\*\* Demand note facility with First Union National Bank\*\* 10.13 Consulting Agreement dated December 6, 1996 between the 10.14 Company and Norman E. Schumaker\*\* Purchase Order issued to the Company by General Motors Corporation on November 17, 1996. Confidential treatment has 10.15 been requested by the Company with respect to portions of this document. Such portions are indicated by "[\*]".\*\*Statement of Computation of Per Share Amounts 11.1 23.1 Consent of Coopers & Lybrand L.L.P. Consent of White & Case (included in Exhibit 5.1) 23.2 Consent of Lerner David Littenberg Krumholz & Mentlik\*\* 23.3 Consent of Robert Louis-Dreyfus\* 23.4 24.1 Power of Attorney\* Financial Data Schedule\*\* 27.1 99.1 Schedule II: Valuation and Qualified Accounts & Reserves\*\*

\*\* Previously filed

# (b) Financial Statement Schedule

The following Financial Statement Schedule is filed pursuant to Item 11(e) of Regulation S-X:

Schedule II: Valuation and Qualified Accounts & Reserves \*\*

All other schedules are omitted because they are not applicable or the required information is shown in the Financial Statements or Notes thereto.

### ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes to provide to the Underwriters at the closing specified in the Underwriting Agreement certificates in such denomination and registered in such names as required by the Underwriters to permit prompt delivery to each purchaser.

The undersigned Registrant hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of a registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

# SIGNATURES

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT, THE REGISTRANT HAS DULY CAUSED THIS AMENDMENT TO BE SIGNED ON ITS BEHALF BY THE UNDERSIGNED, THEREUNTO DULY AUTHORIZED, IN THE TOWNSHIP OF SOMERSET, STATE OF NEW JERSEY, ON MARCH 4, 1997.

**EMCORE** Corporation

/s/ Reuben F. Richards, Jr.

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT, THIS AMENDMENT HAS BEEN SIGNED BY THE FOLLOWING PERSONS IN THE CAPACITIES INDICATED, ON MARCH 4, 1997.

SIGNATURE

SIGNATURE	TITLL
* REUBEN F. RICHARDS, JR.	President, Chief Executive Officer and Director (Principal Executive Officer)
* THOMAS G. WERTHAN	Vice President, Chief Financial Officer, Secretary and Director (Principal Accounting and Financial Officer)
	Director
RICHARD A. STALL	· <del>-</del>
*	Chairman of the Board and Director
THOMAS J. RUSSELL	·-
*	Director
HOWARD R. CURD	
*	Director
HOWARD F. CURD	· <del>-</del>
/s/ Reuben F. Richards, Jr.	
Reuben F. Richards, Jr.	

### EXHIBIT INDEX

#### **EXHIBIT** NO. DESCRIPTION Form of Underwriting Agreement\*\* 1.1 Restated Certificate of Incorporation, amended February 3, 1997\*\* 3.1 Amended By-Laws, as amended January 11, 1989\*\* Specimen certificate for shares of Common Stock\*\* 3.2 4.1 Opinion of White & Case 5.1 10.1 1995 Incentive and Non-Statutory Stock Option Plan\*\* 10.2 1996 Amendment to Option Plan\* 10.3 Specimen Incentive Stock Option Agreement\*\* 10.4 Hakuto Distributorship Agreement\* 10.5 Amendment to Lease for premises at 394 Elizabeth Avenue, Somerset, New Jersev 08873\*\* 10.6 Registration Rights Agreement relating to September 1996 warrant issuance\* 10.7 Registration Rights Agreement relating to December 1996 warrant issuance\* Form of 6% Subordinated Note Due May 1, 2001\*\* 10.8 10.9 Form of 6% Subordinated Note Due September 1, 2001\*\* Form of \$4.08 Warrant\*\* 10.10 Form of \$17.00 Warrant\*\* 10.11 Form of \$10.20 Warrant\*\* 10.12 10.13 Demand note facility with First Union National Bank\*\* 10.14 Consulting Agreement dated December 6, 1996 between the Company and Norman E. Schumaker\*\* 10.15 Purchase Order issued to the Company by General Motors Corporation on November 17, 1996. Confidential treatment has been requested by the Company with respect to portions of this document. Such portions are indicated by "[\*]".\*\* 11.1 Statement of Computation of Per Share Amounts 23.1 Consent of Coopers & Lybrand L.L.P. Consent of White & Case (included in Exhibit 5.1) 23.2 Consent of Lerner David Littenberg Krumholz & Mentlik\*\* 23.3 Consent of Robert Louis-Dreyfus\*\* 23.4 Power of Attorney\* 24.1

Schedule II: Valuation and Qualified Accounts & Reserves\*\*

\*\* Previously filed

27.1

99.1

Financial Data Schedule\*\*

	For the year ended			For the three months ended		
	09/30/94	09/30/95	09/30/96	12/31/95	12/31/96	
Primary:						
Net loss for the period	\$ (169,809) =======		\$(3,176,314) ========			
Weighted average number of shares of common stock outstanding	58,364	900,034	2,994,461	2,994,461	2,994,461	
Weighted average number of preferred stock common equivalents (1)		719,472				
Shares issuable upon exercise of outstanding options and warrants (2)	3,756,144	3,872,516	3,756,144	3,756,144	3,756,144	
Shares assumed to be acquired in accordance with the treasury stock method (2)		2,346,730	2,312,203			
Shares used in computing Earnings per share	1,502,300 =======		4,438,403 ======		4,438,403 =======	
Net (loss) income per share	\$ (0.11)	\$ 0.48	\$ (0.72)	\$ (0.20)	\$ (0.86)	
Fully Diluted:	=======	=======	========	=======	========	
Net Loss for the period	\$ (169,809) =======		\$(3,176,314) ========			
Weighted average number of shares of common stock outstanding	58,364		2,994,461			
Weighted average number of preferred stock common equivalents (1)		719,472				
Shares issuable upon exercise of outstanding options and warrants (2)	3,756,144	3,872,516	3,756,144	3,756,144	3,756,144	
Shares assumed to be acquired in accordance with the treasury stock method (2)	2,312,208	2,346,730	2,312,203	2,312,203	2,312,203	
Shares used in computing Earnings per share	1,507,300 ======	3,145,292 ======	4,438,403 ======	4,438,403 ======	4,438,403 ======	
Net (loss) income per share	\$ (0.11) ======		\$ (0.72) =======	\$ (0.20) ======	\$ (0.86)	

<sup>(1)</sup> Reflects the conversion of preferred shares into common shares based upon the original terms of the instrument. This assumed conversion is presented only in years in which the effect is dilutive.

<sup>(2)</sup> Under the provisions of Securities and Exchange Commission Staff Accounting Bulletin No. 64 ("SAB No. 64"), common stock and common stock equivalents issued by the company within one year or in contemplation of the Company's offering are treated as if they were outstanding for all periods presented. Accordingly, the shares issuable upon exercise of outstanding options and warrants have been increased by 3,756,144 and the shares assumed to be acquired in accordance with the treasury stock method has been increased by 2,312,208 for each year presented.

# CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the inclusion in this registration statement on Form S-1 (Amendment No. 5) of our report dated November 1, 1996, except for Notes 13 and 15 as to which the date is December 6, 1996, and Note 16, as to which the date is February 3, 1997, on our audits of the financial statements and financial statement schedule of EMCORE Corporation. We also consent to the reference to our Firm under the caption "Experts."

Coopers & Lybrand L.L.P.

Parsippany, New Jersey March 4, 1997