

Registration No. 333- _____

=====

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-4

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

EMCORE CORPORATION
(Exact name of registrant as specified in its charter)

NEW JERSEY
(State or Other Jurisdiction of
Incorporation or Organization)

3559
(Primary Standard Industrial
Classification Code Number)

22-2746503
(I.R.S. Employer
Identification Number)

145 BELMONT DRIVE
SOMERSET, NEW JERSEY 08873
(732) 271-9090

(Address, including zip code, and telephone number, including
area code, of registrant's agent for service and principal executive offices)

THOMAS G. WERTHAN
EMCORE CORPORATION
145 BELMONT DRIVE
SOMERSET, NEW JERSEY 08873
(732) 271-9090

(Name, address, including zip code, and telephone number,
including area code, of agent for service)

With copies to:

JORGE L. FREELAND, ESQ.
WHITE & CASE LLP
200 SOUTH BISCAYNE BLVD.
MIAMI, FLORIDA 33131
TEL: (305) 371-2700
FAX: (305) 358-5744

Approximate date of commencement of proposed sale to the public: From time
to time after the effective date of this Registration Statement.

If the securities being registered on this Form are being offered in
connection with the formation of a holding company and there is compliance with
General Instruction G, 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, check the following box and
list the Securities Act 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(d)
under the Securities Act, check the following box and list the Securities Act
registration statement number of the earlier effective registration statement
for the same offering. []

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. [X]

CALCULATION OF REGISTRATION FEE

=====

Title Of Each Class Of Securities To Be Registered	Amount To Be Registered	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee

Common stock, no par value.....	1,500,000 shares	\$10.725	\$16,087,500	\$1,481
=====				

(1) Estimated solely for purposes of calculating the amount of the registration fee, pursuant to Rule 457(c), based upon the average of the high and low prices of the Company's common stock reported on the NASDAQ National Market on January 22, 2002.

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 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 JANUARY 23, 2002

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

PROSPECTUS

1,500,000 SHARES

EMCORE CORPORATION

COMMON STOCK

By this prospectus, we may issue up to 1,500,000 shares of our common stock from time to time in connection with acquisitions of other businesses, assets or securities of other companies whether by purchase, merger or any other form of acquisition or business combination.

The amount and type of consideration we will offer and the other specific terms of each acquisition will be determined by negotiations with the owners or the persons who control the businesses, assets or securities to be acquired. We may structure business acquisitions in a variety of ways, including acquiring stock, other equity interests or assets of the acquired business or merging the acquired business with us or one of our subsidiaries. We expect that the price of the shares we issue will be related to their market price, either when we tentatively or finally agree to the particular terms of the acquisition, when we issue the shares, when the acquisition is completed, or during some other negotiated period and may be based on average market prices or otherwise. We may be required to provide further information by means of a post-effective amendment to the registration statement or a supplement to this prospectus once we know the actual information concerning a specific acquisition.

We will pay all expenses of this offering. We do not expect to pay any underwriting discounts or commissions in connection with issuing these shares, although we may pay finder's fees in connection with certain acquisitions. Any person receiving a finder's fee may be deemed an underwriter within the meaning of the Securities Act of 1933.

We may also permit individuals or entities that have received or will receive shares of our common stock in connection with the acquisitions described above to use this prospectus to cover resales of those shares. If this happens, we will not receive any proceeds from the resale of such shares. See "Selling Stockholders" for the identity of any such individuals or entities and more information about resales of the securities.

Our common stock is quoted on the Nasdaq National Market under the symbol "EMKR". On January 22, 2002, the last reported sales price of our common stock on the Nasdaq National Market was \$10.42 per share.

INVESTING IN OUR COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. SEE 'RISK FACTORS' BEGINNING ON PAGE 6.

NEITHER THE SECURITIES AND EXCHANGE COMMISSIONS NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is _____, 200_

TABLE OF CONTENTS

	Page

ABOUT THIS PROSPECTUS.....	2
WHERE YOU CAN FIND MORE INFORMATION.....	2
FORWARD--LOOKING STATEMENTS.....	3
EMCORE CORPORATION.....	4
RISK FACTORS.....	6
USE OF PROCEEDS.....	14
DOCUMENTS INCORPORATED BY REFERENCE.....	15
DISTRIBUTION OF SECURITIES.....	16
SELLING STOCKHOLDERS.....	16
LEGAL MATTERS.....	17
EXPERTS.....	17

This prospectus incorporates important business and financial information about EMCORE Corporation that is not included in or delivered with this document. This means that we may satisfy our disclosure obligations to you by referring you to one or more documents separately filed with the SEC. See "Documents Incorporated by Reference" on page 15 for a list of documents that we have incorporated by reference into this prospectus. This information is available to you without charge upon written request to:

EMCORE Corporation
145 Belmont Drive
Somerset, New Jersey 08873
Attention: Investor Relations
Tel: (732) 271-9090

To ensure timely delivery, you must request the information at least five business days before the date on which you must make a decision on whether to invest in EMCORE.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the SEC, using the SEC's shelf registration rules. Under the shelf registration rules, using this prospectus, together with a prospectus supplement, we may issue from time to time, in one or more offerings, up to 1,500,000 shares of our common stock in connection with the acquisition of various businesses. We may issue the securities in connection with our acquisition of the assets, business or securities of other companies whether by purchase, merger or any other form of acquisition or business combination.

For each acquisition, we expect to negotiate the terms with the owner or controlling persons of the assets, businesses, or securities we plan to acquire. We expect that the price of the shares we issue will be related to their market price, either when we tentatively or finally agree to the particular terms of the acquisition, when we issue the shares, when the acquisition is completed, or during some other negotiated period and may be based on average market prices or otherwise. Securities may be sold at a fixed offering price, which may be changed, or at other negotiated prices.

With our consent, persons or entities who have received or will receive securities under this prospectus in connection with acquisitions may use this prospectus to sell such securities at a later date. We refer to these persons in the prospectus as selling stockholders. Please see the information described under the heading "Selling Stockholders" to find out more information about resales of the securities by the selling stockholders.

In this prospectus, "EMCORE," "the Company," "we," "us," and "our" refer to EMCORE Corporation, a New Jersey corporation, and its consolidated subsidiaries, unless the context otherwise requires.

This prospectus provides you with a general description of the securities we may issue. If necessary, each time we issue securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read this prospectus, the applicable prospectus supplement and the information incorporated by reference. See "Documents Incorporated by Reference."

In making your investment decision, you should rely only on the information contained or incorporated by reference in the prospectus and any prospectus supplement. We have not authorized anyone to provide you with any other information. If you receive any unauthorized information, you must not rely on it. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state or jurisdiction where the offer or sale of these securities is not permitted. You should not assume that the information contained or incorporated by reference in this prospectus is accurate as of any date other than the date on which it is released by Emcore.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any reports, statements or other information we file with the SEC at its public reference room at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. Our filings are also available to the public on the Internet, through a database maintained by the SEC at <http://www.sec.gov>.

We filed a registration statement on Form S-4 to register with the SEC the securities described in this prospectus. This prospectus is part of that registration statement. As permitted by SEC rules, this prospectus does not contain all the information contained in the registration statement or the exhibits to the registration statement. You may refer to the registration statement and accompanying exhibits for more information about our securities and us.

FORWARD-LOOKING STATEMENTS

This prospectus includes forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. These forward-looking statements are subject to a number of risks, uncertainties and assumptions about us, including, among other things:

- general economic and business conditions, both globally and in our markets;
- our expectations and estimates concerning our future financial performance, financing plans and the effect of competition;
- our ability to integrate any future business acquisitions into our operations, as well as the future success of such businesses;
- anticipated trends in the compound semiconductor capital equipment, wafers and devices business;
- existing and future regulations affecting the compound semiconductor capital equipment, wafers and devices business; and
- other risk factors set forth in the "Risk Factors" section of this prospectus.

In addition, in this prospectus, the words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect" and similar expressions, as they relate to us, our business or our management, are intended to identify forward-looking statements.

EMCORE CORPORATION

We design, develop and manufacture compound semiconductor wafers and devices and are a leading developer and manufacturer of the tools and manufacturing processes used to fabricate compound semiconductor wafers and devices. 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, phosphorus or nitrogen. Many compound semiconductors have unique physical properties that enable electrons to move through them at least four times faster than through silicon-based devices and are therefore well suited to serve the growing need for efficient, high performance electronic systems.

We offer a comprehensive portfolio of products and systems for the rapidly expanding broadband, wireless communications and solid state lighting markets. We have developed extensive materials science expertise and process technology to address our customers' needs. Customers can take advantage of our vertically integrated solutions approach by purchasing custom-designed wafers and devices from us, or by manufacturing their own devices in-house using one of our metal organic chemical vapor deposition ("MOCVD") production systems configured to their specific needs. Our products and systems enable our customers to cost effectively introduce new and improved high performance products to the market faster in high volumes.

The growth in our business is driven by the widespread deployment of fiber optic networks, introduction of new wireless networks and services, rapid build-out of satellite communication systems, increasing use of more power efficient lighting sources, increasing use of electronics in automobiles and emergence of advanced consumer electronic applications. Also, the growing demands for higher volumes of a broad range of higher performance devices has resulted in manufacturers increasingly outsourcing their needs for compound semiconductor wafers and devices. Our expertise in materials science and process technology provides us with a competitive advantage to manufacture compound semiconductor wafers and devices in high volumes.

WAFERS AND DEVICES. We offer a broad array of compound semiconductor wafers and devices, including optical components and components for use in high-speed data communications and telecommunications networks, radio frequency materials ("RF materials") used in mobile communications products such as wireless modems and handsets, solar cells that power commercial and military satellites, high brightness light-emitting diodes ("HB LEDs") for several lighting markets and magneto resistive sensors ("MR sensors") for various automotive applications.

- **Optical Components and Modules.** Our family of vertical cavity surface emitting lasers ("VCSELs") and VCSEL array transceiver and transponder products, as well as our photodiode array components, serve the rapidly growing high-speed data communications network markets, including the Gigabit Ethernet, FibreChannel, Infiniband(SM), and Very Short Reach OC-192, the emerging Very Short Reach OC-768, OC-48 and related markets. Our strategy is to manufacture high cost optical components and subassemblies in-house, using our proprietary technologies, to reduce the overall cost of our transceiver and transponder modules.
- **RF materials.** We currently produce 4-inch and 6-inch InGaP HBT and pHEMT materials that are used by our wireless customers for power amplifiers for GSM, TDMA, CDMA and the emerging 3G multiband wireless handsets.
- **Solar Cells.** Solar cells are typically the largest single cost component of a satellite. Our compound semiconductor solar cells, which are used to power satellites, have achieved industry-leading efficiencies. Solar cell efficiency dictates the electrical power of the satellite and bears upon the weight and launch costs of the satellite. We began shipping our triple junction solar cells in December 2000.
- **HB LEDs.** Through our joint venture with General Electric Lighting, we provide advanced HB LED technology used in such applications as traffic lights, miniature lamps, automotive lighting, and flat panel displays.

PRODUCTION SYSTEMS.

We are a leading provider of compound semiconductor technology processes and MOCVD production tools. We believe that our proprietary TurboDisc deposition technology makes possible one of the most cost-effective production processes for the commercial volume manufacture of high-performance compound semiconductor wafers and devices, which are integral to broadband communication applications.

CUSTOMERS

Our customers include Agilent Technologies Ltd., AMP, Inc., Anadigics Inc., Blaze Networking Products, Boeing-Spectrolab, Corning, Inc., General Motors Corp., Hewlett Packard Co., Honeywell International Inc., Infineon Technologies AG, Loral Space & Communications Ltd., Lucent Technologies, Inc., Lumileds Lighting LLC (a joint venture between Philips Lighting and Agilent Technologies), Motorola, Inc., Nortel Networks Corp., Siemens AG's Osram GmbH subsidiary, TriQuint Semiconductor, Inc. and more than a dozen of the largest electronics manufacturers in Japan.

BENEFITS OF COMPOUND SEMICONDUCTORS

Recent advances in information technologies have created a growing need for 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 that 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. Many compound semiconductor materials have unique physical properties that allow electrons to move at least four times faster than through silicon-based devices. Advantages of compound semiconductor devices over silicon devices include:

- operation at higher speeds;
- lower power consumption;
- less noise and distortion; and
- optoelectronic properties that enable these devices to emit and detect light.

Although compound semiconductors are more expensive to manufacture than the more traditional silicon-based semiconductors, electronics manufacturers are increasingly integrating compound semiconductors into their products in order to achieve the higher performance demands of today's electronic products and systems.

STRATEGY

Our objective is to capitalize on our position as a leading developer and manufacturer of compound semiconductor tools and manufacturing processes to become the leading supplier of compound semiconductor wafers and devices. The key elements of our strategy are to:

- apply our core materials and manufacturing expertise across multiple product applications;
- target high growth market opportunities;
- strategic acquisitions and partnerships with industry leading companies; and
- continue investment in research and development to maintain technology leadership.

Our principal executive offices are located at 145 Belmont Drive, Somerset, New Jersey 08873, and our telephone number is (732) 271-9090.

RISK FACTORS

You should carefully consider the risks described below before making an investment decision. If any of the following risks actually occurs, our business, financial condition or results of operations could be materially and adversely affected.

We caution the reader that these risk factors may not be exhaustive. We operate in a continually changing business environment, and new risk factors emerge from time to time. We cannot predict such new risk factors, nor can we assess the effect, if any, of such new risk factors on our businesses or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those projected in any forward-looking statements. Accordingly, forward-looking statements should not be relied upon as a prediction of actual results. In addition, our management's estimates of future operating results are based on the current complement of businesses, which is constantly subject to change as management implements its fix, sell or grow strategy.

WE MAY CONTINUE TO INCUR OPERATING LOSSES.

We started operations in 1984 and as of September 30, 2001 had an accumulated deficit of \$121.2 million. We incurred net losses of \$12.3 million in fiscal 2001, \$25.5 million in fiscal 2000 and \$22.7 million in fiscal 1999. In addition, as a result of the downturn in the economy, we expect a decline in revenues in fiscal year 2002. Many of our expenses, particularly those relating to capital equipment, debt service and manufacturing overhead, are fixed. Accordingly, reduced revenue causes our fixed production costs to be allocated across reduced production volumes, which adversely affects our gross margin and profitability. Therefore, we expect to continue to incur operating losses until revenues increase. We cannot currently predict whether or when demand will strengthen across our product lines or how quickly our customers will consume their inventories of our products. In addition, several of our customers have reduced the lead times they give us when ordering product from us. While this trend has enabled us to reduce inventory, it also restricts our ability to forecast revenues. If our sales and profit margins do not increase to support the higher levels of operating expenses and if our new product offerings are not successful, our business, financial condition and results of operations will be materially and adversely affected.

WE MAY ENGAGE IN ACQUISITIONS THAT COULD RESULT IN INTEGRATION CHALLENGES, STOCKHOLDER DILUTION, AND CAUSE US TO INCUR DEBT OR ASSUME CONTINGENT LIABILITIES.

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

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

The process of integrating any acquisition may create unforeseen operating difficulties and expenditures and is itself risky. The areas where we may face difficulties include:

- diversion of management time (at both companies) during the period of negotiation through closing and further diversion of such time after closing from focus on operating the businesses to issues of integration and future products;
- decline in employee morale and retention issues resulting from changes in compensation, reporting relationships, future prospects or the direction of the business;
- the need to integrate each company's accounting, management information, human resource and other administrative systems to permit effective management, and the lack of control if such integration is delayed or not implemented; and

- the need to implement controls, procedures and policies appropriate for a larger public company at companies that prior to acquisition had been smaller, private companies.

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

OUR LEVERAGE MAY AFFECT OUR BUSINESS AND AFFECT OUR OPERATING FLEXIBILITY.

At January 15, 2002, we had approximately \$175.0 million in total indebtedness. We may incur or assume additional debt in the future in connection with acquisitions or otherwise, subject to the terms of our existing senior credit facility. In addition, at September 30, 2001, our cash, cash equivalents and marketable securities totaled approximately \$147.7 million. For a description of our indebtedness, please see "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our annual report on Form 10-K for the fiscal year ended September 30, 2001 and any future Forms 10-Q and 10-K which we file, which are incorporated by reference in this prospectus. The level of our indebtedness could:

- limit cash flow available for general corporate purposes, such as acquisitions and capital expenditures, due to the ongoing cash flow requirements for debt service;
- limit our ability to obtain, or obtain on favorable terms, additional debt financing in the future for working capital, capital expenditures or acquisitions;
- limit our flexibility in reacting to competitive and other changes in the industry and economic conditions generally;
- expose us to a risk that a substantial decrease in net operating cash flows due to economic developments or adverse developments in our business could make it difficult to meet debt service requirements; and
- expose us to risks inherent in interest rate fluctuations in connection with any borrowings at variable rates of interest, which could result in higher interest expense in the event of increases in interest rates.

Our ability to make scheduled payments of principal of, to pay interest on, or to refinance our indebtedness and to satisfy our other debt obligations will depend upon our future operating performance, which may be affected by general economic, financial, competitive, legislative, regulatory, business and other factors beyond our control. We will not be able to control many of these factors, such as the economic conditions in the markets in which we operate and initiatives taken by our competitors. In addition, there can be no assurance that future borrowings or equity financing will be available for the payment or refinancing of our indebtedness. If we are unable to service our indebtedness, whether in the ordinary course of business or upon acceleration of such indebtedness, we may be forced to pursue one or more alternative strategies, such as restructuring or refinancing our indebtedness, selling assets, reducing or delaying capital expenditures or seeking additional equity capital. There can be no assurance that any of these strategies could be effected on satisfactory terms, if at all.

OUR RAPID GROWTH PLACES A STRAIN ON OUR RESOURCES.

We have experienced rapid growth, having added a significant number of new employees within the last year. We have also expanded our manufacturing facilities in Albuquerque, New Mexico and in Somerset, New Jersey. This growth has placed and will continue to place a significant strain on our management, financial, sales and other employees and on our internal systems and controls. If we are unable to effectively manage multiple facilities and operations in geographically distant locations, our business, financial condition and results of operations will be materially and adversely affected. We are also in the process of installing new manufacturing and accounting software at our New Jersey facility. Most of the new manufacturing software is customized to our particular business and manufacturing processes. It will take time and require evaluation to eliminate any of the

malfunctions in the software and to train personnel to use the new software. In this transition we may experience delays in production, cost overruns and disruptions in our operations.

WE MUST CONTINUALLY IMPROVE EXISTING PRODUCTS, DESIGN AND SELL NEW PRODUCTS AND MANAGE THE COSTS OF RESEARCH AND DEVELOPMENT IN ORDER TO EFFECTIVELY COMPETE.

We compete in markets characterized by rapid technological change, evolving industry standards and continuous improvements in products. Due to constant changes in these markets, our future success depends on our ability to improve our manufacturing processes, tools and products. To remain competitive we must continually introduce manufacturing tools with higher capacity and better production yields.

The life cycles of some of our products depend heavily upon the life cycles of the end products into which our products are designed. Products with short life cycles require us to manage production and inventory levels closely. We cannot assure investors that obsolete or excess inventories, which may result from unanticipated changes in the estimated total demand for our products and/or the estimated life cycles of the end products into which our products are designed, will not affect us beyond the inventory charges that we have already taken during fiscal year 2001.

We have recently introduced a number of new products, and we will be introducing additional new products in the future. The commercialization of new products involves substantial expenditures for research and development, production and marketing. We may be unable to successfully design, develop or manufacture these new products and may have difficulty penetrating new markets.

Because it is generally not possible to predict the amount of time required and the costs involved in achieving certain research, development and engineering objectives, actual development costs may exceed budgeted amounts and estimated product development schedules may be extended. Our business, financial condition and results of operations may be materially and adversely affected if:

- we are unable to improve our existing products on a timely basis;
- our new products are not introduced on a timely basis or do not achieve sufficient market penetration;
- we incur budget overruns or delays in our research and development efforts; or
- our new products experience reliability or quality problems.

OUR INDUSTRY IS RAPIDLY CHANGING.

The compound semiconductor industry is changing rapidly due to, among other things, continuous technological improvements in products and evolving industry standards. This industry is marked by the continuous introduction of new products and increased capacity for services similar to those provided by us. Future technological advances in the compound semiconductor industry may result in the availability of new products or increase the efficiency of existing products. If a technology becomes available that is more cost-effective or creates a superior product, we may be unable to access such technology or its use may involve substantial capital expenditures which we may be unable to finance. We cannot assure you that existing, proposed or as yet undeveloped technologies will not render our technology less profitable or that we will have available the financial and other resources necessary to compete effectively against companies possessing such technologies. We cannot assure you that we will be able to adapt to technological changes or offer competitive products on a timely or cost effective basis.

FLUCTUATIONS IN OUR QUARTERLY OPERATING RESULTS MAY NEGATIVELY AFFECT OUR STOCK PRICE.

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

- the volume and timing of orders for our products, particularly TurboDisc systems, which have an average selling price in excess of \$1.0 million;
- the timing of our announcements and introduction of new products and of similar announcements by our competitors;
- downturns in the market for our customers' products;
- regional economic conditions, particularly in Asia where we derive a significant portion of our revenues;
- price volatility in the compound semiconductor industry;
- changes in product mix; and
- timing of customer orders.

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

OUR JOINT VENTURE PARTNER, WHO HAS CONTROL OF THE VENTURE, MAY MAKE DECISIONS THAT WE DO NOT AGREE WITH AND THAT MAY ADVERSELY AFFECT OUR NET INCOME.

We do not have a majority interest in our joint venture with General Electric Lighting. A board of managers governs this joint venture with representatives from both the strategic partner and us. Many fundamental decisions must be approved by both parties to the joint venture, which means we will be unable to direct the operation and direction of this joint venture without the agreement of our joint venture partner. If we are unable to agree on important issues with a joint venture partner, the business of that joint venture may be delayed or interrupted, which may, in turn, materially and adversely affect our business, financial condition and results of operations.

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

We have agreed with General Electric Lighting that our joint venture will be the sole vehicle for each party's participation in the solid state lighting market. We have also agreed with General Electric Lighting to several limitations during the life of the venture and thereafter relating to how each of us can make use of the joint venture's technology. One consequence of these limitations is that in certain circumstances, such as a material default by us or certain sales of our interest in the joint venture, we would not be permitted to use the joint venture's technology to compete against General Electric Lighting in the solid state lighting market.

WE HAVE A SIGNIFICANT AMOUNT OF INVESTMENTS IN MARKETABLE SECURITIES.

EMCORE accounts for its investment in marketable securities as available for sale securities in accordance with the provisions of SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities." Unrealized gains and losses for these securities are excluded from earnings and reported as a separate component of shareholders' equity. Realized gains and losses on sales of investments, as determined on a specific identification basis, are included in the consolidated statements of operations. Fair values are determined by reference to market prices for securities as quoted based on publicly traded exchanges. In August 2001, EMCORE sold its minority ownership position in its joint venture with Uniroyal Technology Corporation (UTCI) in exchange for approximately 2.0 million shares of UTCI common stock. EMCORE's cost basis in the UTCI stock is \$7.10 per share or approximately \$14.0 million. Since September 30, 2001, UTCI's stock price has declined dramatically to a

recent low of \$0.48 per share. As a result of this significant decline in the value of the UTCI common stock, in the quarter ending December 31, 2001, we expect to be required to write off a significant portion of our investment in UTCI, and our results of operations could be materially and adversely affected.

SINCE A LARGE PERCENTAGE OF OUR REVENUES ARE FROM FOREIGN SALES, CERTAIN EXPORT RISKS MAY DISPROPORTIONATELY AFFECT OUR REVENUES.

Sales to customers located outside the United States accounted for approximately 47.7% of our revenues in fiscal 2001, 38.6% of our revenues in fiscal 2000 and 52.5% of our revenues in fiscal 1999. Sales to customers in Asia represent the majority of our international sales. We believe that international sales will continue to account for a significant percentage of our revenues. Because of this, the following export risks may disproportionately affect our revenues:

- political and economic instability may inhibit export of our systems and devices and limit potential customers' access to U.S. dollars;
- shipping and installation costs of our systems may increase;
- we may experience difficulties in the timeliness of collection of foreign accounts receivable and be forced to write off receivables from foreign customers;
- a strong dollar may make our systems less attractive to foreign purchasers who may decide to postpone making such capital expenditures;
- tariffs and other barriers may make our systems and devices less cost competitive;
- we may have difficulty in staffing and managing our international operations;
- the laws of certain foreign countries may not adequately protect our trade secrets and intellectual property; and
- potentially adverse tax consequences to our customers may make our systems and devices not cost-competitive.

WE WILL LOSE SALES IF WE ARE UNABLE TO OBTAIN GOVERNMENT AUTHORIZATION TO EXPORT OUR PRODUCTS.

Exports of our 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. On certain occasions, we have been denied authorization, particularly with respect to the People's Republic of China. Failure to receive these authorizations may materially and adversely affect our revenues and in turn our business, financial condition and results of operations from international sales. Additionally, export jurisdiction relating to exports of satellites and associated components has not been definitively settled. Such exports may in the future require a license from the Department of State. This may cause delays in shipping products abroad. Delays in receiving export licenses for products may materially and adversely affect our revenues and in turn our business, financial condition and results of operations.

OUR OPERATING RESULTS COULD BE HARMED IF WE LOSE ACCESS TO SOLE OR LIMITED SOURCES OF MATERIALS OR SERVICES.

We currently obtain some components and services for our products from limited or single sources. We purchase these components and services on a purchase order basis, do not carry significant inventories of these components and do not have any long-term supply contracts with these vendors. Because we often do not account for a significant part of our vendors' business, we may not have access to sufficient capacity from these vendors in periods of high demand. If we were to change any of our limited or sole source vendors, we would be required to

re-qualify each new vendor. Re-qualification could prevent or delay product shipments that could negatively affect our results of operations. In addition, our reliance on these vendors may negatively affect our production if the components vary in quality or quantity. If we are unable to obtain timely deliveries of sufficient components of acceptable quality or if the prices of components for which we do not have alternative sources increase, our business, financial condition and results of operations could be materially and adversely affected.

OUR PRODUCTS ARE DIFFICULT TO MANUFACTURE AND OUR PRODUCTION COULD BE DISRUPTED IF WE ARE UNABLE TO AVOID MANUFACTURING DIFFICULTIES.

We manufacture all of our wafers and devices in our manufacturing facilities. Minute impurities, difficulties in the production process, defects in the layering of the devices' constituent compounds, wafer breakage or other factors can cause a substantial percentage of wafers and devices to be rejected or numerous devices on each wafer to be non-functional. These factors can result in lower than expected production yields, which would delay product shipments and may materially and adversely affect our operating results. We have experienced difficulties in achieving planned yields in the past, particularly in pre-production and upon initial commencement of full production volumes, which have adversely affected our gross margins. Because the majority of our costs of manufacture are relatively fixed, the number of shippable devices per wafer for a given product is critical to our financial results. Therefore, it is critical for us to improve the number of shippable product per wafer and increase the production volume of wafers in order to maintain and improve our results of operations. Additionally, because we manufacture all of our products at our facilities in Somerset, New Jersey and Albuquerque, New Mexico, any interruption in manufacturing resulting from fire, natural disaster, equipment failures or otherwise would materially and adversely affect our business, financial condition and results of operations.

WE FACE LENGTHY SALES AND QUALIFICATIONS CYCLES FOR OUR PRODUCTS AND, IN MANY CASES, MUST INVEST A SUBSTANTIAL AMOUNT OF TIME AND FUNDS BEFORE WE RECEIVE ORDERS.

Sales of our TurboDisc systems primarily depend upon the decision of a prospective customer to increase its manufacturing capacity, which typically involves a significant capital commitment by the customer. Customers usually place orders with us between two to nine months after our initial contact with them. We often experience delays in obtaining system sales orders while customers evaluate and receive internal approvals for the purchase of these systems. These delays may include the time necessary to plan, design or complete a new or expanded compound semiconductor fabrication facility. Due to these factors, we expend substantial funds and sales, marketing and management efforts to sell our compound semiconductor production systems. These expenditures and efforts may not result in sales.

In order to expand our materials production capabilities, we have dedicated a number of our TurboDisc systems to the manufacture of wafers and devices. Several of our products are currently being tested to determine whether they meet customer or industry specifications. During this qualification period, we invest significant resources and dedicate substantial production capacity to the manufacture of these new products, prior to any commitment to purchase by the prospective customer and without generating significant revenues from the qualification process. If we are unable to meet these specifications or do not receive sufficient orders to profitably use the dedicated production capacity, our business, financial condition and results of operations would be materially and adversely affected.

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

INDUSTRY DEMAND FOR SKILLED EMPLOYEES, PARTICULARLY SCIENTIFIC AND TECHNICAL PERSONNEL WITH COMPOUND SEMICONDUCTOR EXPERIENCE, EXCEEDS THE NUMBER OF SKILLED PERSONNEL AVAILABLE.

Our future success depends, in part, on our ability to attract and retain certain key personnel, including scientific, operational and management personnel. The competition for attracting and retaining these employees,

especially scientists, is intense. Because of this intense competition for these skilled employees, we may be unable to retain our existing personnel or attract additional qualified employees in the future. If we are unable to retain our skilled employees and attract additional qualified employees to keep up with our expansion, our business, financial condition and results of operations will be materially and adversely affected.

PROTECTING OUR TRADE SECRETS AND OBTAINING PATENT PROTECTION IS CRITICAL TO OUR ABILITY TO EFFECTIVELY COMPETE FOR BUSINESS.

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

Moreover, we cannot assure you that any patents will afford commercially significant protection of our technologies or that we will have adequate resources to enforce our patents. Furthermore, the laws of certain other countries may not protect our intellectual property to the same extent as U.S. laws.

OUR FAILURE TO OBTAIN OR MAINTAIN THE RIGHT TO USE CERTAIN INTELLECTUAL PROPERTY MAY ADVERSELY AFFECT OUR FINANCIAL RESULTS.

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

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

INTERRUPTIONS IN OUR BUSINESS AND A SIGNIFICANT LOSS OF SALES TO ASIA MAY RESULT IF OUR PRIMARY ASIAN DISTRIBUTOR FAILS TO EFFECTIVELY MARKET AND SERVICE OUR PRODUCTS.

We rely on a single marketing, distribution and service provider, Hakuto Co. Ltd., to market and service many of our products in Japan, China and Singapore. Hakuto is one of our shareholders and Hakuto's president is a member of our Board of Directors. We have distributorship agreements with Hakuto which expire in March 2008 and give Hakuto exclusive distribution rights for certain of our products in Japan. Hakuto's failure to effectively market and service our products or termination of our relationship with Hakuto could result in significant delays or interruption in our marketing and service programs in Asia. This could materially and adversely affect our business, financial condition and results of operations.

OUR MANAGEMENT'S STOCK OWNERSHIP GIVES THEM THE POWER TO CONTROL BUSINESS AFFAIRS AND PREVENT A TAKEOVER THAT COULD BE BENEFICIAL TO UNAFFILIATED SHAREHOLDERS.

Certain members of our management, specifically Thomas J. Russell, Chairman of our Board, Reuben F. Richards, Jr., President, Chief Executive Officer and a director, and Robert Louis-Dreyfus, a director, are former members of Jesup & Lamont Merchant Partners, L.L.C. They collectively beneficially own more than 25% of our common stock. Accordingly, such persons will continue to hold sufficient voting power to control our business and affairs for the foreseeable future. This concentration of ownership may also have the effect of delaying, deferring or preventing a change in control of our Company, which could have a material adverse effect on our stock price.

UNSUCCESSFUL CONTROL OF THE HAZARDOUS RAW MATERIALS USED IN OUR MANUFACTURING PROCESS COULD RESULT IN COSTLY REMEDIATION FEES, PENALTIES OR DAMAGES UNDER ENVIRONMENTAL AND SAFETY REGULATIONS.

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

OUR BUSINESS OR OUR STOCK PRICE COULD BE ADVERSELY AFFECTED BY ISSUANCE OF PREFERRED STOCK.

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

CERTAIN PROVISIONS OF NEW JERSEY LAW AND OUR CHARTER MAY MAKE A TAKEOVER OF OUR COMPANY DIFFICULT EVEN IF SUCH TAKEOVER COULD BE BENEFICIAL TO SOME OF OUR SHAREHOLDERS.

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

THE PRICE OF OUR COMMON STOCK HAS FLUCTUATED WIDELY IN THE LAST YEAR AND MAY FLUCTUATE WIDELY IN THE FUTURE.

Our common stock is traded on The NASDAQ National Market, which has experienced and may continue to experience significant price and volume fluctuations that could adversely affect the market price of our common stock without regard to our operating performance. In addition, we believe that factors such as quarterly fluctuations in financial results, earnings below analysts' estimates, and financial performance and other activities of other publicly traded companies in the semiconductor industry could cause the price of our common stock to fluctuate substantially. In addition, in recent periods, our common stock, 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 similar fluctuations in the future could adversely affect the market price of our common stock.

Our stock price has fluctuated widely in the last year and may fluctuate widely in the future. Since September 30, 2000, our closing stock price has been as high as \$55.38 per share and as low as \$7.67 per share. Volatility in the price of our common stock may be caused by other factors outside of our control and may be unrelated or disproportionate to our operating results.

THE MARKETS IN WHICH WE COMPETE ARE HIGHLY COMPETITIVE. AN INCREASE IN COMPETITION WOULD LIMIT OUR ABILITY TO MAINTAIN AND INCREASE OUR MARKET SHARE.

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

USE OF PROCEEDS

This prospectus relates to securities that may be offered and issued by us from time to time in connection with the acquisition of various assets, businesses or securities. Other than the assets, business, or securities acquired, there usually will be no proceeds to us from these offerings. When this prospectus is used by a selling stockholder in a public re-offering or resale of securities acquired pursuant to this prospectus, we will usually not receive any proceeds from such sale by the selling stockholder. However, any proceeds received by us from the offering of securities pursuant to this prospectus or upon any resale of securities acquired pursuant to this prospectus will, unless otherwise stated in the applicable prospectus supplement, be used for general corporate purposes.

DOCUMENTS INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this document the information we filed with it. This means that we can disclose important business, financial and other information to you by referring you to other documents separately filed with the SEC. All information incorporated by reference is part of this document, unless and until that information is updated and superseded by the information contained in this document or any information incorporated later.

We incorporate by reference the documents listed below:

- Our annual report on Form 10-K for the fiscal year ended September 30, 2001; and
- The description of our common share, no par value, contained our registration statement on Form 8-A, filed on February 26, 1997, pursuant to Section 12 of the Exchange Act, and any amendment or report filed for the purpose of updating such description.

We also incorporate by reference all future filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities and Exchange Act of 1934 on or (i) after the date of the filing of the registration statement containing this prospectus and prior to the effectiveness of such registration statement and (ii) after the date of this prospectus and prior to the closing of the offering made hereby. Such documents will become a part of this prospectus from the date that the documents are filed with the SEC.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

EMCORE Corporation
145 Belmont Drive
Somerset, New Jersey 08873
Attn: Investor Relations
Tel: (732) 271-9090

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference.

You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer and sale is not permitted. You should assume that the information appearing in this prospectus and information incorporated by reference into this prospectus, is accurate only as of the date of the documents containing the information. Our business, financial condition, results of operation and prospects may have changed since that date.

DISTRIBUTION OF SECURITIES

The shares of EMCORE common stock covered by this prospectus are available for use in connection with acquisitions by us of other businesses, assets or securities in business combination transactions. The consideration offered by us in such acquisitions, in addition to any shares of common stock offered by this prospectus, may include cash, assets, debt or other securities, that may be convertible into shares of common stock of EMCORE, including shares covered by this prospectus, or assumption by EMCORE of liabilities of the businesses, assets or securities being acquired, or a combination of any of these. The amount and type of consideration we will offer and the other specific terms of each acquisition will be determined by negotiations with the owners or the persons who control the businesses, assets or securities to be acquired after taking into account the current and anticipated future value of such businesses, assets or securities, along with all other relevant factors. The securities issued to the owners of the businesses, assets or securities to be acquired normally are valued at a price reasonably related to the market value of such common stock either at the time an agreement is reached regarding the terms of the acquisition or upon delivery of the shares.

In an effort to maintain an orderly market in our securities or for other reasons, we may negotiate agreements with persons receiving common stock covered by this prospectus that will limit the number of shares that they may sell at specified intervals. These agreements may be more or less restrictive than restrictions on sales made under the exemption from registration requirements of the Securities Act, including the requirements under Rule 144 or Rule 145(d), and the persons party to these agreements may not otherwise be subject to the Securities Act requirements. We anticipate that, in general, negotiated agreements will be of limited duration and will permit the recipients of securities issued in connection with acquisitions to sell up to a specified number of shares per business day or days. We may also determine to waive any such agreements without public notice. See "Selling Stockholders," as it may be amended or supplemented from time to time, for a list of those individuals or entities that are authorized to use this prospectus to sell their shares of EMCORE common stock.

SELLING STOCKHOLDERS

The selling stockholders listed in any supplement to this prospectus, and any transferee or successors-in-interest to those persons, may from time to time offer and sell, pursuant to this prospectus, some or all of the shares covered by this prospectus.

Resales by selling stockholders may be made directly to investors or through a securities firm acting as an underwriter, broker or dealer. When resales are to be made through a securities firm, such securities firm may be engaged to act as the selling stockholder's agent in the sale of the shares by such selling stockholder, or the securities firm may purchase shares from the selling stockholders as principal and thereafter resell such shares from time to time. The fees earned by or paid to such securities firm may be the normal stock exchange commission or negotiated commissions or underwriting discounts to the extent permissible. In addition, such securities firm may effect resales through either securities dealers, and customary commissions or concessions to such other dealers may be allowed. Sales of shares may be at negotiated prices, at fixed prices, at market prices or at prices related to market prices then prevailing. Any such sales may be made on the Nasdaq National Market, in the over-the-counter market, by block trade, in special or other offerings, directly to investors or through a securities firm acting as agent or principal, or through a combination of such methods. Any participating securities firm may be indemnified against certain liabilities including liabilities under the Securities Act. Any participating securities firm may be deemed to be an underwriter within the meaning of the Securities Act, and any commission earned by such firm may be deemed to be underwriting discounts or commissions under the Securities Act.

In connection with resales of the shares sold under this prospectus, a prospectus supplement, if required, will be filed under Rule 424 (b) under the Securities Act, disclosing the name of any selling stockholder, the participating securities firm, if any, the number of shares involved, any material relationship a selling stockholder may have with us or our affiliates, and other details of such resale to the extent appropriate. Information concerning the selling stockholders will be obtained from the selling stockholders.

Stockholders may also offer shares of stock issued in past and future acquisitions by means of prospectuses under other available registration statements or pursuant to exemptions from the registration requirements of the

Securities Act, including sales which meet the requirements of Rule 145(d) under the Securities Act, and stockholders should seek the advice of their own counsel with respect to the legal requirements for such sales.

The terms of the acquisition of shares of common stock by the selling stockholder may include a provision for the sharing or reallocation of the selling stockholder's costs in connection with the resale of the securities, including the cost of registering the securities issued in the acquisition and preparing and printing the amendment or supplement, commissions and other costs or resale.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for EMCORE by White & Case LLP, Miami, Florida, who may rely upon Dillon, Bitar & Luther, New Jersey counsel for EMCORE, as to matters of New Jersey law.

EXPERTS

The financial statements and the related financial statement schedule incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended September 30, 2001 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference, (which report expresses an unqualified opinion and includes an explanatory paragraph referring to the change in method of accounting for revenue recognition) and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WE HAVE NOT AUTHORIZED ANY DEALER, SALES PERSON OR OTHER PERSON TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS OR ANY PROSPECTUS SUPPLEMENT. YOU MUST NOT RELY ON ANY UNAUTHORIZED INFORMATION. THIS PROSPECTUS IS NOT AN OFFER OF THESE SECURITIES IN ANY STATE WHERE AN OFFER IS NOT PERMITTED. THE INFORMATION IN THIS PROSPECTUS IS CURRENT AS OF [], 200___. YOU SHOULD NOT ASSUME THAT THIS PROSPECTUS IS ACCURATE AS OF ANY OTHER DATE.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 20. INDEMNIFICATION OF DIRECTORS AND OFFICERS

EMCORE's Restated 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;

(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 arbitral 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.

ITEM 21. EXHIBITS AND FINANCIAL STATEMENTS SCHEDULES

The following exhibits are filed with this Registration Statement:

EXHIBIT NO.		DESCRIPTION
5.1	--	Opinion of White & Case LLP.*
23.1	--	Consent of Deloitte & Touche LLP.*
23.2	--	Consent of White & Case LLP (included in Exhibit 5.1).*
24.1	--	Power of Attorney.*

* Filed herewith

ITEM 22. UNDERTAKINGS

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(a) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(b) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the registration statement;

(c) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; provided however, that paragraphs (1)(a) and (1)(b) do not apply if the registration statement is on Form S-3, Form S-8 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") that are incorporated by reference in the registration statement.

(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.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement 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.

(5) That, for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a 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.

(6) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to provisions described in Item 20 or otherwise, the registrant has been advised that in the opinion of the 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.

(7) To deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report, to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

(8) That prior to any public reoffering of the securities registered hereunder through us of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), such reoffering prospectus will contain the information called for by the applicable registration form with respect to reofferings by persons who may be deemed underwriters, in addition to the information called for by the other Items of the applicable form.

(9) That every prospectus (i) that is filed pursuant to paragraph (8) immediately preceding, or (ii) that purports to meet the requirements of Section 10(a)(3) of the Securities Act and is used in connection with an offering of securities subject to Rule 415, will be filed as part of an amendment to the registration statement and will not be used until such amendment is effective, and that, for purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offering therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(10) To respond to requests for information that is incorporated by reference into the prospectus pursuant to Item 4, 10(b), 11, or 13 of this form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

(11) To supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-4 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Township of Somerset, State of New Jersey, on January 23, 2002.

EMCORE CORPORATION

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

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

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-4 has been signed by the following persons in the capacities indicated, on January 23, 2002.

SIGNATURE

TITLE

/s/ Thomas J. Russell*

Chairman of the Board and Director

Thomas J. Russell

/s/ Reuben F. Richards, Jr.

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

Reuben F. Richards, Jr.

/s/ Thomas G. Werthan*

Chief Financial Officer, and Director
(Principal Accounting and Financial Officer)

Thomas G. Werthan

/s/ Richard A. Stall*

Chief Technology Officer and Director

Richard A. Stall

/s/ Charles Scott*

Director

Charles Scott

/s/ Robert Louis-Dreyfus*

Director

Robert Louis-Dreyfus

/s/ Hugh H. Fenwick*

Director

Hugh H. Fenwick

/s/ Shigeo Takayama*

Director

Shigeo Takayama

/s/ John J. Hogan, Jr.*

Director

John J. Hogan, Jr.

* indicates signed by Reuben F. Richards, Jr. as attorney-in-fact

EXHIBIT INDEX

EXHIBIT NO.		DESCRIPTION
5.1	--	Opinion of White & Case LLP.*
23.1	--	Consent of Deloitte & Touche LLP.*
23.2	--	Consent of White & Case LLP (included in Exhibit 5.1).*
24.1	--	Power of Attorney.*

* Filed herewith.

(WHITE & CASE LLP LETTERHEAD)

January 23, 2002

EMCORE Corporation
145 Belmont Drive
Somerset, New Jersey 08873

Re: The Registration Statement on Form S-4 for the issuance of up to
1,500,000 shares of common stock of the EMCORE Corporation

Gentlemen:

On the date hereof, EMCORE Corporation, a New Jersey corporation (the "Company"), filed with the Securities and Exchange Commission a Registration Statement on Form S-4 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"). The Registration Statement relates to 1,500,000 shares of the Company's Common Stock, no par value (the "Shares"), to be issued from time to time, pursuant to Rule 415 of the Act. We have acted as counsel to the Company in connection with the preparation and filing of the Registration Statement.

In connection therewith, we have examined and relied upon the original or a copy, certified to our satisfaction, of (i) the Articles of Incorporation and the Bylaws of the Company; (ii) resolutions of the Board of Directors of the Company authorizing the offering and related matters; (iii) the Registration Statement and exhibits thereto; and (iv) such other documents and instruments as we have deemed necessary or appropriate for the expression of the opinion herein contained. In making the foregoing examinations, we have assumed the genuineness of all signatures and the authenticity of all documents submitted to us as originals, and the conformity to original documents of all documents submitted to us as certified or photostatic copies. As to various questions of fact material to this opinion, we have relied, to the extent we deem reasonably appropriate, upon representations or certificates of officers or directors of the Company and upon documents, records and instruments furnished to us by the Company, without independently checking or verifying the accuracy of such documents, records and instruments.

To the extent relevant to the opinion expressed below, we have assumed that the Company will have sufficient authorized but unissued shares of Common Stock on the date of any issuance of shares registered pursuant to the Registration Statement.

We do not express or purport to express any opinions with respect to laws other than the Federal laws of the United States. As to all matters governed by the laws of the State of New Jersey involved in our opinions set forth below, we have relied, with the Company's consent, upon an opinion of Dillon Bitar & Luther dated today and addressed to us.

Based upon the foregoing examination, we are of the opinion that the Shares, when issued in the future in accordance with the authority of the board of directors, will be duly and validly authorized and, when the consideration prescribed by the board of directors has been received, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the use of our name under the caption "Legal Matters" in the Prospectus forming a part of the Registration Statement. In giving such consent, we do not admit that we come within the category of persons whose consent is required by Section 7 of the Act or the rules and regulations of the Commission hereunder.

Sincerely

/s/ White & Case LLP

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in this Registration Statement of EMCORE Corporation on Form S-4 of our report dated November 27, 2001, (which report expresses an unqualified opinion and includes an explanatory paragraph referring to the change in method of accounting for revenue recognition) appearing in the Annual Report on Form 10-K of EMCORE Corporation for the year ended September 30, 2001 and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ Deloitte & Touche LLP

Parsippany, New Jersey
January 23, 2002

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Reuben F. Richards, Jr. and Thomas G. Werthan, or either or them, his attorney-in-fact, with the power of substitution, for him and in his name, place and stead, in any and all capacities, to sign the Registration Statement described in the attached resolutions as well as any and all amendments (including post-effective amendments) to such Registration Statement, and to sign any registration statement for the same offering covered by such Registration Statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitutes, may lawfully do or cause to be done by virtue hereof.

Dated: January 22, 2002

REUBEN F. RICHARDS, JR.

THOMAS G. WERTHAN

RICHARD A. STALL

THOMAS J. RUSSELL

ROBERT LOUIS-DREYFUS

HUGH H. FENWICK

SHIGEO TAKAYAMA

CHARLES T. SCOTT

JOHN J. HOGAN, JR.